DOCUMENT RESUME

ED 474 955 PS 031 150

AUTHOR	Lamb-Parker, Faith, Ed.; Hagen, John, Ed.; Robinson, Ruth, Ed.; Rhee, Hezie, Ed.
TITLE	The First Eight Years Pathways to the Future: Implications for Research, Policy, and Practice. Proceedings of the Head Start National Research Conference (6th, Washington, DC, June 26-29, 2002).
INSTITUTION	Administration for Children, Youth, and Families (DHHS), Washington, DC. Head Start Bureau.; Columbia Univ., New York, NY. School of Public Health.; Society for Research in Child Development.
SPONS AGENCY	Department of Health and Human Services, Washington, DC.
PUB DATE	2003-00-00
NOTE	1041p.
CONTRACT	DHHS-105-99-1520
AVAILABLE FROM	Head Start Information & Publication Center, Order Fulfillment Department, P.O. Box 26417, Alexandria, VA 22313-0417. Tel: 703-683-2878; Fax: 703-683-5769; e-mail: puborder@headstartinfo.org; Web site: http://www.headstartinfo.org.
PUB TYPE	Books (010) -- Collected Works - Proceedings (021) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF07/PC42 Plus Postage.
DESCRIPTORS	Child Care; Child Development; Child Health; *Early Intervention; *Educational Practices; Educational Quality; Emergent Literacy; *Infants; Longitudinal Studies; Mental Health; Parent Participation; *Preschool Children; Preschool Curriculum; *Preschool Education; Program Effectiveness; Special Needs Students; Student Evaluation; Welfare Reform
IDENTIFIERS	*Early Head Start; *Project Head Start

ABSTRACT

This document summarizes the proceedings of Head Start's Sixth National Research Conference on early childhood and family research. The first part of these proceedings compiles presentations from special sessions, including plenary sessions on promoting young children's eagerness to learn in educational settings, self-regulation, and policies and programs that support families with children from birth to three. Presentations at the conference consisted of reports of research, literature reviews, and commentaries on research and practice in Head Start and Early Head Start. The next section of the proceedings recounts symposia, roundtables, and conversation hours, which addressed topics relating to: (1) research funded by the Administration on Children and Families, including the Family and Child Experiences Survey, Head Start Quality Research Centers, the Head Start Mental Health Research Consortium, and the National Evaluation of Early Head Start; (2) child development; (3) children with special needs and disabilities; (4) consequences of welfare reform; (5) early childhood assessment and outcomes; (6) language, literacy, and early learning; (7) parenting/families; (8) quality early education and child care; (9) quality health care; and (10) student programming. The third section of the proceedings summarizes the poster sessions. Topics included assessment/diagnosis, behavioral issues, child care, community resources, disabilities, bilingual issues, family functioning, fatherhood, infant/toddler programs, language development and early literacy, mental

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health intervention and services, instrument development, Native American issues, normal child development, parent involvement in children's education, parenting styles, school achievement, and professional development. Appendices include lists of cooperating organizations, the program committee, and peer reviewers, as well as a directory of presenters and a subject index. (KB)

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SUMMARY OF CONFERENCE PROCEEDINGS

ED 474 955

THE FIRST EIGHT YEARS PATHWAYS TO THE FUTURE

Implications for Research, Policy, and Practice

Head Start's Sixth National Research Conference

June 26–29, 2002
Washington, D.C.

Presented by
The Head Start Bureau
Administration on Children, Youth and Families
Administration on Children and Families

In collaboration with
Columbia University, Mailman School of Public Health

and
Society for Research in Child Development

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ACKNOWLEDGEMENTS

This document was prepared by
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under Contract No.
DHHS 105-99-1520

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2003

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Special Sessions

Opening Session

Human Capital—Investing in Parents to Facilitate Positive Outcomes in Young Children

GREETINGS: John W. Hagen, Joan E. Ohl, Faith Lamb-Parker
INTRODUCTION OF KEYNOTE SPEAKER: John W. Hagen

MODERATOR:

Ann Crittenden

Ann Crittenden is an award-winning journalist and author. She was a reporter for The New York Times *from 1975 to 1983, where she wrote on a broad range of economic issues, initiated numerous investigative reports, and authored a series on world hunger that was nominated for a Pulitzer Prize. She was also a financial writer and foreign correspondent for* Newsweek, *a reporter for* Fortune, *a visiting lecturer at MIT and Yale, a regular economics commentator for CBS News, and executive director of the Fund for Investigative Journalism in Washington, D.C.*

Ms. Crittenden has a BA from Southern Methodist University; a Masters degree from Columbia University School of International Affairs; and an "all-but-dissertation" in modern European history from Columbia. She has moderated a lecture series on economics at the 92nd Street Y in New York City, and directed a seminar on the global economy for the Aspen Institute. She has spoken before a wide range of groups, including the New York Venture Capital Association and the World Affairs Council of San Francisco. She is a member of the Council on Foreign Relations and is on the board of the International Center for Research on Women.

KEYNOTE SPEAKER:

James J. Heckman

James J. Heckman is the Henry Schultz Distinguished Service Professor of Economics at the University of Chicago where he has served since 1973. He holds a parallel appointment as Director of Center for Social Program Evaluation at the Harris School of Public Policy at the University of Chicago, and is also a Senior Research Fellow at the American Bar Foundation.

Heckman's research combines both methodological and empirical interests in evaluating the impact of a variety of social programs on the economy and on the society at large. He has written on the impact of civil rights and affirmative action programs in the U.S., on the impact of taxes on labor supply and human capital accumulation, on the impact of public and private job training on earnings and employment, on the impact of unionism on labor markets in developing countries, and on the impact of skill certification programs.

Heckman has also contributed substantially on the literature both in applied and theoretical econometrics. His methodological work on selection bias and on the evaluation of social programs is widely used, as is his research on the analysis of heterogeneity in consumer preferences and in the analysis of longitudinal data. He has a series of influential papers on the identifiability of broad classes of econometric models.

Heckman has a B.A. from Colorado College, a masters degree and doctorate in economics from Princeton University, and an honorary masters from Yale University. He has received numerous honors for his research. He is a fellow of the Econometric Society, a member of the American Academy of Arts and Sciences and of the National Academy of Sciences. He received the John Bates Clark Award of the American Economic Association in 1983. Most recently, he shared the 2000 Nobel Memorial Prize in Economic Sciences with Daniel McFadden.

John Hagen: I want to welcome everyone to Head Start's Sixth National Research Conference. Windy Hill is not with us this morning, but she will be at a later session, so you will meet her then. First, I want to introduce you to Joan E. Ohl who is the Commissioner for the Administration on Children, Youth and Families (ACYF). Previous to this position, which Joan Ohl has had now for the last several months, she was Secretary of Health and Human Services in the State of West Virginia. She has had many positions in health care and prior to that she worked in higher education at five different universities. We are pleased that she is here and will make some opening remarks.

Joan E. Ohl: I am delighted to be here and to welcome you to Head Start's Sixth National Research Conference: The First Eight Years: Pathways to the Future. We at Head Start are pleased to have funded these conferences devoted to the latest early child and family research, practice, and policy.

Wade Horn, when he was the Commissioner at ACYF, initiated these research conferences. These conferences have grown over the years to become a major forum for presenting new research in early childhood development and programming. We continue to emphasize the implications of research for practice, which makes this conference most unique in terms of the potential immediate impact on children and families.

I want to recognize Esther Kresh, the Federal Project Officer for this research conference. When I came to the ACYF in the fall and met her, Esther Kresh first talked to me about this conference because it has been her pride and joy, her baby as one would say. Many of you may know that over the past few months she has had numerous health problems and, therefore, will not be able to attend the conference. I would ask you to remember her in your thoughts and prayers.

I would also like to thank Faith Lamb-Parker from Columbia University and John Hagen from the Society for Research in Child Development, along with the other members of the Program Committee for putting together what looks to be a stimulating and exciting program. The program looks to be excellent. It brings together nationally known professionals from the field to address you in plenary sessions, luncheons, symposia, roundtables, and conversation hours. I also want to thank the cooperating organizations that have worked with the Program Committee and the Head Start Bureau in making this event happen.

As the largest national child development program for children from birth to 5 and their families, a major part of Head Start's mission is to serve as a national laboratory, to test new ideas and to contribute new knowledge about how to serve low-income families and their children. With its diverse population and local responsiveness to programming that best serves the need of each community, Head Start provides a unique opportunity for partnerships among researchers and Head Start staff and parents.

The goals for this conference are to (a) bring the most recent and the best research in early childhood development, child care, and family issues to the early childhood intervention community; (b) provide a forum where practitioners can share their experience on issues that they are facing in the field with the research community, to help them form the most relevant research questions; and (c) build strong, enduring partnerships among researchers, practitioners, and policy makers concerning low-income children and their families.

In looking at some of the evaluations of past conferences, it is clear that this conference has become increasingly proactive, dynamic, and responsive to the needs of both practitioners and researchers. Partnerships and collaborations have developed where previously there had been none. Examples cited are where Head Start directors, trainers, and staff increasingly embrace researchers' efforts and work wholeheartedly together toward common goals where before there was suspicion of researchers' intentions. Furthermore, researchers have engaged in partnerships in developing measures for Head Start programs. Additionally, we are designing research questions, analyzing data, interpreting results, and enriching and validating the outcomes of the research efforts resulting from those partnerships.

In the past, researchers might have kept at arms' distance to remain "objective" while designing their study and collecting and analyzing data. These conferences have helped us achieve the diversity of perspectives that is needed to provide answers to important questions about children and families. The Bureau recognizes the importance of partnerships in research exemplified by our recent initiatives. In addition to this conference, the Head Start University Partnerships, the Early Head Start Local Research, the Quality Research Centers, and the Impact Study exemplify the process of partnership growing and developing.

Finally, I would like to leave you with a charge for this conference. For researchers—continue to do the best research possible because there are many questions that we need to have answered in our field. Practitioners—continue to feed research your most pressing problems and tell researchers what it is like in the field. Most importantly, to both practitioners and researchers—continue to create and build new partnerships, learn each other's language, formulate mutual goals, and most of all, listen to each other as we move forward increasing our knowledge base about young children and their families. I am glad to be with you this morning. I hope that the conference will be very productive for each and every one of you.

Faith Lamb-Parker: Good morning and welcome. Esther Kresh, John Hagen, and I have been partners in conducting these research conferences since the first conference in 1991. We are saddened that Esther could not be with us. Joan Ohl talked about how Esther had worked with Wade Horn on developing the framework for the first conference, thinking about how it would look and how it would work, and it has truly been her baby. We will be delivering cards and food to her periodically throughout the conference. Some of you know that she handpicked everything you will be eating at the conference, and, of course, she wants a taste of it all.

We work with a Program Committee whose members have given freely of their time and expertise and I have grown to love them all. I want to thank each of you for helping make this program as good as it can possibly be. John Hagen and I keep saying that the conference we are doing has to be the best one, but then ask, "How can we top this?" Then we always say of the next one, "Well, this one looks even better." We both agree that this is the best one so far. The members of the Program Committee are Esther Kresh; John Hagen; Mary Bruce Webb, the Acting Federal Project Officer in Esther Kresh's absence; and myself; along with Ann Bardwell from Child Development Council of Franklin County, Ohio; Kathryn Barnard, University of Washington; Cynthia Garcia Coll, Brown University, who is unable to attend; Gloria Johnson-Powell, University of Wisconsin; John Pascoe, Wright State University; Gregg Powell, National Head Start Association; Suzanne Randolph, University of Maryland; Lonnie Sherrod, Fordham University; Jerry Sroufe, American Educational Research Association; Ruby Takinishi, Foundation for Child Development; Harry Wright, University of South Carolina; and Edward Zigler, Yale University.

I would like to give a special welcome to Leslie Davidson, who is the Chair of my department at the Mailman School of Public Health, the Department of Population and Family Health. I am excited that Leslie is coming not only to the conference but to Columbia, because until now no one from my department has been interested in attending these conferences, and that is sad. A pediatrician, she will bring her expertise, knowledge, and interest in child issues to both. I would

also like to give a special welcome to a person who has been coming to all the conferences and is a Head Start pioneer. We do not applaud enough the people from our past that are no longer with us every day, but who have been very influential in helping us get where we are today. That person is Saul Rosoff, who was Ed Zigler's first Deputy when ACYF was called the Office of Child Development (OCD). Ed acknowledges that without Saul he could not have accomplished what he did while Director of OCD.

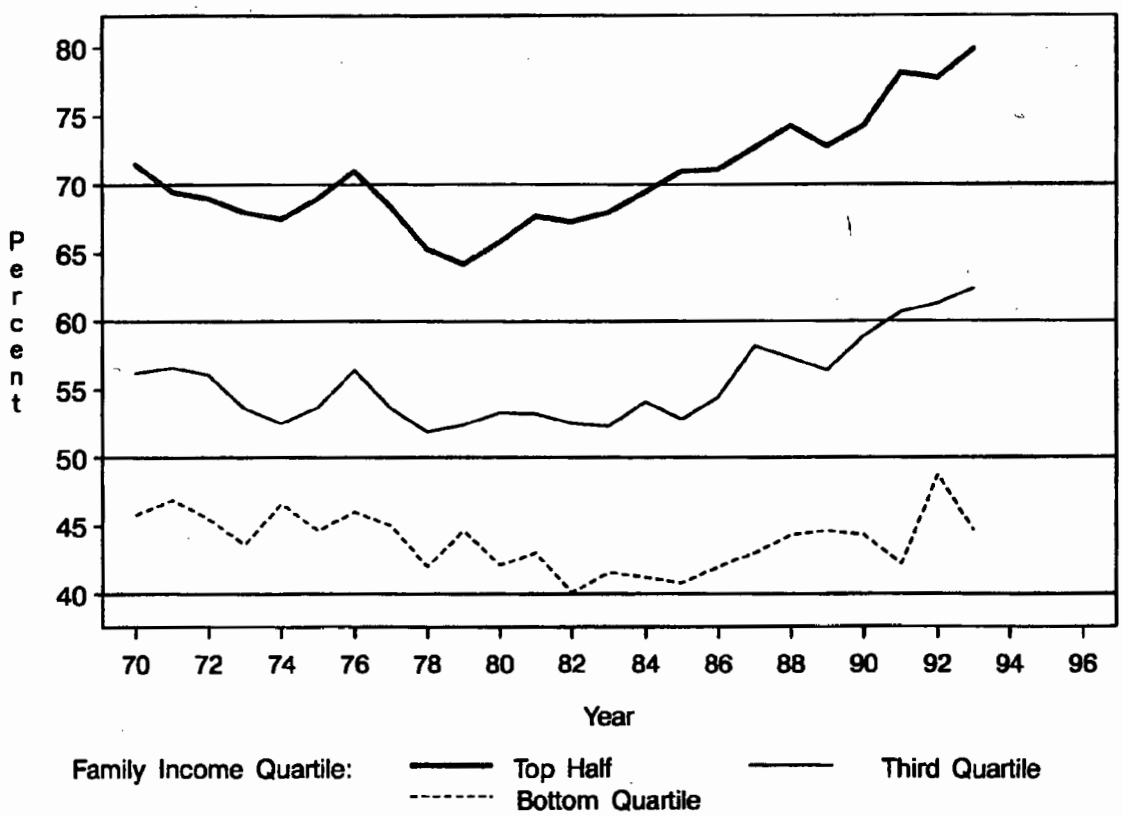
The number of cooperating organizations for the conference has grown considerably since

possibly reformulate our policy approaches. We need to think about this in a more inclusive, integrative way, and to think of skill formation as not being a segmented activity in one part of a life cycle or another. We need to incorporate all aspects in one common framework.

First let me give you some background facts. A substantial body of empirical evidence documents a shift in the demand toward more skilled labor that began in the late 1970s. This shift has been found in many countries around the world. In the United States, this shift in demand caused the wages of high school dropouts to decline in real terms over most of the past 2 decades. Similar phenomena are found in other economies with open labor markets.

In response to these economic incentives, recent cohorts of youth have increased their college attendance, but the increase has not been uniform across racial, ethnic, and family income groups. Latinos and African Americans have only recently begun to increase their college enrollment rates. For minority males, college enrollment has been remarkably stable. These weak responses are surprising in light of the increase in the return to education that has been shared across all ethnic groups. Among all groups, the college enrollment response to the rise in the demand for college-educated labor has been greatest for children from high-income families. Only after sustained increases in the premium for education did enrollment increase for children from lower income families. These responses have increased intergenerational inequality. Higher income parents have educated their children to earn more than the children of lower income parents (see Figure 1).

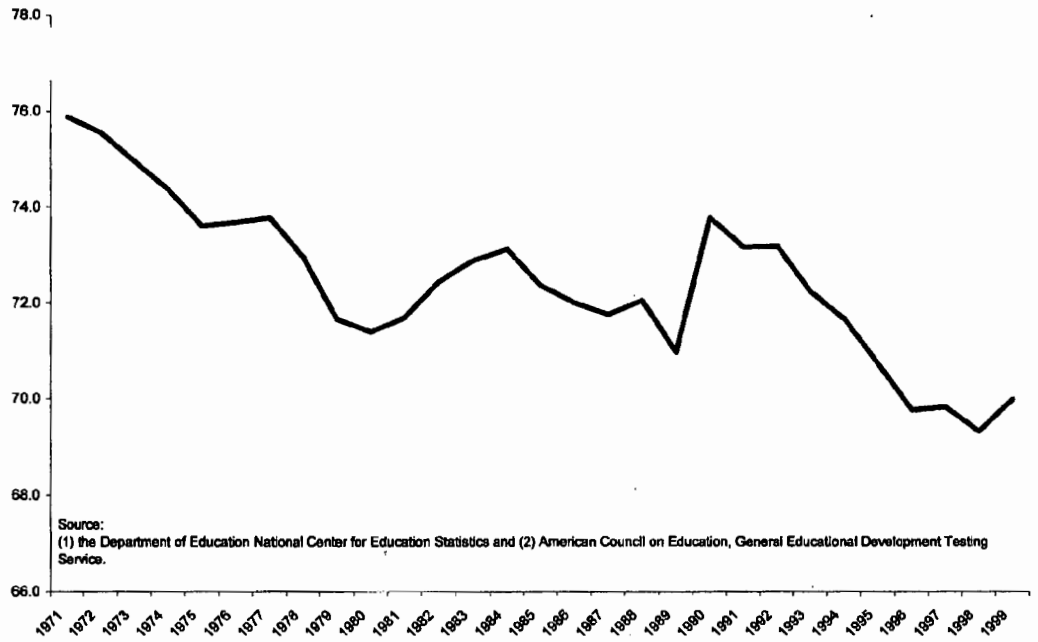
Figure 1. College Participation by 18 to 24 Year Old High School Graduates and Equivalency Degree Holders



Note: These numbers were computed from 1971 to 1989 CPS P-20 School Reports and the 1990–1993 October CPS data files. Racial-ethnic categories are mutually exclusive.

Second, and even more troubling, the high school dropout rate has actually been increasing over the last 20 years, not decreasing. The graduation rate that you might read in *The New York Times* seems to show that high school graduation rates have been increasing over time. However, the reality is that all of the growth in high school certification in the last 20 years has been through GED certification, not through completion of high school. We know from many studies in economics, sociology, and education that a GED degree does not trade equally well in the labor market, in the military, and in a number of other tasks as a high school diploma. If the GEDs are removed, we find that the high school graduation rate has actually been decreasing over time (see Figure 2).

Figure 2. High School Graduates of Regular Day School Programs, Public and Private, as a Percent of 17 Years Old Population USA, 1971–1999



While we have an economy where skill has become more important, at the same time the high school dropout rate has increased and the rate of college attendance also has essentially decreased. Even adjusting for migration and for compositional effects, we still find that the American economy has not responded. As one might expect, it should respond to a market that now places a greater emphasis on skills in the form of higher wages and opportunities in social life. In the face of an increased demand for skill throughout our economic and social life, we find that the American system is not producing potential workers with a high level of skill and, in fact, this threatens our prosperity in the next 20 years.

While it is possible through trial and error to stumble onto an effective policy without understanding the problems that motivate it, a more promising approach to policy formation is to understand the mechanisms and institutions that produce skill, to understand how they are related, and where they have gone wrong.

These considerations are especially important in the study of skill formation. Human capital accumulation is a dynamic process. The skills acquired in one stage of the life cycle affect both the initial conditions and the technology of learning at the next stage. Human capital is produced over the life cycle by families, schools, and firms. A major determinant of successful schools is successful families. Schools work with what parents bring them. They operate more effectively if parents reinforce them by encouraging and motivating children. Job training

programs, whether public or private, work with what families and schools give to them, and cannot remedy 20 years of neglect.

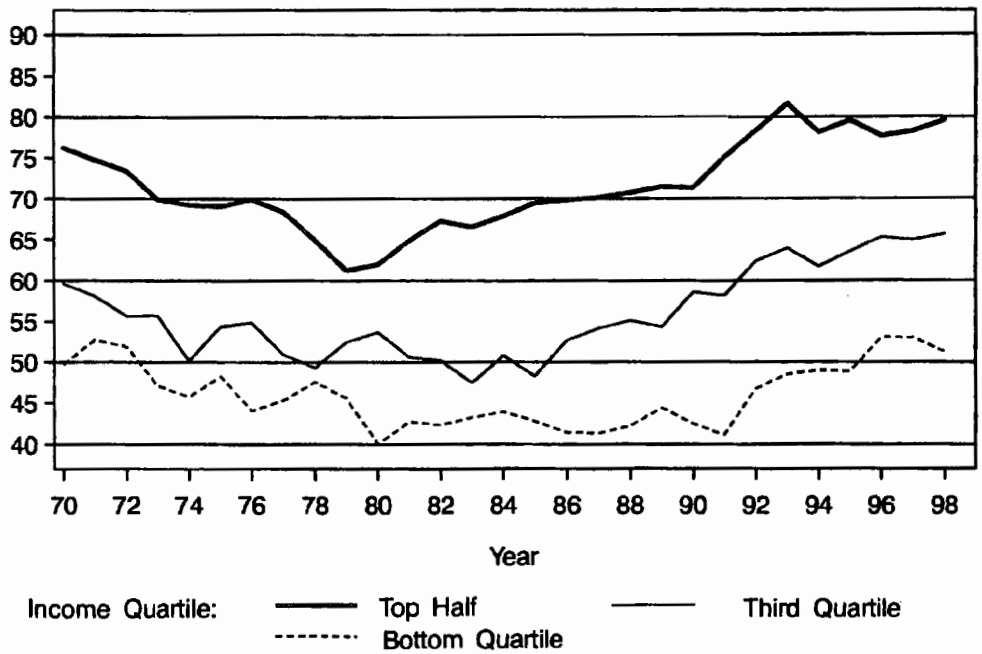
Recent studies in child development emphasize that different stages of the life cycle are critical to the formation of different types of abilities. When the opportunities for formation of these abilities are missed, remediation is costly and full remediation is prohibitively costly. These findings highlight the need to take a comprehensive view of skill formation over the life cycle that is grounded in the best science and economics in order to produce effective policies.

A study of human capital policy grounded in economic and scientific fundamentals can improve upon a purely empirical approach to policy that relies on evaluations of programs and policies in place or previously experienced. While any trustworthy study of economic policy must be grounded in data, it is also important to recognize that the policies that can be evaluated empirically are only a small subset of the policies that might be tried. If we base speculation about economic policies on economic fundamentals, rather than solely on estimated "treatment effects" that are only weakly related to economic fundamentals, we are in a better position to think beyond what has been tried to propose more innovative solutions to human capital policy problems.

Accordingly, this presentation will investigate the study of human capital policy by placing it in the context of economic models of life cycle learning and skill accumulation, and in the context of economic models of competition, rather than focusing exclusively on which policies have "worked" in the past, although we certainly pay attention to what has been tried.

What are the important issues that might account for the results we see? Over time we find pronounced differences in college participation rates depending on family income. Looking at 18- to 24-year-old males, we find that about the time the market for skills increased making college attendance a premium in terms of increased wages, the college attendance rates of people from the top half of the family-income distribution also increased, and increased rather strongly. However, in the bottom quartile of the family-income distribution, little response has occurred and college attendance rates did not substantially increase (see Figure 3).

Figure 3. College Participation by 18 to 24 Year Old Male High School Completers by Parental Family Income Quartile



Source: Authors' calculations from October CPS files.

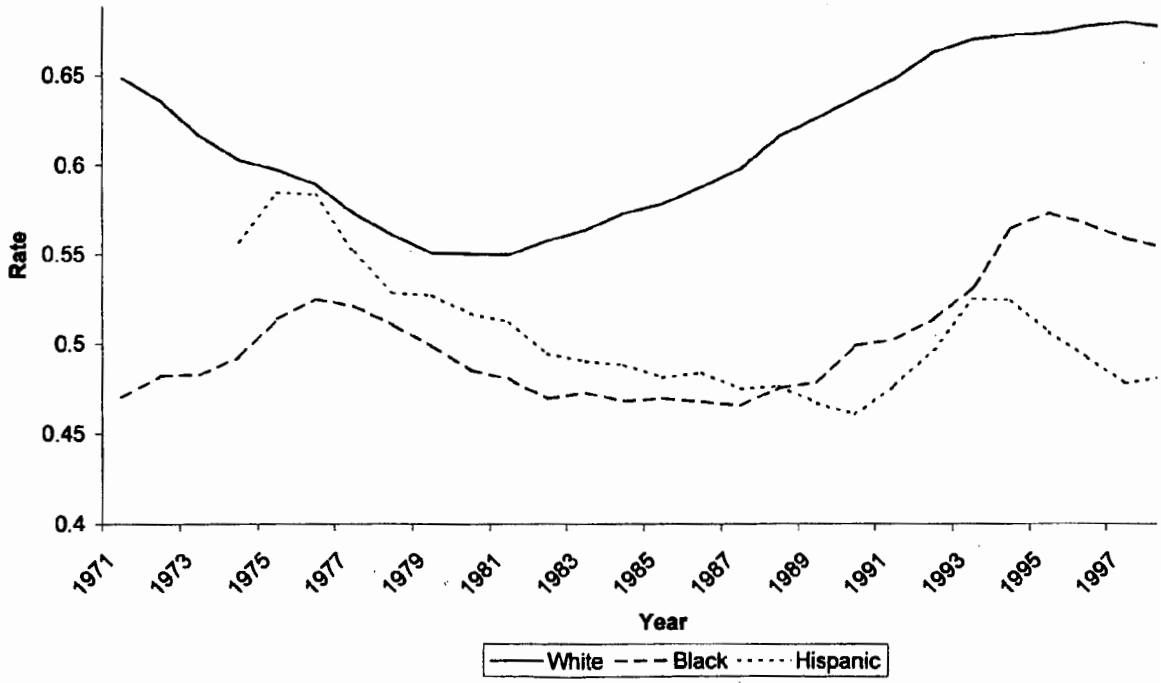
There are two basic interpretations of the finding that parental income is important. The first and probably the most commonly accepted one that guides most economic and social policy is that individual children at the age for attending college face serious credit market constraints so it is difficult to borrow money needed for college. Family income resources really prevent individuals from attending school. This argument was popular in the Clinton Administration and motivated the Hope Scholarship program. This has become the most common discussion in terms of educational policy.

There is, however, a second interpretation, which I believe actually receives much better support. The second interpretation is the following: Family income is really just a crude surrogate for the family and is something that has to do with long-term family influences. As important as the family-income level at the age when the child is ready for college is the income of the parents when the child is 4 years old.

These two interpretations are essentially not at odds with each other. They both can be at work. Recent research suggests that the overwhelming, dominant explanation can be attributed to early factors, not the factors that arise in family income and tuition policies implemented when children are 14 or 15 or 16. These differentials are evident at an early age and they give rise to the educational differentials. Similar phenomena occur for participation in job training programs and participation in a number of dimensions of economic and social life, but the factors that give rise to these differentials by income/class actually start early. I believe that this is why early intervention is so important.

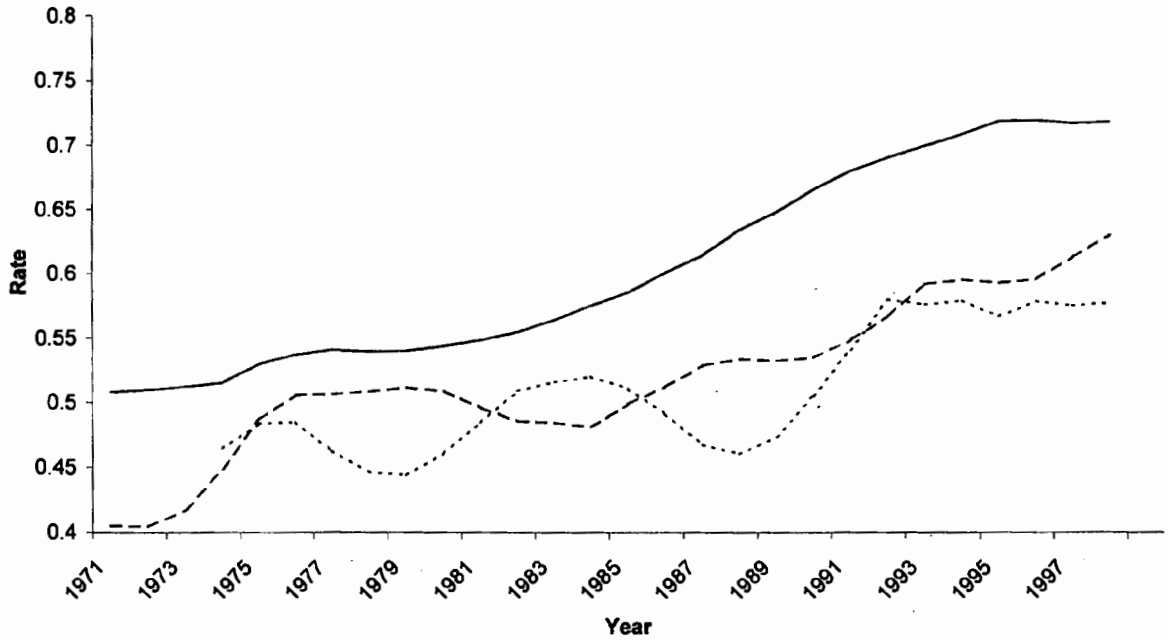
We should recognize that in the American context when we classify people by income, we are essentially classifying them by race and ethnicity. Looking at college attendance rates by African American, Whites, and Latinos, we find that the Whites' rate increases while the rates for Latinos and African Americans have increased much more slowly and fitfully (see Figures 4 and 5). Evidence shows that inequality in college attendance is increasing across ethnic groups, income groups, and generations at the same time that there is a demand for greater skill in the labor market.

Figure 4. College Participation, High School Graduates and GED Holders, Males, Ages 18–24



Note: Three-year moving averages are shown.

Figure 5. College Participation, High School Graduates and GED Holders, Females, Ages 18–24

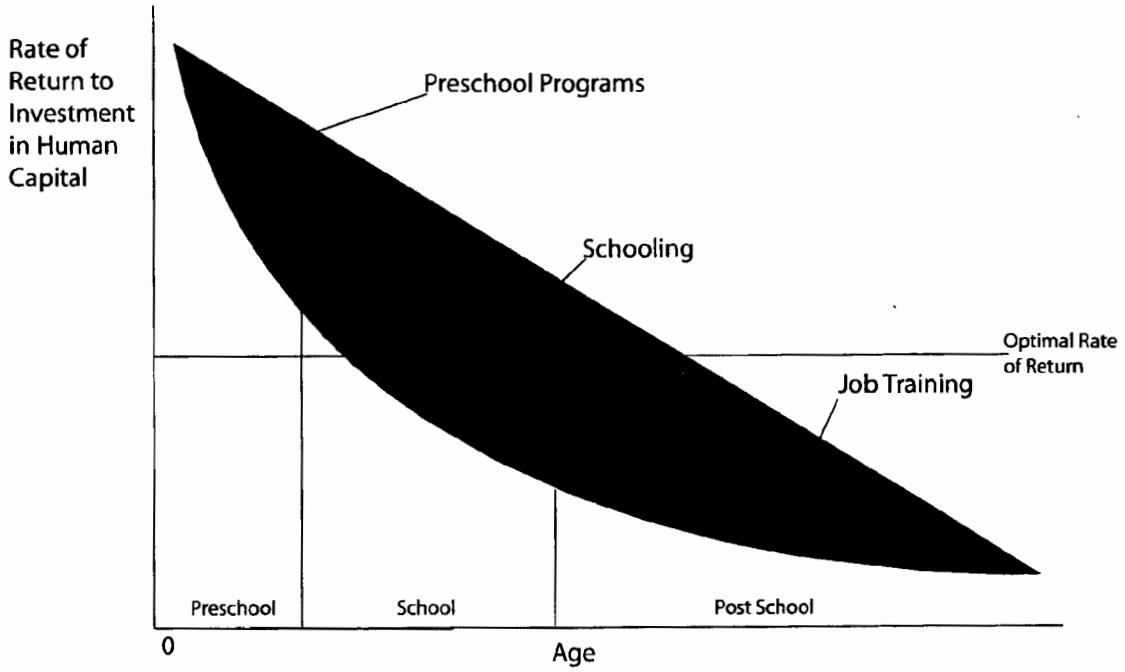


Note: Three-year moving averages are shown.

What is the best evidence that we can bring to bear on how to solve this question? From research that I have done, along with research findings from others, I would argue that the following basic diagram (see Figure 6) summarizes two critical ideas that are important to understand in terms of our educational policy. The first idea is what economists like to call the rate of return to investment—basically the dollar rate of return. Here we can look not only at earnings, but we can monetize various other social and socioeconomic benefits. This first principle is one where we argue the following: It is more profitable to invest in the young than in the old on the sheer basis of when the investment occurs. If one makes an investment and the investment does not fully depreciate, say it does not depreciate at all, one is going to have a long return to harvest. Secondly, and more fundamental, something that economists have only recently fully understood but has been around in the literature for quite awhile, is a more basic idea—the notion that skill begets skill.

Economists call it complementary—so the early interventions, the early investments, they pay off not only in the form of direct yield and direct payments and in terms of direct income, but in terms of allowing people to learn, facilitating and motivating the learning process. If we were to ask ourselves at what age in the life cycle of the child do we get the highest dollar return, I would argue, based on looking over the entire life cycle, that it is in post-school training, schooling, and preschool programs. Moreover, when we compute the cost-benefit analysis and convert it into the language of economics, we find a high return for preschool children and a somewhat lower return for regular schooling and job training.

Figure 6. Rates of Return to $1 of Investment Initially Setting Investment to Be Equal Across All Ages



If I have to spend a dollar, where would I spend most of that dollar? Theoretically, based on evidence that we have about the complementarity of skills and how early skills and early motivations foster later learning and how that in turn fosters further learning and is valued in the labor market and in other activities in social life, then investing in early intervention offers the greatest return for dollars spent.

The next question is how much do we allocate to these various activities? We find that there is a large allocation for ordinary public schooling, K–12, and the postsecondary schools, as well as a large amount of allocation of resources to both public and private job training. Relatively speaking, we invest little in the early years of the life cycle, partly because only recently have we established a solid case that we should put early childhood investments on the same basis as other kinds of investments. One problem is that the government and policy makers frequently specialize in one part of the life cycle or another and fail to recognize that the process of human skill formation is a life cycle. There should not be a single Department of Labor or Sub-Department of Education but, in fact, there should be a Department of Human Capital Formation. As an empirical statement I would argue, if you look at the budgets and if you look at the intervention, there is ample evidence that there are very high rates of return from intervention at this early level.

There is a large gap between African Americans and Latinos in terms of college participation rates at age 24–12 percentage points between African Americans and Whites and 14 percentage points between Whites and Latinos. The thrust of a large body of evidence that has been gathered over 20–25 years has shown that once we control for early family factors and adjust the figures, this gap jumps from a 12 to 14% deficit to an 18 to 19% deficit. However, we know that when we control for early family factors, it makes a tremendous difference. Recently there has been a great deal of discussion in educational policy about family income being very important and explaining much of the gap between different income groups.

Let me neutralize the issue of race for a moment and simply look at income quartiles and ability quartiles for White males. These data come from the National Longitudinal Survey of Youth. The data show that if family income is high and individuals are at the highest ability level they are the most likely to enroll in college. Among very bright children, we find essentially that if we classify individuals by current family income status, these individuals are much less likely to go to school.

How does this hold up if we essentially say, yes, it looks like family income matters? What kinds of policy are indicated by this? I believe it is very useful to do an adjustment controlling for early family factors—control for the importance of the family. If one does that there will still be a gap although the gap will shrink considerably. This suggests that early family factors play a large role in discussions of college participation. Therefore, when we think about education policy, we might want to think about early childhood policy.

But let me give you an even more dramatic demonstration. Instead of just asking, "Do you go to school?" let us look at the question, "Do you complete 4 years of school?" It is completion of schooling that has the highest economic return. Here we see something interesting. We still find a gap, but the gap between children from the lowest income and the highest income families is not so substantial. I believe any evidence of the short-term factors at work in explaining the gap in college attendance is eliminated, at least in college enrollment, which is best addressed by tuition policy and transfers to families in the college going years.

What do we know? As I have already indicated, ability and early factors make a difference. Let me show you how powerful these differences are. From a study of Whites only looking at the differences in math scores between ages 6 and 12, established ability factors play a large role. Background factors play a large role in explaining participation, not only in college, but also in job training and many other aspects of the economy, even the military. If we examine the gaps we see a substantial test score gap between those from the highest income families and those from low-income families. These gaps begin early and, if anything, widen. Again, if we control for early family factors the gaps are not eliminated, but are substantially reduced.

The same can be true of the much more controversial African American/Latino/White gap where there is a substantial gap in math scores. When we adjust for early background factors, early family income, and family structure we find that the gaps, while not completely eliminated, are more than two-thirds reduced (see Table 1). This again indicates the importance of family and early family interventions. As those abilities are the exact drivers of the gap in education and participation in the larger society, this research leads one to think that it is very important to focus on the early years.

Let me make a couple of other observations. When we talk about ability we frequently talk about mental ability, cognitive ability. But recent research and a lot of intuition suggest that ability is multidimensional, not only in an obvious way, but in an important distinction between cognitive and noncognitive abilities. Let me give you some evidence of this. You are all familiar with the GED testing program. The GED program is very widespread and is now producing somewhere between 15-20% of all new high school graduates. It is now beginning to be well studied. The goals of the GED program are basically to certify that individuals have achieved a certain level of test competence.

Does the GED achieve this? If we look at a measure of achievement, the AFQT for GED recipients and high school graduates, whether they are White, African American, or Latino or whether they are male or female, we find that the GED and high school graduates who do not go on to college and earn approximately the same amount of money have essentially the same test scores. In some sense, therefore, the test works, but it is precisely because the test works in this sense that it is a valuable insight into the importance of noncognitive skills.

How well do GED recipients actually perform in the labor market? There we find something dramatic, which is that GEDs, once you adjust for their ability and their years of schooling, are typically earning about what high school dropouts earn. They are not earning anywhere near the amount earned by high school graduates.

Table 1. The Change in the White-Minority Schooling Gap when Minority Explanatory Variables are Equated to White Levels (see notes at end of table) Standard Errors in Parentheses (the Relevant White-Minority Schooling Gap is given in the last row of each panel)

A. Change in minority probability of being in grade 9 or higher at age 15

	Without AFQT Score		With AFQT Score	
	Blacks (1)	Hispanics (2)	Blacks (3)	Hispanics (4)
(1) Equating All Family Background Components	.07 (.021)†	.08 (.022)†	.03(.022)	.02 (.021)
Individual Components:				
(1a) Number of Siblings	.03 (.009)†	.03 (.012)†	.02 (.010)†	.01 (.013)
(1b) Highest Grade of Father	.04 (.021)†	-.01 (.028)	.01 (.022)	-.03 (.029)
(1c) Highest Grade of Mother	.01 (.005)†	.06 (.021)†	.00 (.007)	.04 (.023)†
(1d) Broken Home	-.02 (.010)	-.003 (.006)	.001 (.010)	.003 (.007)
(2) Equating Family Income	.09 (.021)†	.12 (.021)†	.08 (.027)†	.04 (.020)†
(3) Equating Local Average Wages	-.001 (.002)	.01 (.005)†	-.002 (.002)	.008 (.004)†
(4) Equating Tuition and College Proximity	-.01 (.005)†	-.02 (.008)†	-.02 (.006)†	-.02 (.009)†
(5) Equating AFQT Scores	na	na	.16 (.034)†	.17 (.027)†
(6) Equating 1 and 2	.14 (.023)†	.18 (.030)†	.10 (.025)†	.06 (.028)†
(7) Equating 1,2,3, and 4	.13 (.021)†	.17 (.021)†	.08 (.023)†	.05 (.027)†
(8) Equating 1,2,3,4, and 5	na	na	.21 (.027)†	.20 (.026)†
(9) Gap between Whites and Minorities	.16	.21	.16	.21

B. Change in minority probability of high school completion at age 24 (high school graduation and GED attainment combined)

	Without AFQT Score		With AFQT Score	
	Blacks (1)	Hispanics (2)	Blacks (3)	Hispanics (4)
(1) Equating All Family Background Components	.06 (.014)†	.05 (.021)†	.03 (.015)†	-.01 (.024)
Individual Components:				
(1a) Number of Siblings	.02 (.007)†	.03 (.010)†	.01 (.007)†	.01 (.010)
(1b) Highest Grade of Father	.03 (.015)†	-.01 (.032)	.02 (.016)	-.04 (.029)†
(1c) Highest Grade of Mother	.01 (.005)	.03 (.020)	-.002 (.005)	.02 (.022)
(1d) Broken Home	.01 (.008)	-.005 (.006))	.007 (.007)	-.001 (.005)
(2) Equating Family Income	.07 (.016)†	.08 (.018)†	.05 (.018)†	.01 (.019)
(3) Equating Local Average Wages	.01 (.004)†	.01 (.010)	.008 (.004)†	.01 (.010)
(4) Equating Tuition and College Proximity	-.004 (.003)	.006 (.009)	-.007 (.002)†	.007 (.008)
(5) Equating AFQT Scores	na	na	.11 (.019)†	.16 (.019)†
(6) Equating 1 and 2	.12 (.013)	.12 (.021)†	.06 (.016)†	.002 (.026)
(7) Equating 1,2,3, and 4	.12 (.013)	.13 (.023)†	.06 (.017)†	.008 (.030)
(8) Equating 1,2,3,4, and 5	na	na	.15 (.014)†	.16 (.026)†
(9) Gap between Whites and Minorities	.08	.14	.08	.14

†Significant at the 10 percent level.

What accounts for this? Is the answer that other factors matter? Who are these GEDs? What do we know about them? I am talking about averages, not about individuals. What we find is that, looking at participation in various activities such as shoplifting, use of drugs, petty crimes, and so forth, GED recipients are actually more likely to participate in these than high school dropouts. Certainly more than high school graduates.

Why am I going on about this? Because this provides some indirect evidence that something other than just straight cognitive skill matters, and it also suggests that when we start evaluating early childhood programs, we want to think more broadly about skills that make a tangible manifestation.

Let me talk about the evidence—like bringing coal to Newcastle—but I will nonetheless talk about it. What we have seen from a large number of studies of early education is the following: If you look at early intervention programs — the Abecedarian Project, the Milwaukee Project, the Harlem Study, the Perry Preschool Project, and a number of other studies — the central return on these programs with some exceptions and certainly with evidence of fadeout is that basic abilities of individuals such as IQ scores are not fundamentally altered. We do find, however, that these programs have substantial impact on crime, motivation, and school attainment. We find substantial reduction in antisocial participation. We find more integration, so while cognitive ability may be difficult to change, achievement is not.

A provocative study by Donahue and Siegelman suggests that even though the Perry Preschool costs a great deal in terms of direct amounts of money spent compared to the crime reduction rates, what you find is that the return, just in terms of savings on incarceration costs, more than pays for the cost of Perry Preschool. In other words, if we carefully target the program towards disadvantaged individuals at risk, we can get cost-benefit ratios that are extraordinarily high, certainly higher than anything we see in terms of return for schooling and job training. The general thrust of the evidence shows that if we start trying to address problems of skill formation, motivation, and achievement in the late teenage years and the early 20s, we can have some success with some people, but it is much too late. This is why I have come to believe that preschool activity is so important; I certainly do not want to write anybody off, but the cost-benefit ratios and the rates-of-return calculations suggest low rates of return for these later interventions. All the available evidence suggests that preschool programs have an extremely high rate of return and should be supported.

In summary, what we need is a much more inclusive understanding of how skills are formed and a much more rigorous knowledge base. I would argue that the preschool intervention area has been neglected in policy agendas precisely because people are not looking at the integrated aspect of life cycle learning. Part of the strongest case that can be made for early intervention is precisely that these later interventions are not all that effective.

What has a high rate of return? Early intervention does. This does not mean that people who are 20 or 25 years old should be written off. It does suggest, from a social planning perspective and a social policy perspective, that if we think about new generations of individuals, the return on a purely economic and social base are extraordinarily high in the early years. The more evidence we show on this, the more work will be funded in this area and the more basic knowledge and social policy will be directed towards the real problem in our society.

Hagen: You can see why we were thrilled when James Heckman agreed to speak at the conference. He certainly gave us a different perspective and also makes the charge to put our resources, as much as possible, into issues around young children and family.

We are now going to hear from Ann Crittenden. She received her Bachelor's degree from Southern Methodist University. She went on to Columbia University School of International Affairs for her Masters degree and also pursued a Doctorate in European History. She has been a lecturer on a wide variety of topics over the years and worked for *The New York Times* for 10 years. In recent years she has been especially committed to issues of investing in children. Her

most recent book, *The Price of Motherhood: Why The Most Important Job in the World Is Still the Least Valued,* was published in 2001.

Ann Crittenden: I am thrilled to be here and am especially flattered to be on the same podium with a Nobel Prize-winning economist because I have been waiting for you people to get into this issue. It is very exciting because I believe with your research and reinforcement from the field of economics there is a better chance for change. Heckman explained that he became interested in early education by understanding that the rate of return was far greater than in later education and job training programs. I wanted to mention how I got into this field. I was basically an economics journalist for about 15 to 20 years. Then I had a child, which changed my life overnight. I put two and two together. I was aware at that time that the economists were becoming increasingly convinced that human capital—by which is meant all the combination of human skills, training and motivation, curiosity, the spirit of entrepreneurship—is the most important component of national wealth. It is our greatest national resource.

In 1995 the World Bank, for the first time, began to quantify the sources of wealth and national riches, and they put human capital at 59% of national wealth. This makes it more important than everything else added together: land, water, oil, all other resources, physical infrastructure, you name it, all of it together is not as important as educated, prepared human beings.

A few years ago the president of the Information Technology Association of America said that running out of IT workers today is like running out of iron-ore during the industrial revolution.

If this is our source of national wealth, I knew that as a new mother I had to learn more about the child development literature. I read everything I could find and began assigning myself stories and writing articles about child development. I interviewed Irving Harris, Berry Brazelton, Daniel Stern, and other researchers and tried to find out all the latest information. Finally one friend asked me, "Is your child all right?" He thought that maybe I had a serious problem. I said, "Yes, he is very normal. I am just trying to learn about this field."

This was 20 years ago and we were just beginning to accumulate early childhood research. I wrote the first story appearing in the popular press for the *Wall Street Journal* on the initial results of the Perry Preschool Project. I thought, "Well, here we are, 0 to 3, the critical years. If these are truly the years where human capabilities are developed or stunted, then who are the greatest producers of human capital?" Two and two make four. Mothers and early childhood caregivers, early educators, nannies, grandmothers, hands-on fathers, family care providers, day-care teachers—all of these people are our most important producers in the country. This has to be true. They are more important than the farmers who will receive $118 billion in subsidies over the next 6 years, more important than accountants and their multibillion-dollar movements of capital. They are, without question, our most valuable economic players.

I wondered if I could write about this when no one else was talking about it. No one had put together the discipline of economics and the field of child development. They were two totally separate worlds and to this day, almost 20 years later, they remain far too separate. I have one message for all of you—that what you are doing is wealth creation and you are the most important people in the country doing that work.

Heckman's brilliant presentation gave us the numbers. However, the truth of what I am talking about is not entirely in the numbers. We need the numbers and we are going to need the research as well. I believe, however, that the truth lies elsewhere, which is illustrated by an anecdote from an interview that I had when I was writing the book.

The interview was with a female postal worker, whose husband was also a postal worker. She was pregnant and also had a 4-year-old. A fellow worker had just adopted a 2-year-old foster child whom he clearly loved. One day he came in and said that he and his wife had decided to institutionalize the child because he was tested and appeared to be retarded. The postal worker was appalled and she went home and talked to her husband, saying that she thought there was

nothing wrong with the child, but that he had been abused. She decided she wanted to take him home rather than have him institutionalized. Her husband was not happy because it would be a financial burden, but she said she would earn the extra money to pay for the legal bills and to take care of this child. They took the child and eventually formally adopted him. She was convinced he had been abused after the following incident: The boy had been with them about 2 weeks and was playing with the 4-year-old when the phone rang. The mother went to answer it, telling the children not to move and she would be back in a minute. She kept talking, forgetting about the children waiting. About 45 minutes later she went back to check on them. Her son had become tired of waiting and had run off to play. The foster child, on the other hand, was standing motionless waiting. He had not moved the whole time she had been gone. She told me that was when she knew he had been mistreated. She reassured him that this house was safe and that he was loved. The end of the story is that the "retarded" child went to Harvard and Yale Graduate School and on the day I interviewed this woman he was elected the Mayor of Washington, DC. Think about it. What is this in economic terms? A million dollars at least saved to the public taxpayer. A human life saved. An enormous asset created.

Classical economics casts economic man as the chief actor in the drama of wealth creation. Theoretically the individual's pursuit of personal gain adds to the sum total of riches. No matter how self-interested one may be, economic man's strivings to garner wealth for himself will be guided as if by an invisible hand to produce more resources than can ever be generated by the well-meaning plans of government or the community.

This is what is called "the magic of the marketplace." The beauty of the free market according to Charles Schultz, Economic Advisor to President Lyndon Johnson, is that it reduces "the need for compassion, patriotism, brotherly love and cultural solidarity as motivating forces behind social improvement, harnessing the base motive of material self-interest to promote the common good as perhaps the most important social invention mankind has achieved."

This satisfying scenario assures us that we can all be as selfish as we like and still be doing good. This is true, but it is only half of the story. The second half is that in the beginning we are all helpless babies and another economic actor, the conscientious mother, or let us call this group "conscientious caregivers," holds center stage. Without conscientious caregivers there would be no economic man. Here is another way the story of wealth creation might begin. Conscientious mothers and caregivers motivated by feelings of compassion and love nurture, protect, and train children for adulthood. Fathers, other female caregivers, and relatives may play a part in this process, but mothers have the primary role. Their altruism and willingness to do all they can for their offspring will be guided as if by an invisible hand to produce healthy children who will become the productive enterprising economic men and women of the future.

What we are actually talking about is finding a way of incorporating this other profound truth into our way of thinking, into our economic policy, and into our investment policy because there is increasing evidence that an investment in the young gives us by far the highest rate of return. That, of course, includes investment in mothers and other caregivers.

I discovered another body of data from the field of economic development while doing my research. These data show that without any question, on every continent in every culture, resources in the hands of mothers and other hands-on caregivers is far more likely to be invested in children's health and education than resources in any other hands.

That is profound and has led people like Larry Summers, when he was at The World Bank, to lecture groups in Pakistan, telling them that investing in women was the surest path to economic development. The women are going to invest in the children and that is going to ensure economic development for the future. We need to take seriously the insights that Heckman shared with us today about how other researchers are producing brilliant results from early intervention projects and that we have the capacity to change our own national strength as well as impact the lives of children.

Question: I am from Houston, Texas. Dr. Heckman, what role do our large number of immigrants in the United States play in some of your graphs in terms of achievement and increasing economic capacity?

Heckman: Many of the graphs I showed are adjusted for the immigrant question. There is no question that this is an important area. If we look at GED certification, in particular, we find that immigrants are more likely to receive GEDs, especially Mexicans coming to the U.S. to try to increase their skills. The general problem in the area of skill formation is not solely or mainly a problem of immigrants. It is much more pervasive in the society, but certainly immigrant groups are at a major disadvantage. Nonetheless, that concerned me a great deal when I asked the question about different cohorts of individuals going on to college. It is a stunning finding that people born up to 1950 are not going to school at a lower rate than those who follow them—the 1960 birth cohorts are going to college at the same rate. That is not strictly due to immigrants. It is a much more pervasive phenomenon.

Question: Dr. Heckman, you are talking about investments in early childhood bringing a much higher rate of return than investing in post-secondary education. Head Start is a program that invests in both. It invests in mothers and fathers, as well as children. Are you suggesting first that we concentrate more of our available funds on our children?

Heckman: That is a good point. We know that the studies of programs like Perry Preschool and other interventions have suggested that part of the reason why they have been successful, even though the intervention ends after 2 or 3 years, is precisely because parents have been included and have also been educated. When I was talking about investments in the young, I certainly did not mean to exclude the investments in the parents. We know there have been separate effects on the parents, but by teaching parenting skills, they also have changed the family environment for the better.

Question: How would you relate the data that you presented to the large increase in the service sector of the economy, the choices people are making, and their beliefs about how they can make a living. Maybe people are not going to college, in other words, but developing businesses in the service sector imagining that this perhaps is a better way?

Heckman: All around the world there has been a shift in demand for education, whether or not it is in the service sector. The service sector includes financial services in addition to McDonald's, so all over the world there has been a shift in demand towards a more educated labor force. Skills are needed in a number of areas, even in the service sector, so I do not see the service sector growth providing an alternative that makes it equally profitable or more profitable for individuals to drop out of school. In fact, all the evidence suggests that the real wages of unskilled individuals, especially high school dropouts, have declined as a group; those wages have gone down 15–20% between 1980 and 2000. Even though there is a service sector that accommodates people with unskilled jobs, this may actually perpetuate inequality across generations. I do not see the service sector as a remedy for the need for skill. It is not an alternative. If anything, it is less of an alternative now than it was before.

Question: What can researchers do to bridge the gap that you described?

Crittenden: We can look in the area of policy, especially toward universal preschool education. We need to consider the justifications being made for it and that justification can be overwhelmingly an investment in our national economy, more than any other rationale that might be put forward for it. We need to talk about the ramifications of the inequality. For instance, something

like 36% of children from families with incomes under $15,000 go to preschool and almost 80% of children from families with incomes over $75,000 go to preschool. These are enormous income inequality gaps, with the very children who may need preschool not getting it.

I noticed recently the Committee for Economic Development, a business-supported think tank funded by major corporations, has come out in support of massive new financing for almost universal preschool. They have proposed a $25 to $35 billion preschool education program. This is the first time business has come out in support of something like this.

Hagen: I would like to address a question to either of our panelists. It seems to me that just from a pragmatic and political standpoint, it is difficult to convince the politicians to invest when the payoff is going to be 20–25 years later, versus when the payoff is going to be 1–2 years later. Doesn't that pose a problem in convincing people who control the budgets that they should spend money where the return will not be seen for quite awhile?

Heckman: On top of that, children do not vote.

Crittenden: Yes. That is a problem.

Heckman: It makes this all the more imperative. In these types of discussions, one frequently hears the phrase "touchy-feely," meaning the case is not solid. Several years ago the book *The Bell Curve* was published. The thesis of this book was that there is a genetic basis for intelligence and that individual skills cannot be affected. Some say that in the Perry Preschool research, there are only 110 observations, which does not make the evidence all that strong. I do not think there is anything to fear here in understanding and looking at the data, making these data available, and collecting more data.

The reason the case is not as strong as it should be is precisely because there are not that many empirical studies of early childhood development as there are studies of job training programs. It is important that early childhood development connect with the larger economic community to make this case, to see that these investment returns are as high as they should be. The point that Crittenden is making is correct, and on an intuitive level nobody denies the importance of good mothers. We do not need cost-benefit calculations to prove that. Yet that is not the way that policy is made; one looks at rates of return, at numbers.

The early childhood community has not made the case that it could make and should make, based on the results of these interventions, on what is going on in the family. It should tackle the hard problem that many shy away from. We need to recognize that mothers play a huge role and that investments in failed families have a huge return. We understand that at some level. It needs to be documented better.

Crittenden: Just as an anecdote—a child in prison, the ultimate failure of parenting and caregiving, costs $35,000 to $40,000 a year for expenditure and a wasted life. Governor King of Maine gave a speech a few years ago describing a halfway house for juvenile delinquents, first-time offenders, and teenagers whom the studies show intervention is not going to help as systemically as younger children. These halfway houses had live-in surrogate parents trying to teach these young teenagers how to brush their teeth, how to get up in the morning, get properly dressed, get to their assignments on time, and so forth. The Governor went to visit and he said, "My God, all these people are trying to do is be good parents to these youngsters who never had any." That was costing the State of Maine about $30,000 a year per child. On the other hand, the Perry Preschool, as a top preschool program, costs $14,000 a year. Some preschool programs are about $6,000 a year. A home-visiting program might be about $2,000 a year per family. In Europe, child allowances to everybody are in the range of $2,000 a year. The younger the child is at the time of the intervention, the cheaper it is to the public purse and the more effective it is to the society.

I would add that I have been briefing legislators in Massachusetts, California, and in other parts of the country, and every time I go to a state legislature talking about these issues I ask them how many letters does it take to make you think about a piece of legislation? The answer, in large states like Massachusetts, is 15 letters. If this community were attuned politically and wanted to make their case, it could be made in a powerful way and it is not being made at the moment.

Plenary I

Promoting Young Children's Eagerness to Learn in Educational Settings

CHAIR: Ann Bardwell
DISCUSSANT: Ron Herndon
PRESENTERS: Barbara T. Bowman, Ross A. Thompson, Susan H. Landry

- **The Cultural Context of Children's Learning Environment**
  Barbara T. Bowman
- **Social and Emotional Origins of Readiness to Learn**
  Ross A. Thompson
- **How Caregivers and Teachers Can Support Young Children's Eagerness to Learn**
  Susan H. Landry

Ann Bardwell: Three researchers will share different contexts for what makes children eager to learn. What we heard from James Heckman was exciting, including the key elements that stay with children and promote their finishing of high school or going to college. Clearly, an important foundation is their cognitive learning in early childhood. Furthermore, he made it clear that to put them in good stead, their social and motivational experiences in preschool were even more important than cognitive learning, with parents as a base for those experiences. We understand the importance of children's early experiences in determining whether they approach learning with confidence, skill, and a sense of self-efficacy; or if they are instead apprehensive and unsure in the face of challenges they encounter. It is important that we look at and hear the research on children's early preschool experiences.

Our first speaker is Barbara Bowman, a faculty member, founder, and the former President of the Erickson Institute for Advanced Study in Child Development in Chicago. She is an authority on early education, and a national advocate for improved and expanded practitioner training. She is a pioneer in building knowledge and understanding of the issues of access and equity for minority children. She has served on numerous professional boards, including the National Association for the Education of Young Children (NAEYC), the Great Books Foundation, and the National Board for Professional Teaching Standards. She was on the committee of the National Research Council for *Eager to Learn* and *Neurons to Neighborhoods*.

Barbara T. Bowman: Child development research is predicated on the notion that there are similarities in the patterns of child growth and development. The search for these patterns has occupied researchers over much of the past century, and the current model is one in which the individual is shaped and molded through interactions of genetic potential within particular environmental contexts. Culture or group norms for behavior are therefore important influences on children's development.

It is abundantly clear from studies, both in the United States and around the world, that there is a baseline of human and material resources necessary to promote the developmental potential of children. Not all child-rearing environments provide these resources. When there are too few resources, and when children experience overwhelming doses of hunger, disease, danger, abuse, and neglect, their development may be severely stunted and learning made more difficult.

A number of projects, Head Start for instance, have demonstrated that young children who are at risk can maintain their typical developmental trajectory if given the basic resources of physical and emotional support. Thus, the first step in helping children reach their developmental potential is to put in place the support systems all children need.

Often, an environment may support development, but may not be attuned to the demands of a particular challenge. An individual may be within normal limits for a particular characteristic, but not able to meet the demands of a particular society. For instance, a myopic child may see within the range of normal, but may not see well enough to become a great hunter in a hunting society.

Similarly, a culture and language, which work well in one context may not prepare children well for another environment. A child may learn the culture and language of their home and community, but what they learn may not be what is needed in a particular environment, like school. Against this backdrop, in 1998, the National Research Council organized a committee of researchers to review the research on early education, draw conclusions, and make recommendations about how to best prepare young children for the challenges of school. The results of this investigation are contained in the report *Eager to Learn*. In the study, the committee drew on a broad range of scholarship in child development, education, anthropology, linguistics, psychology, cognitive science, neuroscience, and sociology. They also gave special consideration to children from diverse cultural and linguistic backgrounds.

I will briefly summarize the results of this report as it applies to culture and language. The report points out some principles of development that are relevant to the acquisition of cultural norms. Among these are that all normally developing children have a latent capacity to learn. Given the basic resources, children show a prodigious enthusiasm and competence for learning. This predisposition to learn frames much of early development. Rather than having to force children to learn, the research shows quite clearly that children come into the world ready to learn, as part of their genetic equipment. What this means is that at birth, the average child has the latent capacity to walk, talk, explore the world using their senses, make categories, use symbols, love, and be loved. Not only do they have the capacity to learn these things; they want to. Or, in the words of our report, they are eager to.

The evidence for children's predisposition to learn is quite robust. Babies learn their mother's voice and smell in the womb. In a few months, they learn to recognize the faces of their primary caregivers, and they use these faces as clues to emotion. At 3-months-old, they begin to make speech sounds used in language, and by the time they are 9-months-old, they are well on their way to eliminating the sounds they do not need in their own language community. This means that children eagerly embrace the culture and language of their caregivers.

Individual differences also matter. The various body systems—neurological, biochemical, physical—are shaped by genes, which affect, and are affected by, experiences. Hence development and learning, in many ways, is quite individual. For instance, an individual infant highly tuned to sounds may learn to talk easily and early on. Early talkers and late talkers have different resources with which to explore the world. They get different responses from others and thus have different opportunities to learn.

The interaction of genetic predispositions and experiences makes each individual unique in how and when they acquire knowledge and achieve developmental milestones. Many examples exist of normal differences in individual development. For instance, temperament, the arousal pattern for an individual, is fairly stable across time. Children approach learning language in somewhat different ways, some adding one word at a time and others starting off with groups of phrases. Within the patterns of development, there are individual variations in style, timing, and methods of learning.

Culture and language also affect children's learning. For instance, children come into the world primed to learn a language. Given a chance to hear and participate in verbal communications, most children will quickly learn to talk; some will learn to speak Hmong while others learn Black English or Spanish. Each child will learn the unique characteristics of his or her own language and begin to process experiences through that language's potential.

All children will learn to make categories, but some may learn to tell trees apart while others learn the difference between letters and numbers. Those who focus on the trees will become good at identifying them, and those who focus on letters and numbers will become experts at distinguishing them. They will all learn to love and be loved, but some will learn to kiss everyone in the family whenever they meet, and others will learn to shake hands or to bow, while still others may learn that it is all right to hurt the ones you love.

Children have similar capacities to learn, but what they learn depends on what their environment offers them to be learned. Children who live in culturally and socioeconomically diverse communities face different realities, learn different behaviors, have different traditions, and learn different values. They all learn, but what they learn is somewhat different.

I want to talk about low-income children who may be developmentally competent in their homes and communities, but who often fail when they come to school. Who are these children? They mostly live in low-income communities, and they often belong to minority groups that occupy a tenuous place in mainstream society: African American, Latino, Native American, and some Asian groups. Research points to differences in the socialization of children and school expectations from these groups, and those differences may account for some children's school difficulty.

In school, children are expected to have mastered a standard grammar, to have good-sized vocabularies, and to enunciate clearly in the standard accent of the school language. They must learn skills like reading, writing, and arithmetic, so they must have considerable background in understanding symbols. They are expected to sit at chairs and desks, not to talk whenever they wish, to line up to go to the bathroom, so they must have certain kinds of body control. They are expected to interact with peers without hitting or pushing and to do what the teacher tells them to. Therefore, particular social skills are needed, and there is a long list of specific linguistic, cognitive, social, emotional, and physical skills that underlie school achievement.

The knowledge and skills necessary for success are not natural in all environments. Some children come from families and communities whose child rearing does not promote school skills, although their families have taught them to be competent in their own communities. For example, children who speak Black English have a language that is suitable for expressing ideas among their own family and friends, and it represents the same developmental accomplishment as speaking any language. However, in the mainstream world of school, only Standard English is appreciated. The child who speaks Black English is a likely candidate for school failure.

Similarly, children whose home language is not English are disadvantaged in school when all the instruction takes place in English. Children whose cultures have different ways of explaining concepts, of valuing academic achievement, or defining self-control may be disadvantaged in the school environment. Following are some examples that show some of the differences among low-income children in relation to the factors that are relevant to school success. Many examples make particular note of the differences between welfare and nonwelfare recipients' children. For one, there are differences among different social classes for the attributes that are perceived of as

necessary for school success. These include the percentage of kindergartners who have print familiarity by family characteristics.

Another example is first-time kindergartners passing math proficiency tests, and the percentage distribution of first-time kindergartners by frequency with which parents say they persist at tasks, and then the teacher's judgments about the persistence of children. One of the interesting things is that the parents see their children as much more persistent than the teachers, which tells us something about children's behavior and how it is appreciated in one context as opposed to another.

What are the conclusions that come from this? First, avoid stereotyping. Teachers need to know about children's culture and language, not because they expect every child to be like the norm for the group, but because it gives a starting point for understanding children's past experience, values, and beliefs. It is the teacher's job to mediate between the demands of home and school so that school is not foreign and uncomfortable for children and their families.

Respect cultural differences. Throughout the world, people have found different ways to be human. While some of these ways may conflict with new realities, challenges, and environments, they nevertheless make sense to the participants in that culture, and are important and deeply embedded in their sense of self. Helping families adapt in a healthy way to new challenges is accomplished best by teachers who are sensitive, respectful, and who form relationships with families.

Differences do not need to compromise achievement. There is considerable evidence that quality, early intervention can ameliorate, if not completely compensate for, social class differences in school performance. Research on model programs from the Perry Preschool Project to the North Carolina Abecedarian Project show that when provided with a high-quality preschool program, young children can at least improve their later academic achievement, and at best gain parity with their more advantaged peers. As an aside, let me point out that this does not mean preschool is a vaccination. Schools must build on what is begun in preschool, when children are in kindergarten and the primary grades, if they are to continue to be successful.

Children need an opportunity to learn school-related skills and knowledge. This is the heart of the report *Eager to Learn*. In order to learn well in school, children must be developmentally competent; that is to say healthy in mind and body. But they must also have the opportunity to learn the knowledge and skills that underlie school success. Many children do not regularly have access to the experiences and expectations that are the social and cognitive foundation for school learning. Although they have learned in families and neighborhoods, they also need an opportunity to learn for school.

Prior learning is important. Recent findings in learning theory—and I recommend to you the National Academy report *How People Learn*—presents strong evidence for the importance of prior learning for later learning. In order for a child to take in new knowledge and skills for use in solving problems, the new knowledge and skill must be integrated into the child's old thinking and actions. Even simple concepts that children acquire early are the base for early learning, but these concepts must be broadened, and new frameworks or schemes must be created for information and meaning.

Good teaching provides the bridge and builds on what children already know. If new opportunities to learn are too narrow or meager, children may not be able to use their past experience to make sense of them. This leads to distorting the new learning or building too narrow a platform for understanding. Presumably, this helps explain why children who have limited experience with language, books, and symbols have greater difficulty learning to read.

Assess accurately. Assessment of young children poses a particular challenge as we try to ensure that learning is occurring. The first 5 years of life are a time of incredible growth and learning, but the course of development is uneven and sporadic. Additionally, how children express what they know may look different on the surface, but represent similar levels of achievement. There is a story about an anthropologist who makes the analogy that Muslims

show their respect for God by taking off their shoes and putting on their hats, while Christians do just the opposite.

Consequently, assessment, particularly standardized tests, must be carefully used and interpreted. Teachers need to become expert at observing, documenting, learning, and diagnosing problems, rather than depending on formal tests. Teachers who do not have the time and knowledge to assess their children, to plan, to reassess and replan, are not likely to provide the optimum learning environment for the young children they teach.

Finally, work with families. There is ample evidence of the influence of the family on children's school learning. When families are involved with school, children learn better. Further, the relationship children form with their teachers are critical to their learning, and mirror the patterns of the primary caregivers. Families need to understand their own importance to their children's education and learn what they can do to foster school learning. *Eager to Learn* summarizes a considerable amount of research on preschool learners, and I only had time to give you a small taste. I hope you will read the entire report. I believe if we implement its recommendations, we will ensure that all children come to school not ready to learn—they are already great learners—but ready to learn school-related skills and knowledge.

Bardwell: Ross Thompson is the Karl A. Happold Distinguished Professor of Psychology at the University of Nebraska. His research concerns sociopersonality development, early emotional growth in developmental science, and public policy. He is Associate Editor of *Child Development*, he edits a series of specialized volumes in developmental psychology for McGraw-Hill, and has served on several National Institutes of Health review committees.

Ross A. Thompson: Bowman has already given a reading assignment for today. The National Academy of Sciences has been unusually productive in the creation of materials that are useful to us, so let me tell you how to find them. They are available at the National Academy Press website, at www.nap.edu. There you will find information about *Eager to Learn* as well as another report that I have been associated with, entitled *From Neurons to Neighborhoods*. What is wonderful about both reports is that they converge in their conclusions about the nature of early development, about the kinds of catalysts that provoke intellectual growth in children, and about the importance of a social and emotional world as it relates to children's readiness for school.

I love the theme and title of this symposium because whenever we talk about young children's eagerness to learn in educational settings, we are recognizing the importance of a social and emotional side of children's intellectual growth. This is because when we adopt a developmental orientation to school readiness, we realize that young children's social and emotional lives are connected. We cannot disconnect them, because they are connected in so many ways.

As all of you know, they are connected motivationally. The children who are likely to benefit most from school are curious. They are excited about learning. They are confident of their own success, and they are convinced of the importance of school and its value to them. Children's social and scholastic lives are also connected socioemotionally, and this is because learning is not fundamentally an isolated activity. It is something that occurs in partnership with the teacher, and usually with a group of peers.

Therefore, young children's capacities to cooperate with their friends and with teachers, to follow instructions, to ask for guidance when they do not understand, and to be able to respond appropriately to differences with another individual in thinking and intention, are important ingredients contributing to their capacities to benefit from an educational setting. Children's social and scholastic lives are linked as well in the growth of self-regulation, because one of the most important challenges for young children is acquiring self-control in all the various areas that are relevant to their learning.

There is cognitive self-control with respect to the ability to focus one's attention and one's mind on the task at hand. There is behavioral self-control with respect to acting appropriately and cooperatively. Finally, there is emotional self-control with respect to being able to respond appropriately to the interpersonal demands of the classroom.

The fact that children's social and scholastic lives are connected is not news to those people who work with them. Research shows that teachers view children's motivational and emotional unreadiness as a source of great concern. This is because it is more difficult to assist children who are not interested in learning, who lack confidence in their success, or who seem incapable of cooperation or self-control, than it is to tutor letter or number skills. Thus, attention to intellectual preparation has to be accompanied by attention to the motivational and socioemotional qualities of early learning, and this has been recommended in both *Eager to Learn* and *From Neurons to Neighborhoods*.

There is a good deal of scientific evidence behind this. Motivational, emotional, and self-regulatory qualities mature significantly in early childhood, and here is the other side of our understanding. Although we regard the preschool years as a period of great intellectual preparation for the school years, it is equally true that during the preschool years, children are acquiring the social and emotional skills that are necessary for school success. When we think about children's readiness for school, complementing the intellectual variability that is apparent to all of us, there is also variability in children's emotional and motivational readiness. Some children arrive at school well prepared. Others are more challenged. For many of them, it arises from intellectual differences in their preparation, but for many others, the intellectual capabilities are in place.

What makes them more challenged in a school setting, as Barbara Bowman mentioned, are their social and self-regulatory lack of preparedness. Thus, when we think about the preschool years, we recognize that these are years that prepare children; that, in a sense, provide the motivational and emotional foundations for school success. This is true in so many areas. With respect to social cognition, we now know how significant the preschool years are for developing understanding of other people, particularly that inner psychological world of thoughts, beliefs, feelings, and intentions. All of this is studied by researchers under the rubric "theory of mind," making us aware of how much children inquire into what is going on within others' hearts and minds.

We recognize that social cognition and its development contributes to advances in children's capacities to cooperate. We also recognize that it contributes to capacities for social deception, since children understand that the contents of others' minds can be misled. But it also contributes to shared understanding, and the ability to take into account another's feelings and thoughts in social interaction.

Self-understanding is another accomplishment of the preschool years. Just as children are becoming aware of the psychological qualities of others, they are doing so with respect to themselves, far and away from earlier bodies of research suggesting that young children are primarily concrete in their self-perception. We now recognize that they see themselves along the lines of personality. The evaluations of others that children perceive about themselves have a lot to do with shaping their self-perceptions. Thus the praise or criticism of parents, caregivers, and others outside and inside the home are significant catalysts to shaping early self-understanding and motivation for children's eagerness to learn.

Emotional competence is another domain of growth in the preschool years related to skill readiness, defined as a capacity to feel the way one wants to feel in social situations. Research in our laboratory and others has shown that preschoolers make enormous strides in both emotional understanding and in learning to manage their own feelings. Parental guidance and the emotional climate of the home are important constituents of those developing abilities; so are the emotional demands of child care outside the home. These findings are especially important in concert with recent research indicating that early risks for emotionally-related psychopathol-

ogy are also much more apparent in the early years than one ever thought true before. Children are now showing capacities for depression, conduct problems, even phenomena that look disturbingly similar to post-traumatic stress syndrome, at younger ages than earlier generations of psychologists would ever have thought possible.

Self-control is also a major accomplishment relating to the preparation for school, because we know that with advances in brain functioning, particularly in the prefrontal cortex during the preschool years, children are developing capacities to regulate their attention, behavior, and emotions. Here again, the support of caregivers in-home and out-of-home, particularly in providing incentives for self-control within the context of manageable demands, are important constituents of whether or not children enter the schoolyard door capable of the kinds of social cooperation and emotional self-control necessary for school readiness.

Related to this growth in cooperation is conscience. Research by Grazyna Kochanska in our own lab shows that the roots of conscience development are established in the preschool years and are formed not on the basis of firm expectations, but on the basis of relational incentives. That is what motivates children to get along, particularly in the context of the warm and trusting emotional bond to an adult. In a sense, therefore, a humanistic basis for getting along with others is something that children pick up as preschoolers.

Finally, peer social competence is another important constituent of school readiness that is formed in preschool, particularly as children learn the skills and capacities for cooperation with others. There are many catalysts that I mentioned to children's growth in these areas. I have talked about neural-cortical maturation. I have talked about the growth of children's conceptual skills, and many others.

The most important contribution revealed in research to these emerging forms of psychological readiness for learning has to do with the quality of relationships that young children share with the people who matter to them, both in-home and out-of-home. Indeed, when we turn to research literature on the social and emotional determinants of children's readiness to learn in educational settings, we find that relationships are critical for children's readiness to learn in school.

I want to talk, in particular, about four kinds of significant relationships. First, a small but important body of research indicates that the warmth and support of the mother-child relationship predicts young children's later academic and social functioning in school. This conclusion is derived from several longitudinal studies, and others on the way. In one example, Estrada and colleagues found that a measure of the emotional quality of the mother-child relationship at 4 years of age was associated with children's cognitive competence at that age. However, it was also predictive of school readiness measures at 5 and 6 years of age, IQ at age 6 years, and school achievement at 12 years of age. These findings are consistent with a large body of research showing how the parent-child relationship influences intellectual growth, but is now extending it further to the beginning of school success.

A second important relationship is with the child-care provider. The quality of child care and the quality of the child-caregiver relationship also predict later school success and classroom behavior. Findings from *The Children of the Cost, Quality, and Outcome Study Go to School* study indicate, for example, that the quality of the child care classroom predicted language and math skills through second grade, and also predicted the quality of children's peer relationships and behavioral problems several years later.

Classroom practices that are most predictive of children's academic success are the kind that are familiar to all of us. They include assessments of whether procedures are developmentally appropriate for young children. They include the use of child-centered teaching methods, the teacher's sensitive responsiveness to children, and the creation of a language-rich environment. These conclusions, again, are consistent with broader bodies of research suggesting how important the quality of child care is to the growth of the capacities relevant to school success. Consistent with this, the child-caregiver relationship is also important.

Longitudinal studies such as those of Bob Pianta show that the warmth and sensitivity of the child care provider enhances social competence and reduces proneness to behavior problems in kindergarten and the early primary grades. But, it is not just the early child-caregiver relationships that are related to behavior problems; they also predict children's subsequent classroom thinking, attention skills, and concept development. Thus, relationships both at home and in child care are important.

That is not all. As children enter school, the quality of the child-teacher relationship is also an important contribution to school adaptation. As Gary Ladd's research has shown, young children who enjoy warm, positive relationships with their kindergarten teachers are more excited about learning, are more positive about coming to school, are more self-confident, and achieve more in the classroom than do children who experience more troubled or conflicted relationships with their teachers.

Indeed, one study by Hamre and Pianta, *Conflict In The Relationship Between Kindergarten Teachers and Children*, predicted children's academic performance and behavior problems through eighth grade. The relationship alone is not formatively significant, but it launches children on a trajectory of self-expectations and approaches to school that can have an enduring effect upon them. Additionally, relationships with peers in school are also important. Again, in Ladd's research, children who experience greater peer acceptance and friendship tend to feel more positively about coming to school, and they also perform better in the classroom.

When we talk about relationships, we are talking about a broad concept, and it is important to recognize that relationships encompass many different influences. What happens, therefore, when we try to unpack what is going on in these relationships? To borrow a phrase from *Neurons to Neighborhoods*, we are trying to understand the idea that relationships are the active ingredients of healthy psychological growth.

Many aspects of relationships that are revealed in relationship theory suggest what is important, including shared activity and understanding. I should say activity and understanding in the context of a warm and trusting relationship. Everyday activity with adults provides so many catalysts to skill development and concept understanding, through activities as innocuous as reading a story together, conversing about the day's events, explaining about insects, and/or walking through the day's routine tasks. These activities, consistent with the ideas of Vygotskyan theory, are what children are doing together with a skilled mentor with whom they are connected. They provide so many catalysts, not just for intellectual growth, but for the growth of social and emotional maturity.

We have found in our own research that everyday conversations between parents and young children about events in the child's life incorporate powerful lessons about emotion, morality, conflict, cooperation, and many other aspects of the psychological world that help to objectify experience that is sometimes difficult to comprehend. It gives children a forum for understanding as they converse about these experiences with people whom they trust. In this respect, therefore, it is not just shared activity and understanding, but it is activity in the context of the relationship with a trusted person, in which the security and warmth of that relationship makes the communication and the activity doubly important.

The scaffolding of cognitive skills is another Vygotskyan concept suggesting that much of what is done together is structured by the adult, again not just to foster intellectual growth, but also to contribute to the growth of social and emotional development and the capacities for self-regulation. Importantly, this kind of activity not only contributes to the growth of these skills in children, but also contributes to children's growing self-confidence and their excitement about becoming further competent in the future. Indeed, it is through these relationships and the scaffolding of skills for children that they come to value learning and becoming competent for its own sake.

Recent research in developmental relationships also suggests that the relationships provide a prism for self-understanding, social understanding, and acquisition of values. Young children

achieve self-confidence and a sense of self-efficacy in part through the expressed and implied evaluations of themselves by others.

In everyday social interaction and conversations about events, young children clarify their understanding of the motives or the intentions, feelings, and thoughts that underlie the behavior of other people. They also learn about themselves through how their actions are evaluated and described by others. This means that the quality of relationships that young children share with adults at home and outside of the home—in particular, the responsiveness, support, and opportunities for unhurried interaction they share with those adults—are important lenses through which children learn about themselves, as well as about other people.

Finally, I conclude with the double-meaning phrase that relationships make people matter. In a sense, relationships instill certain people in a child's world with special significance, and we know that this makes children far more receptive motivationally to the influences and catalysts for growth that these people provide. This is why caregivers outside of the home and in the home are so important. In another sense, relationships make people matter because they cause young children to care about other people by establishing a human connection between themselves and others.

In a sense, relationships make people in general matter to children by underlining their interest in how other people feel, in what other people think, and in other people's motives and intentions. The most general conclusion, therefore, is that young children's eagerness to learn in educational settings develops in the context of these relationships that children share with parents at home, with child care providers, with teachers in school, and with peers.

There are several implications for our thinking about children's readiness. One implication is that this provides a challenge to decontextualized assessments of learning readiness. It suggests as the empirical evidence also confirms, that assessments of learning readiness taken outside the context of the setting in which children are learning in relationship with others, may provide limited predictive value of how well children will do in school. This is because, as we have seen, many motivational and self-regulatory qualities of school adaptation are related to the settings and the relationships that young children experience.

Another implication is that our attention is drawn to the need for special support for at-risk children, although a great deal of popular attention is given to the disadvantaged backgrounds and intellectual shortcomings that they bring to the school door. It is also important to recognize that many of these children are also encumbered by difficulties in self-management and social emotional understanding, and in the self-confidence that diminishes their enthusiasm for learning. These may rise also from lack of relational supports that they experience in their preschool years.

Thus, one of the reasons that children from at-risk settings benefit more significantly from higher quality child care than do children from more advantaged settings is that, in a sense, higher quality care not only provides more beneficial intellectual challenges, but also the relational supports that underlie excitement about learning. This leads, finally, to my most speculative implication, and this is simply the idea that because beginning school presents so many challenges to young children, we should be considering how relationships could aid in the kind of institutional transition that beginning school provides.

There is so much that children have to learn to do when they enter a school setting, from learning directed by a teacher and the challenges of the peer environment, to mastering new daily routines and classroom expectations. It is not just a matter of children becoming ready for school, but it is also a matter of schools becoming better prepared for the young children who enter kindergarten. Part of that readiness on both parts may be based in the enlistment of relationships that children have drawn upon in the past as a way of helping them negotiate the institutional transition they face when entering school. There are many ways that this can be done. However, the broad idea is that when children can be supported by the relationships that have encouraged their learning in the past, they may have a more effective bridge to the new

relationships that will help to shape their learning enthusiasm in the months and years to come in school.

Bardwell: Next, Susan Landry will share research about how caregivers and teachers support young children's eagerness to learn. Landry is a development psychologist and the Michael Matthew Knight Professor in the Department of Pediatrics at the University of Texas, Houston Health Sciences Center. She is also Chief of the Division of Developmental Pediatrics and Director of the Center for Improving the Readiness of Children for Learning and Education (CIRCLE). The Center is currently involved in using the knowledge gained from years of studying young children to help promote the national goals of early childhood literacy initiatives. We have been one of the pilot dissemination sites for the CIRCLE project, located in seven classrooms in Columbus, Ohio.

Susan H. Landry: I will talk about how caregivers and teachers can support the cognitive development of young children in ways that facilitate and actually enhance their eagerness to learn. There has been a lot of attention recently paid to thinking about the best way to do this, due in part to our understanding of how many children are entering school not prepared to learn and succeed. We have already heard today that this problem is most pressing for children who come from families with physical disabilities or those with social and economic risk factors, such as poverty.

What does the research tell us is important to focus on in order to get children prepared and excited to succeed in school? One thing it tells us is it is critically important to have consistently high levels of interaction between caregivers and teachers at this early age. Thompson has already talked a great deal about how important this is.

Research tells us that an important way that this occurs is through teachers and caregivers providing specialized support for children's learning in the form of scaffolding. This may be particularly important in early childhood because of children's immature attention skills and cognitive abilities. The caregiver and/or the teacher, if they are doing this sensitively, are able to scaffold or support those immature attention skills in ways that allow the child to integrate information more effectively and to learn new concepts, such as vocabulary and language skills.

The research also tells us that there are specific ways caregivers and teachers can scaffold. There are at least six important areas that need to be attended to in these early interactions. The first, and maybe the most important, is a rich language input by families and teachers giving children information about what things are called, why they work a certain way, asking questions about what the child thinks, and asking children to make predictions. This might occur through book reading, through conversations at the breakfast table, sitting on the front porch, or in the car. These are ways that the caregivers and the teachers point things out to children and engage them in conversation about what things are called, but also about letters, sounds, and other early literacy activities. This interaction allows the child, in a natural progression, to become comfortable with the concepts by the time they enter kindergarten.

Second, this cognitive input becomes integrated more effectively for the child if it is done in a way that promptly, contingently, and sensitively responds to the child's signals of what they are interested in. The third point relates to maintaining and building on interests rather than redirecting or ignoring them. Fourth is fewer restrictions. It is much more effective if high levels of restrictiveness are avoided, particularly those that are harsh and punitive. As we have seen, this shuts children down. They become passive, less likely to take initiative and, therefore, less likely to be eager to learn. Fifth, we also need to become much more aware of children's capacity for making choices and decisions, and we need to give them opportunities for doing that. Lastly, we do this best if we are all monitoring their behavior sensitively and consistently.

Is this form of scaffolding particularly important across early childhood, or could we wait and do it later on? What if we do not see it happening? Is there a chance to catch up? Many

people predict that this group of behaviors is particularly important in early childhood because of the active growth that is occurring in the brain. The organization of associations and the capacity for this form of support from others allows that young brain to integrate information and develop stronger associations more effectively. Therefore, the thought is that because of the flexibility of the developing brain, this needs to occur at high levels across early childhood.

One way we have tested this out in our laboratories, which are basically families' homes or early childhood classrooms, is by studying 360 children and families from birth. The children are now turning 10 years of age. We have studied them in their homes every year to look at how families are supporting children. These are low-income families, and we are looking at how this naturally occurs. We subgrouped these families according to the six key essentials that we found were most important in predicting how well children did, and we found that of this large group, we had four subgroups of caregivers. We had multiple measures of parents' interaction styles across the first year of life to 2 years of age. The first group used scaffolding techniques at high levels, relative to the rest of the sample, and they continued to do that until entry into kindergarten. Additionally, they were consistent across that period.

The next group was inconsistent in their pattern of behaviors, using these techniques at high levels, equally high as the first group, but dropping off dramatically as the child developed independence and autonomy. For some mothers and fathers, this was a particularly challenging period and they were not able, for many reasons, to keep that support available to the child. The third group was very low in infancy and got a little bit better as the child approached 2 years of age. The fourth group was, unfortunately, consistently low in providing this type of support.

We measured the children's skills with assessments of cognitive and language development and put those together into a construct. We included infants of very low birth weight with significant medical complications at birth who were at biological risk, and full-term healthy children who were at environmental risk. Some children in this sample were at double jeopardy because they had both types of risk factors, and some were at single jeopardy because they lived in homes that were from poverty backgrounds only.

We found that the two inconsistent groups did not differ from each other, so they were put together. The children, and this again was a poverty sample, with the mothers and fathers who did this at consistently high levels were at normal, average cognitive language skill levels when they entered kindergarten. The other two groups were lower and tapered off.

To determine if this form of scaffolding was especially important in early childhood, we studied these families when the children were 6 and 8 years of age. Statistically, we entered those parenting behaviors into the equation and found that they did not provide explanatory power above and beyond the early clustering of scaffolding in the youngest period. Actually, the numbers leveled off and then down. They were not at average levels at 8 years of age in any of the groups. Again, this points to the importance of high-quality early childhood programs. This research clearly shows us that the parent is a critical source of stimulation for the child and that they do this for language, social, and cognitive development, as well as a broad range of subareas within each of these areas.

They do this in many ways. They model good language. They model this in terms of activities that they do at high frequency that are focused on the types of skills children need to develop. This may be in play activities, book reading, engagement around everyday activities, and in conversation. We are finding that this is particularly effective in homes where parents appreciate and understand their role as a teacher of their child and do not expect that it is going to happen by other people providing the input.

We also find in the research that it is relevant across cultures and economic levels. Recently, we wanted to test whether families that were taught to use these scaffolding techniques would develop these skills at higher levels. Would the children show stronger learning and responsiveness in joint attention or shared activities? We first worked with these families when the children were infants. This was the Playing and Learning Strategies (PALS) group.

Now we are working with their toddlers and preschoolers, looking at children's signals, interests, what they need, and what they would like the parent to get involved in with them. We coached the parents on responding contingently, promptly, warmly, and with sensitive behaviors, including tone of voice and pacing, in ways that maintained interest. We helped them to provide lots of information through labeling, engagement in conversation, toy demonstrations, and avoidance of restrictions.

We did this in home settings where families watch short, focused videotapes of other mothers doing things with their children in each of the six areas of scaffolding. The mother stopped and started the tape and talked about what she saw and what she thought. Then she was coached to try different things with her child that she chose, whether it was a feeding activity, toy play, going to the bathroom, or taking a bath. Then she was videotaped, and she looked at the videotape with her coach and critiqued herself. Mothers loved this procedure. They said, "Ooh, that was good. I like that. Look at the way she responded when I did that." Or, "Uh oh, I have got to stop doing that. That is not working." It was a very powerful technique for families to decide for themselves what they think is working with their children and what they think is not working.

Then we measured, through videotape, mothers' interactions in toy play, everyday activity, and reading short books many times across this coaching period. We systematically coded the different scaffolding techniques and the child's response. This is the group we are working with. We have finished and are now working in the toddler-preschool period.

A second group got developmental screenings and the same number of home visits, with a person that came and talked with them about their child's development but not the coaching program. The group that got the coaching made significantly greater increases across time than the other group that did not get this kind of input. The coached PALS group used richer language, scaffolding techniques, and explanations. Maintaining attention, redirecting, and ignoring signals increased exploratory play and questioning. The PALS group significantly increased and grew in these skills across time.

There was a decrease in the coached group of noncompliance or lack of responsiveness in shared interactions with caregivers, an increased and greater degree of responsiveness to verbal requests, independence of the mother when the examiner did a social interaction around toys, and a greater degree of responsiveness to that examiner.

What happens when we combine those six scaffolding techniques with school readiness behaviors, with the teacher as the target? Do we see a similar phenomenon in children's growth when teachers learn how to scaffold language, use open-ended questions, help children learn about letters, creatively engage children in learning, explore letter knowledge activities and sounds, and move up the phonological awareness continuum to segment words, syllables, and writing techniques? When teachers combine the six key essentials and the research-based literacy activities through coaching and mentoring, we see significantly greater growth in language than what occurred in the control classrooms. These are receptive and expressive language increases across eight months.

In the expressive category, the group that got this type of engagement around literacy made 14 months on average gain in language skills and vocabulary. Phonological awareness, print concepts, and letter knowledge also increased dramatically. We asked 500 teachers to rate how the group fared on social-emotional behaviors. The teachers said it was an indescribable feeling to see children who entered their classroom initially with low self-esteem become confident, take initiative, and tell them what they were interested in. They also saw this for children with disabilities such as speech disorders, as well as children whose home language was not English.

In conclusion, these approaches are challenging both for our families in poverty and for our classroom teachers who have children in poverty. However, it is possible to support teachers and parents in supporting their children to be eager to learn, and to do this in ways that enhance social-emotional development and school achievement.

Bardwell: Ron Herndon is Chair of the Board of the National Head Start Association. He is Executive Director of the association and long-time Executive Director of Albina Head Start in Oregon. Herndon comes to the stage as I do, as a Head Start administrator. He will share with you the policy and practice implications of what we have heard from research. That is where the rubber hits the road.

Ron Herndon: I have been in other positions where the rubber met the road. I guess I would rather be the "rubberor" than the "rubberee." In listening to the panelists, a couple thoughts occurred to me. One, in all that we do, and most certainly for those of us involved in research, we should always maintain a certain amount of humility. I say that because there are those who have come before us who have done research and believed just as passionately in it, and then we found out that there were errors. Let me remind you of something called phrenology. Phrenology, for those who have not been around long enough, is to tell what people could do by the shapes of their heads. A great deal of research said that was possible. People made careers of that.

Coming up a little bit further, when I was a little boy in grade school back in the 1950s, a great deal of research said that little boys with my complexion could not do as well as little White boys and girls. As a matter of fact, I read it in the books that they gave me in school. It seemed kind of strange to me when I was reading this and looking at my friends. I said, "Look, man, they say we are supposed to be like this, that we cannot do that, and the other children can."

When we were finally in relationships with White boys and girls, it is a shame to say, but we used to take a great deal of pleasure in beating them both physically and intellectually. I am not talking about fighting, but I am talking about when we made the honor roll or were in physical competitions, because we were not supposed to be able to do that, according to the research. You all have probably run across a great deal of research indicating that women were not supposed to perform as well as men in certain areas. I think it was Napoleon who said that history is an agreed-upon myth.

As we do our research, begin to make decisions, and come to conclusions about those who are most vulnerable in our society, I strongly suggest that we always maintain a certain amount of humility, knowing that we might be wrong. When research begins to impact political decisions, we should have even more than a tablespoon of humility and think we might be wrong.

As we begin to make decisions about children, I would hope there are more positive things than negative. For example, in case you forget, when children really upset you, here is a list of positive things you can say to them. If you keep this on the wall or leave it in your bedroom and you think you want to smack one of them, quickly read this list and say, "Oh, I like the way you did that. You are such an intelligent child."

Therefore, when we begin to describe children and their families, most of what we have to say sounds negative: they do not have this, they do not have the other, they have not had this, they have not had the other. When am I going to hear the positives? Do the positives only come when I intervene? Did these families not have positive attributes, long before I showed up on the scene? It has always been interesting to me, and I think this is important. Years ago, I did some training for people who were going into the Peace Corps. One of the first things that was done was to teach Peace Corps volunteers to respect the culture of the society they were going to. One of the first things they had to learn was to understand and respect others. How much effort do we make to help teachers and those who work with low-income children respect the families, their cultures, and societies, before we begin to make some hard and fast decisions about what these children do not know, cannot do, and what their families will not do?

Case in point. This is a little bit of baffling research that is not frequently shared. Let us take a look at understanding African American and White children when they get into high school. We talk about risk factors and all the things that could occur in a child's life that could lead them to failure in one way or another, or to not being as successful as we would like them to be. In high

school, when the hormones are really raging, African American teenagers are less likely to smoke, drink, or become binge drinkers.

African American boys are also less likely to carry a gun to school and less likely to be involved with drugs. If I were getting ready to go into a community, especially an African American community with all the risk factors, one of the first things that I would say to those who are going to intervene is, "Yes, like all societies and all cultures, this particular community has strengths and weaknesses; but let me share some of the strengths." What is it about a group of people who supposedly are surrounded by pathology, that somehow the children who are at risk get to this crucial age and are able to avoid the destructive, negative behavior when their peers who come from "across the tracks," who have had many more advantages, have not been able to cope as successfully? Then we begin to talk about strengths in a community.

What can we learn from this community? What is it? What are the lessons that we can share with parents who have had their hearts broken because their children are acting out in socially unacceptable ways? I will never be able to do that as long as I see this community as a community that is filled with only problems. I will not ask the questions about strengths and how to build upon those strengths in the community. That is a fundamental difference in the way we approach research.

I have been with Head Start since 1975. I have seen thousands of children and families, and 99.9% of these families wanted what was best for their children. "Show me how to do it. Help me. Like most of us, there are times when I have stumbled. Give me a helping hand and if I run into problems later on, would you please be there to give me assistance?"

Unfortunately, the majority of these low-income families send their children to the lowest performing schools in the community. They send their children to schools where there are the least experienced teachers. They send their children to schools without a so-called "robust curriculum," with the highest dropout rates. The children will never see a second language or a physics class. Then we turn around and say that all of our predictors of failure are true. Well, I guess so. It is like we take a big barrel of misery, throw the children in it, and then say guess what, they came up miserably.

Let me conclude that we need to exercise a great deal of humility when we begin to make hard and fast decisions about other people's lives, and especially the people who may not look like us, come from a different community, or are of a different cultural background. We are treading on social quicksand. We should give positive reinforcement that outweighs the negative, for both children and parents. Before we make assessments about a culture or a group of people, our positives should outweigh our negatives. If we cannot do that, then I would suggest that we go back and examine our own research.

Finally, in all that we do, someone will have to be there for parents who are vulnerable, with the hand of friendship, the heart of love, and the assistance, which is what all of us need at some point in our lives. Somehow, somewhere, we will have to make sure that it is stretched out to parents when they need it.

Plenary II

Self-Regulation: The Interplay of Cognitive, Biologic, and Emotional Domains

CHAIR: John W. Hagen
PRESENTERS: Sybil Carrère, Claire B. Kopp

- **Self-Regulation in Young Children: Does it Really Matter?**
  Claire B. Kopp
- **The Child, the Family, and Emotional Development**
  Sybil Carrère
- **Quality of Care and Stress System Activity in Young Children**
  Claire B. Kopp for Megan R. Gunnar

John Hagen: We have three presentations on the topic of self-regulation. Megan Gunnar, is unable to attend due to travel difficulties. However, she sent her presentation electronically and Claire Kopp has agreed to present her talk.

Claire B. Kopp received her Ph.D. from Claremont Graduate School. She was on the faculty at UCLA for many years. Her research interests have broadened, but she has worked in social, emotional, and cognitive development in infants and young children. She has been interested in infants and children at risk for a long time. Her training has been in developmental psychology, but she has also moved into the areas of clinical psychology and neuroscience. Kopp is the author of *Baby Steps: The "WHYS" of Your Child's Behavior in the First Two Years*. She has been a member of SRCD for a long time and has served as the editor of the newsletter. She has been President of Division 7 of the American Psychological Association, and has served as editor of the Guilford Publications series on emotional and social development.

Claire B. Kopp: John Bowlby once said that when one has a baby, one has 5 years of hard labor ahead. For those of you who are parents, you know that well. For those of you who are not parents, you just have to trust us that it is so. There are truly relentless demands on parents of young children ranging from basic physical nurturing, to emotional nurturing, to socialization, to creating an environment for learning.

There are rewards for parenting as well. I have learned much about the demands and rewards of parenting from parents whom I have counseled over the past 30 years. They have shared their trials, tribulations, and rewards. Friends, grandparents, and other relatives have also come to me

with stories about young children. I have a wonderful corpus of tales of toddlers, particularly around the issue of learning to be social and learning to follow norms. Learning to follow norms is in fact fundamental to self-regulation. I would like to share one of these tales.

My husband and I were in the mountains in a national park. The national park has a famous hotel, and in the hotel is a very famous gift shop. The gift shop, though, is extremely small. When we walked in, I saw a child of about 2, reaching for a shelf filled with colorful sand in bottles. As she reached for this shelf, I saw a woman with an infant in her arms reach out to the toddler and try to grab her. It was a case for disaster. The mother must have realized this so she called to another child who was about 8 or 9, and she told the child to take the toddler out. My husband and I finished whatever we had to do in the gift shop and left. As we exited the gift shop, there standing to the left of the doorway was the 9 year old calmly reading a book. At her feet was the toddler. The toddler was crouched with her head in her arms sobbing as if she had been abandoned.

It was a riveting scene for me, because the toddler had not gone back into the gift shop. She was there, following the rule that says, "If mom says you are not to go back into the gift shop, you don't." It is true there was a monitor there in the eyes of her sister, but she did not run away from her sister. She was there outside bawling, but she was showing the beginnings of self-regulation. It was a little victory.

I want to talk to you about some of those little victories that make them the path to self-regulation. We will talk about what I consider the definition of self-regulation. There are children who seem to have a great deal of difficulty in learning everyday norms. We have learned in the past decade that there is stability for some of these children. Some, however, go on to have major problems.

Why does this matter? We know that children who do not follow rules tend to have conflict with their parents and others in the family. Sometimes we do not know if the child is at fault or the parent is at fault, or both. Clearly, family relationships suffer when children do not follow the rules. We also know that children who do not follow rules do not do well in school, and they do not do well with their peers. I also would like to add that children who do not follow rules tend to be unhappy children.

First, let us make sure that we have a common understanding of the term self-regulation. Many people are using the term self-regulation, but since the early 1980s, my definition of self-regulation has been the following: recognition and acceptance of norms, particularly the do's and don'ts. Primarily, don'ts are for young children. The don'ts are prescribed by others who "matter" in the child's life, and that is an important point. Self-regulation also means that eventually the child does not require external monitors to follow norms. Compliance to norms is not slavish or mindless. There is a role for the child in following norms. The role can be, "Hey Mom, I can't do this now. Give me a little bit more time," or question, "Why do I have to do this?"

In terms of respecting the child's needs, the child should not lose self-worth when socialized to norms. Self-regulation also means that the self is absolutely essential to follow these norms. The child begins to realize that norms relate to him or her as the person. This often occurs somewhere between 18 and 24 months of age in terms of our data. Another point to remember is that one's needs are not always in sync with others; we think that understanding occurs around the age of 3. Thinking, "I am responsible for my actions and the conflicts I create when I do not follow the norms" probably comes somewhere around the age of 4.

How do we measure self-regulation? Initially we do not measure self-regulation per se. We measure compliance, the everyday do's and don'ts, the delay in waiting for something, and modulation in terms of not shouting or not having a temper tantrum. We have data that suggests that at about 18 months of age, children can follow everyday family rules fairly well. We have data that suggests that at 18 months of age, on average, a toddler can wait 7 seconds. That is not so good. At 24 months, many toddlers are able to wait about 2 minutes. We also have data

that show that if a mother says to a child, "Please wait until I get off the telephone," even 6-year-olds have problems with this. One might want to speculate why this would be.

Briefly, let me tell you about an 18-month-old and her two rules. I was giving a lecture years ago at Ohio State to a group of psychiatrists and social workers. A mother approached me and said, "I have an 18-month-old daughter. Would you like for me to bring her in next week to the seminars that you are conducting?" I said, "Great." When the mother came in the following week, I asked her, "Do you have any everyday rules for your child?" She said, "I have two. First, she is not allowed to go into her brother's room, and she respects that. Second, she is not allowed to stand on tables." We were in an informal seminar room that had a little table. I do not know what possessed me, but I stood on the table. The little girl went over to her mother, buried her head in her mother's lap, and said, "Table, table, table." She was truly upset, so I got off the table. The following week the mother came back to the seminar and I said, "What happened?" The mother said to me, "All my daughter said on the way home was 'Table, table, table.'" So there are messages that they understand.

I want to talk to you about some of the contributors from culture, parents, and children. I also want to spend some time talking about language and present some data on developmental paths and problematic self-regulation.

There are five points that I would like you to keep in mind regarding this presentation. The first point is that most of our data come from middle-class, White families. We know so little about other cultures within the United States. We actually know more about Japanese families and rules than we know about families of Asian American, African American, or Latino background. The second and third points are that there are truly essential parental contributors and child factors. The fourth point is that self-regulation for young children is not an easy process. The last point to emphasize is that learning to follow socio-cultural norms should not lead to a loss of the child's self-esteem.

What do we know about social-cultural norms? We know from the scant data that we have that most cultures have safety norms for children. Even the most unsophisticated cultural groups put a high priority on keeping young children from harm. We also know that most cultures have a norm for what they consider a "good child." This "good child" norm may differ across cultures, but there is something about a good child. We have a sense that this "good child" norm reflects age expectations for the child. What type of differences might be expected in terms of cultural variations? There is a difference in rule emphasis. Some rules will be more emphasized than others, with the exception of safety rules. The ages expected for a young child's compliance will vary. Lastly, there will be differences in the degree of autonomy provided for children. By the way—if anyone is interested in doing collaborative work with different cultural groups in the United States, contact me.

Now I would like to turn to some of the important aspects of parenting. We have enough data that tell us that if we want children to learn, if we want them to be social, if we want them to be emotionally happy, the style of parenting that works best for most parents is being warm, firm, and fair. Firmness is definitely needed for problems, but it must be accompanied by fairness.

In terms of self-regulation, I believe that there are certain actions as parents that are absolutely essential. The first thing is structure in the household. For young children, structure often takes the form of schedules. Schedules are typically implemented very early in life. Schedules create boundaries for children that help them to become secure. Schedules are an essential prerequisite for teaching children about norms because schedules allow the child be alert and attentive to safety rules. In our data across three samples, we saw that parents initiate safety rules fully in the 2nd year of life. They emphasize safety rules so the child gets the message.

Interpersonal norms reflect respecting other's possessions, not going into a brother's room, or not touching the VCR. They could also include being polite, saying, "please," or "thank you." Parents also express those rules at about the midpoint in the 2nd year. Social conventions include what one wears when one goes outside or how early one can go to a neighbor's house.

Parents' emotion control expectations are harder for the child to meet. Parents may hope for it, but it takes a while for the child to get there. Parents also train children in independent functions, such as dressing oneself, personal hygiene, and so forth. Research findings have included cross-cultural norms. For example, a mother in Okinawa getting ready to nurse her 2-year-old child withheld her breast until the child said, "Please."

What about children? What is it that they need to bring to learning norms? First, there is the emotional social bond. Why should a child even bother to follow the norm if he does not like the person or feel close to the person who is waiting for the child to say, "Please" or "Thank you?" Cognition comes initially in terms of comprehension, and we published a study where we found that the increase in comprehension during the toddler period is associated with an increase in performance. Additionally, children have to remember what they hear in weighing out the norms, so memory is important. If one is not paying attention to the parent, one cannot get the message about the norms.

The fourth point is temperament relating to individual differences. There is a growing body of data that show that children who are very difficult to deal with early in life and who have parents who are not responsive to this difficulty have a long course of behavior problems that start in the toddler period, continue into preschool years, and, for some, continue into adolescence. Temperament is something to consider.

Katherine Nelson's work is particularly informative in terms of thinking about language and self-regulation. In her book in the mid-1990s, she makes three points on the use of language for children. First, language provides a way for children to have an internalized dialog with themselves. They think about ideas. The second point is that language affords the young child the opportunity to describe the self and also to evaluate the self. The last point is that language provides communication to others. Self-appraisal is important in self-regulation.

Here are some of the ways that a young child uses language. All of these are important. I have learned in the last few years that when children start to say, "If...then...", then one can make a sentence that they are going to understand when behavior has been difficult for them. The "I"s are widely used in language at this age: "I can," "I won't," "It's mine," and so forth.

Here are language examples from our laboratory from a child who is 4 years of age, where the child is playing with an assortment of toys, while the mother is sitting nearby: (a) "This is the newspaper for the morning;" (b) "My school has a playground;" (c) "No, right now! We're going to play this now;" (d) "I want a snack now;" (e) "She's going to be the cooker;" and (f) "Well, I want a booster chair for her." Those six examples are of communication. The next example comes from the child telling one of the toys around the toy stove, "You can't touch this when the water is boiling." It's just after dinner now, so they can't eat anything. This is a type of reasoning that we hope children get to, and this is why language is so important here.

Self-talk is helpful for adults as well as children. This is strictly about when self-talk might come in and the types of self-talk that exist. For those interested in self-talk, Patrick Estin edited a book called *Crib Talk* which is an excellent example of how young toddlers talk to themselves at night and in the morning. One gets a sense of what it takes from the culture, from parents, and from the child, to follow norms.

Let us turn to data primarily related to compliance. I published this data with Heidi Freidinski in the early 1990s of children aged 13 to 36 months. The highest score is "4," which represents the child following the rule usually on his or her own. A score of "3" means that the child is more or less following the rule, but not regularly. We looked at safety, interpersonal compliance, delay, and self-care. Much of these data were collected from a sample that was primarily middle class and White, and the mothers were highly educated. Therefore, we were concerned about the representation of the sample.

In a later study with Coulson and Neufeld, we recruited other participants from child care centers and created a more ethnically diverse sample. We added a social-emotional variable, which represented behaviors such as not getting into fights with children, not screaming, or

being nice in the family. The older sample is composed of, on average, 5-year-olds and the younger sample is composed of 2½-year-olds.

The range of scores for safety is wider for the 2½-year-olds than for the 5-year-olds. The average score for each group is significantly different. The range is so much narrower for the 5-year-olds meaning that most children are following safety norms by that age.

We have some data from Japanese colleagues looking at children between 18 and 24 months. Findings included more compliance in terms of safety in American homes. In explanation of this finding, we know that there could be more expectations on the part of American parents about safety norms, probably because there are far more safety hazards in the United States. We also have data that indicate that there are fewer expectations from the mothers in the Japanese culture. These data are consistent with other findings from other studies from Japan. There is a great deal of indulgence from Japanese parents towards their toddler children.

These data also are consistent with recent publications showing that "don'ts" are harder for children to follow—it is easier for them to follow the "do's", and we believe it is because of the emotional climate.

Language data shows that in disputes children tend to justify why there is a dispute, and the justifications are primarily around the child's own feelings. The child feels hurt. There is far less concern about other's feelings. Immaterial consequences do not get as much attention as the child's own feelings.

One of my doctoral students, Bonnie Klimes-Dougan, did her dissertation on child negotiation. An example of child negotiation is in a clean-up situation. A child has been told to put away toys, and a child tries to distract the mother from the task. There is a lot of negotiation at age 3 to get the mother not to think about the task. What is the negotiation? I have to go to the bathroom (or potty). Read me a story. Can we read now? Can I play with something else? Examples of that type of negotiation decrease because by 4 years old children are compliant. This type of negotiation is when a toddler says to the mother, "I hear you, Mom. I'm going to put the toys away, but I'm going to do it my way." The self is emerging, reflecting self-needs. I am going to put old toys away. I am going to put dolls away first. I am going to do something. I am listening to you. I am realizing that the toys have to go away, but I am a person, and I will tell you how I will do it.

I want to turn to biosocial risk factors. We have increasing data that show that children who are born very early (premature infants, children whose mother's have used illicit drugs) tend to have problems with physiological regulation early on. It is my belief that children who have difficulty with physiological regulation (they do not sleep well, they do not eat well, they do not handle schedules well) are candidates for poor self-regulation.

Genetic disorders can cause children to have difficulty with rules. If there are central nervous system disturbances or brain damage, particularly early brain damage related to the frontal lobe, there is much data that indicates that these children will have long-term difficulty with rules.

Children who have development delays and delayed use of language tend to have difficulty with rules. We have to understand that children with moderate forms of cognitive impairment do not reason well or follow rules well. For further discussion, I recommend Sissy Pampel's 1995 paper in the *Journal of Child Psychology and Psychiatry* where she has looked at the data for children who have difficulty with rules, complex problems, and so forth.

I would not want to end on a sad note, so I am going to end with a very brief story. Six months ago, a colleague said to me, "My granddaughter has started biting. This is a big problem. I do not understand this, because she has incredible language. She has hundreds of words. She speaks in sentences that are six, seven, and eight words long. Why is this child having so much trouble with biting?" I said, "I don't know, but why don't you go home and talk to her about it, and get your daughter or someone to talk to her." They started doing this, and there was not much change. One child, in particular, was the recipient of the biting. About 2 months ago, the little girl came to her grandfather after a biting episode and said, "I bit Annie, but I didn't bite Betty."

I was thrilled when I heard this and I said to my colleague, "She's reasoning now about the people who mean something to her and those who don't." I said, "I think that very soon you are going to see a decrease in biting." I was right. It took another 6 weeks or so, when she began to say to her mom when she went to the play group, "I will not bite." What she did was to start biting herself when she got angry. That did not last very long, because it hurt. Then she started to yell at the little girl who was taking her toys, but she did not bite her. I promised the grandfather that, eventually, she would stop screaming at the little girl and talk instead. It took 6 months, but it was success. It was a little victory on the path to self-regulation.

John Hagen: We are now going to hear from Sybil Carrère. She obtained her Ph.D. at the University of California at Irvine. She is currently a Research Assistant Professor in Family and Child Nursing at the University of Washington. You have probably heard of some of the research that she has done with Dr. John Gottman at the University of Washington. That work has gotten much national acclaim. The work I am alluding to predicts from interviews with newlywed couples whether they will ultimately divorce or not. Her presentation is entitled "The Child, The Family, and Emotional Involvement."

Sybil Carrère: I am going to talk about children and their parents and what parenting has to do with children's emotional development. First, I would like to talk briefly about the relationship between parenting and children's emotional development. This will build off the work that Claire Kopp was just presenting in terms of self-regulation. Next, I will discuss emotion regulation. I am referring to children's ability to soothe themselves emotionally. Then, we will review some biology and discuss the physiology of emotion regulation and how parents can help their children physiologically self-soothe. Finally, I will talk about what this all has to do with children's readiness for school environments.

As Claire alluded to, it is well established that parenting styles influence children's emotional and social development. Much of the research is focused on disciplinary styles using parenting and the kinds of predominant affect parents use when interacting with their children. In general, we know that when parents use inconsistent restrictive discipline techniques in combination with cold or hostile affect, these children have displayed more negative kinds of affect. They have more problems in how they interact with other children, and they are more easily stressed than children whose parents use more warmth in combination with either a restrictive disciplinary style or permissive, however, consistent disciplinary style.

The work that we have been doing at the University of Washington suggests that this mainstream work on the link between parental disciplinary style and child outcomes also can be extended by a more general consideration of how children's outcomes are related to the parents and the child's interactions. This is related particularly in emotional moments, whether it is the emotion of the child or whether it is the emotion of the parent. Gottman, Katz, and Hooven found that there are such links between those parent-child interactions around emotion and things like social competence, prosocial behaviors, and the psychological health of the child, as well as how well they will do in school settings.

We are not the only laboratory that has conducted this type of research and found these kinds of results. For example, Denham and her associates have found that emotional competence in preschoolers was predicated upon how parents teach their children about emotions through modeling and positive coaching behaviors. Work by other people, such as Eisenberg, has extended our understanding of this relationship between parenting and emotional competence into middle childhood and adolescence.

I would like to briefly discuss what we mean about emotion regulation. This construct has emerged as central to this research on parenting and emotion. One of the presenters yesterday, Ross Thompson, had a good definition of emotion regulation that I would like to borrow. When he talks about the child, he says that emotion regulation is whether we can find extrinsic and

intrinsic processes responsible for being able to monitor, evaluate, and modify emotional reactions, especially the intensive and temporal features in order for that child to accomplish their goal. Some signs of successful emotion regulation have been outlined by Katz and Gottman. They suggest that the child that can successfully modulate their emotions is a child who can inhibit inappropriate behaviors associated with extremely strong negative affects, such as temper tantrums or extremely "over the top" kinds of positive affect.

Emotion regulation also concerns the ability to self-soothe the physiological arousal that the strong affect has induced. It has to do with the child's ability to focus attention, and this is very important in terms of their readiness for school. It also has to do with the ability of children to be able to organize themselves for coordinated action in the service of an external goal. Many researchers believe that this broader context of emotional parent-child interaction is an important link between parenting techniques and child outcomes. This link is emotion regulation.

I want to talk briefly about how the physiology of emotion regulation has to do with the child's ability to physiologically self-soothe. The ability to physiologically self-regulate is recognized as a very important developmental landmark, and it has been linked to important childhood outcomes beginning with infancy. Let us do a brief biology lesson. We think that neural regulation is a very integral part of emotion regulation. You may remember studying the autonomic nervous system. The autonomic nervous system has two parts: One is the sympathetic nervous system that activates the heart and gets it pumping faster, and increases your heart rate and blood pressure. It can be thought of as a gas pedal for the heart. The other is the parasympathetic nervous system. This is like the brake pedal for the heart. It slows the body down and it brings the body back into homeostasis, primarily through the vagus nerves.

Within the very first months of birth, the major task that an infant has is to learn how to achieve that physiological homeostasis. The infant does this by being able to self-regulate its physiological responses. This is done primarily through reactions to the environmental situation that they are in and self-soothing constant behaviors (turning away, sucking their thumb, and so forth). Infants who achieve physiological homeostasis can then shift their attention from distress that is happening inside their body and begin to focus outwards. When they focus outwards, it provides an optimal state to be able to receive sensory and social information. That is why it is so important.

Parents are critical in helping their children develop the physiologically homeostatic mechanisms that are integral to emotion regulation. Parents can help their infants achieve physiological homeostasis before the infants are even able to do it for themselves. This ability of the parents begins with the parent's faculty for responding to an infant's distress with affection and comfort (this work comes from Judy Dunn), and it continues with face-to-face play with the infant during the first years of life.

The ways in which caregivers interacts with their infants can influence the children's basic regulatory abilities, and it lays the ground work for later abilities that the children will develop in self-soothing, in repair interactions, and in their ability to focus attention. Researchers have argued that these emotion regulation abilities in infancy are fundamental to the development of cognitive abilities and social competence later in the child's life.

The parasympathetic nervous system's activity can be indexed by the vagal tone, which is related to what I was telling you earlier about the nerve's control. Research by Stephen Porges and others indicates that the vagal tone is associated with a child's ability to self-regulate and to react to the environment, and the ability to suppress the vagal tone has an important role in helping that child sustain and focus attention.

The capacity to emotionally self-regulate also has implications for the child's ability to appropriately manage the often emotionally provocative and stressful challenges that take place within the school environment, both inside the classroom and in terms of the social dynamics that are taking place with other children.

Now I want to introduce the poly-vagal theory that Stephen Porges has developed. It is a phylogenetic developmental model of neural regulation of the heart and it allows for three

emotional subsystems. These systems are hierarchical in organization, and the most phylogenetically recent system or the most recently evolved system control responses to stressors. This is called the ventral vagal complex. The ventral vagal complex not only controls the heart rate but is also involved with communication and with prosocial behaviors through the enervation of the nervous system. That is, the ventral vagal complex is not only modulating the heart, but it also ties directly into those parts of the brain that are associated with a child's ability to use words and communicate.

The second emotional response subsystem is the sympathetic nervous system to which I referred earlier. In terms of a fight-or-flight response, it is the subsystem that increases heart rate in the face of stressors, having blood go through the muscles so that they are either ready to fight with their muscles or use those muscles to run away. It is less connected to children's ability to communicate.

The third and most primitive of these subsystems is the dorsal vagal complex. The dorsal vagal complex, when it is activated, generates a massive decrease in heart rate that is typically seen in an organism when it is behaviorally freezing. For example, baby animals, when there is a predator nearby, go into this freeze mode. That is what we are talking about with this most primitive of systems.

The more successful adaptive emotion regulation responses, such as the prosocial behaviors, the ability to communicate with others, and flexibility in the face of stressful situations, utilize the ventral vagal complex subsystem. When the ventral vagal complex and the behavior strategies that are associated with it fail, the sympathetic nervous system comes in to play. If this secondary system is not effective, then the most primitive of these neural subsystems, the dorsal vagal complex, is utilized to respond to social challenges. We suggest that maladaptive emotion regulation represents a utilization of these more primitive neural control mechanisms.

Stephen Porges' poly-vagal theory suggests that what happens with children is that they may revert to a more primitive response when the ventral vagal complex system is compromised. Again, I want to remind you that the vagal tone is a way to measure the ventral vagal complex system's ability to regulate the body's responses to stressors.

There is much support for Stephen Porges' theory of emotion regulation both in terms of the work that Porges and his colleagues have done, as well as research at the University of Washington. For example, Gottman, Katz and Hooven found in their studies of middle childhood that the ability to adaptively regulate emotion was associated with vagal tone. When they looked at children at age 4, high vagal tone predicted those children's emotion regulation ability, their peer social competence, their academic achievement, and their physical health at age 8.

One more concept that I want to introduce is the construct of meta-emotion that my colleague John Gottman introduced to describe parent's feelings about their children's emotions. Meta-emotions also encompass the parent's styles of communicating with their children about emotions. When we talk about the meta-emotion structure of the family, we mean the parents' awareness of their own emotions and the emotions of their children, and how they coach their children about emotions. The most active dimension in this meta-emotion structure of the family is the parental attitude and activity that we call emotion coaching versus an attitude of emotion dismissing.

Emotion coaching refers to ways in which parents interact with their children when their children display negative affect, particularly anger and sadness. It also includes how parents deal with positive emotions like pride and affection. Because this meta-emotion dimension is orthogonal to parental warmth, it adds to the research that is focused on parental discipline techniques and the predominant affects that parents display towards their children.

What does emotion coaching mean? We are talking about parents who emotion-coach their children to do a number of different kinds of things. First, what they do is detect negative emotion in their children at a much lower level before that negative emotion has a tendency to escalate and it gets too hard for the parents to get the child to self-soothe. Therefore, they detect

this at lower thresholds. Then, they empathized with the child about their emotion. Even if there is some misbehavior involved, they still empathize with the fact by saying, "I know that you're feeling angry. You should not be throwing those things on the floor, but I do understand that this situation might make you feel upset." Parents use those moments as a way to build their relationship with their child, and they use those moments as a way to teach their children about their emotions. It is like doing emotion homework with one's children. The other thing they do is set limits on the children's behaviors. They help the children find ways to problem solve and know what to do with their strong emotion the next time it occurs.

In contrast, emotion-dismissing parents do not tend to notice negative emotions until they have really escalated. These parents, when we have talked to them about emotions, do not feel that talking with their children about emotions is very helpful to their children, or they try to avoid talking to their children about emotions. Finally, when their child is feeling angry or upset, parents will try to distract the child. For example, "Oh, look at your dolly! Look at what dolly is doing!" They will tell the child that the emotion that they are experiencing is not okay, that is, it is not okay to feel angry or sad in a particular situation.

There is research conducted at the University of Washington that pulls this all together. We have looked at parents in teaching situations. Parents who were emotion-coached and used praising methods of teaching had children with higher vagal tone when they were engaging in tasks that demanded impulse control and effort. This regulatory physiology was a strong index of the ability of these children to self-soothe when upset and inhibit impulsive behavior. In addition, the parent's meta-emotion system also predicted a wide variety of outcomes at age 8. These include better social competence with peers, lower reports of teachers talking about behavior problems in the classroom, greater modulation and dampening of negative affect in the child, and higher levels of academic achievement in both reading and mathematics. Last, there was better physical health in the child in terms of infectious illness.

John Gottman and I have been following a cohort of families since 1990, the 1st year of their marriage, before the pregnancies were even a twinkle in their eyes. We have continued to follow these families as they became parents, and have studied that transition to parenthood. One of the graduate students in our laboratory, Alyson Shapiro, is looking at the triadic interactions between the two parents and their infant. When an infant sits in an infant seat for a long time, there will be a point when the infant starts fussing and crying. Shapiro looked at those moments of fussing and crying and the physiology that is associated with them. She found that there are some parents that use emotion-coaching strategies. They will say to their infant, "Oh don't be sad" or "Does this place make you scared?" Then there are parents who use emotion-dismissing strategies such as "Oh baby, smile" or "Oh baby, be happy and don't cry." Shapiro looked at the physiology of the infants right after those moments. When parents used emotion-coaching behavior, their infants had a lower heart rate and higher vagal tones, indicating that they are tapping into the ventral vagal complex. The parents who had used the emotion-dismissing behavior had infants with higher heart rates and lower vagal tones.

We are following these families, along with a larger cohort of families, for the next 4 years. We will try to gain a better understanding of how emotion coaching and dismissing at this early stage of life (these infants were 3 months old) will influence children's abilities to emotion regulate and succeed in school.

What does meta-emotion, emotion regulation and readiness have to do with school? We believe, and what some of the evidence tends to show, that children's emotional development is associated with that child's ability to succeed in school. During infancy, preschool, and middle childhood, the meta-emotion structure of the family is associated with how the parents socialize their children around emotions. This includes modeling appropriate emotional responses in stressful and conflict situations. It also includes coaching their children about the meaning of emotions, how they can manage their emotions successfully, and teaching children about the social rules of emotional expression.

Our laboratory has found that the ability of parents to model successful emotional responses to situations and their ability to coach their children about emotions shapes the capacity of those children to emotionally and physiologically self-regulate. Because these children are able to utilize the ventral vagal complex neurosubsystem to physiologically soothe themselves, these children are better able to focus attention. They are able to access the communication centers of the brain so they do better in terms of their social interactions with other children and their teachers. These children are able to behave appropriately within the classroom setting and they are less likely to use physical aggression when they get into emotionally provocative and stressful situations. Finally, they are also less likely to be depressed or socially withdrawn in those types of stressful situations.

I hope I have given you some information as to why we think that emotions are so important in terms of children's development. In addition, when we are thinking about our child's readiness for school and ability to manage it, it is important for us to look at emotions.

John Hagen: Megan Gunnar has focused on stress systems and has done work that has received much acclaim, looking at both the sympathetic hormonal and brain systems. She received her Ph.D. in Developmental Psychology from Stanford University and is currently the McKnight University Professor at the Institute of Child Development at the University of Minnesota.

Claire B. Kopp for Megan R. Gunnar: We will be talking about stress as researchers who are interested in the relationship between behavior and biology. Ponce Celley is often credited with creating the field of stress research over half a century ago when he discovered the host of physical changes in the body that seemed to occur when people or animals were exposed for long periods to overwhelming challenges. These bodily changes included the breaking down of muscle, increased blood sugar, slowing of wound healing, impairments in immune functioning, gastric ulceration, and so forth. Celley called the overwhelming challenges "stressors" and the body's reaction to them "stress." Celley later learned that the activity of an endocrine system that produces a hormone called cortisol was responsible for many of these bodily changes.

Cells in the hypothalamus of the brain produce a chemical called cortocotropin releasing hormone or CRH. CRH stimulates the pituitary gland to produce another chemical called ACTH, which goes into the bloodstream and stimulates the outer shell or cortex of the adrenal glands to manufacture and release cortisol into the bloodstream. Once in the bloodstream, this hormone has effects on both body and brain that help organize the body and mind to manage stressful experiences.

The hypothalamus, pituitary, adrenal gland (HPA) system is related to the brain for several important reasons: (a) Stress researchers learned that activity of the HPA system was regulated by regions in the brain that are involved in emotion and self-regulation; (b) The brain is a major target organ for cortisol. In the brain, cortisol levels affect learning and memory, and over time, the threshold at which we experience negative emotions when things are potentially distressing; and (c) CRH, which is the releasing hormone for the HPA system, acts in many areas of the brain, helping to orchestrate behavior, brain, and body reactions to stressors and challenges.

We know that some individuals easily become tense, anxious, sleepless, and so forth when faced with even minor challenges. Others seem to manage major life events with relative ease. They roll with the punches. Genetics certainly have something to do with these individual differences. Animal studies have shown that experiences, especially in infancy and childhood, also matter. Over half a century of research on rats and monkey babies has shown that the neurobiology of stress, that is, the interactions between the brain emotion systems and the HPA stress hormone system develop over the rat and monkey equivalence of infancy and childhood. Furthermore, while the emotion stress system is developing, it is plastic or open to being changed by experiences. Animal studies have shown that the mother or primary caregiver serves as a powerful buffer for the stress system early in life. When mother is available and responsive,

the baby does not produce elevation in cortisol levels, even when things happen that upset it and cause the baby to emit distress cries. Furthermore, these studies have shown that stimulation received by the baby during caregiving interactions is critical in shaping the development of the emotion stress system. When the young animal receives what in humans can be described as sensitive, responsive, and stimulating care, the animal develops into one that is better able to roll with the punches. When the young animal receives what in humans might be described as disorganized, neglectful, deprived care, it develops into an animal that is more skittish, reactive, and vulnerable to life's challenges.

Is there a human chapter to this story? Do parents and other caregivers provide a protective buffer to this stress system, because they are available? Do experiences in infancy and childhood help to shape the neurobiology of our emotion stress system? We are a long way from knowing the answer to the second question, however we are quite sure that the answer to the first questions is a resounding "yes."

There are increases in cortisol measured while human infants are undergoing their well-baby physicals and receiving their shots for childhood immunization. Over the 1st year of life infants produce less and less of a cortisol stress response to the exam shots. In fact, by the 2nd year of life, infants seem to tolerate the physical exam and the two shots that they receive—one in each thigh—without producing any increase in stress hormone. This is amazing, but these data look a lot like what one would see in studies in baby rats and monkeys. In human infants, crying decreases a bit over the first 6 months of life, but by the 2nd year, infants are upset, and they let you know it. The difference between crying and cortisol that is seen after 12 months of age is a classic type of dissociation often seen in stress research. It is this dissociation that lets us ask whether the parents, who are of course with the infant during the exam shots, are providing a stress buffer.

One way of examining this question is by considering the security of the infant-parent attachment relationship. Bowlby argued that the behavior attachment system serves as a homeostatic mechanism that constitutes an external or outer ring of life support. If the outer ring is equal to the task, then the demands on physiological systems are minimal and survival is increased. In secure attachment relationships, we hypothesize that the outer ring would be up to the task, while in insecure relationships the infant might need to activate his or her stress hormone system to manage potentially stressful situations. To test this, we had toddlers engage in a series of challenging, potentially stressful tasks. They met a clown, encountered some puppets that popped out of the wall and asked them to play, and were shown a mechanical clown robot that moved around and made a loud noise. These are all things that some toddlers find fun and others find scary. After watching how the toddler reacted, we had the mother do whatever she normally would do to help the child feel comfortable. We took samples of cortisol before and after this test session.

A week later, we brought the children back to the laboratory and tested them in the Ainsworth Strange Situation Paradigm to determine whether they were in a secure or insecure attachment relationship. As we expected, children who were not frightened of our challenges—the bold ones—had no reason to produce a cortisol stress response, and they did not. Children who were frightened did produce a cortisol stress response, but only if they were insecurely attached to the parent who had been with them. If they were securely attached to the person who was there to protect and support them, they did not produce a cortisol stress reaction. Remember that this was true although they were acting frightened of our challenging tasks. In a secure attachment relationship, the presence of the parent provides a powerful stress buffer.

Many children spend much of their awake time being cared for by people other than their parents. Indeed, they spend much time in out-of-home child care where they are cared for along with a group of other children. When the child is in child care, there is every reason to think that the adults caring for the child can provide the same kind of powerful stress buffer as good parents. However, whether this happens is related to the quality of the child care.

The data shows increases in cortisol levels for preschoolers in two child care centers that differed in measures of child care quality. The lower quality center scored in the acceptable range while the higher quality center was quite exceptional. There was a small increase in the stress hormone, on average, even at a higher quality center. A full day negotiating relationships with many other children is hard work, but at the lower quality center the increase was significantly larger. A similar type of result is seen in family-based child care. From data on 21 preschool children who were each in 21 different family child care homes, we used observational ratings of the caregiver environment developed by the NICHD child care study to rate the caregivers on the amount of focused attention and stimulation they provided the target child. Quality of care was directly related to the child's stress hormone activity over the day.

Early in life, our stress physiology is regulated powerfully by the quality of care we receive from parents and other caregivers. Parent-child attachment relationships that are secure provide the child with a way of buffering activation of the HPA stress hormone system while the children go about exploring the world. High quality child care helps buffer the children's stress hormone system while they go about learning and socializing with peers. These findings suggest that, as with other mammals, our social relationships in infancy and childhood may play a role in shaping our stress neurobiology. Of course, they do not prove that these experiences have long-term effects. Work examining this critical question is currently underway.

Plenary III

Polices and Programs That Support Families With Children From Birth to Three

CHAIR: Ruby Takanishi
PRESENTERS: Deborah A. Phillips, Marcia K. Meyers, Steve A. Freedman

- **Lessons From *Neurons to Neighborhoods***
  Deborah A. Phillips
- **The Dual Earner/Dual Carer Society: What Government Can Do to Support Motherhood, Fatherhood, and Employment**
  Marcia K. Meyers
- **Child Health Insurance: A Modern American Fiction**
  Steve A. Freedman

Ruby Takanishi: While the focus will be on birth to 3 years of age because that is an important part of the life span, we all agreed that it would be difficult to make that arbitrary cut off. Therefore, we decided that while the focus would be on the early years, that will not be the exclusive focus.

Deborah Phillips is Associate Professor and Chair of the Department of Psychology at Georgetown University. Deborah is a developmental psychologist and she is Study Director for the Committee on Integrating the Science of Early Childhood Development, which led to the report that she is going to be talking about, *From Neurons to Neighborhoods*. She is also part of the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care.

Deborah A. Phillips: My presentation is based on the *Neurons to Neighborhoods* report from the National Academy of Sciences Committee on Integrating the Science of Early Childhood Development. The members of this committee represent a wide range of disciplines including developmental psychology, medicine, psychiatry, economics, neuroscience, and education and include those who study children with special needs. There also were practitioners on the panel. This report is a true consensus, agreed to in full by all committee members.

The conclusion from the report that made headlines was that focusing on ages 0–3 really begins too late and ends too soon. Our way of balancing the debate at the time was to say that on the one hand 0–3 is the critical period in brain development, but on the other hand 0–3 is important but does not produce an indelible blueprint that one is stuck with for the rest of one's

life. In addition, in this session we are trying to think about how we support families and children from birth to 3.

We had an interesting conference call in which we were all bemoaning the boundaries that we had to put around what we said. However, I took the boundaries seriously and tried to think through what in this report is relevant to 0–3 or what issues it raises for the 0–3 period. In fact, the origins of *Neurons to Neighborhoods* was derived from the national fascination with early brain development, which was focused on the 0–3 years.

When there is controversy around an issue that has a scientific base or where scientific evidence is being used in the service of action, people start getting worried about it. In this case, the neuroscience community was getting worried about what was being said about neuroscience research. The tendency when this happens is for people to run to the National Academy of Sciences (NAS) and look to them to provide "a cover." They rely on NAS to come up with an objective report that deals with the controversy. We work behind closed doors literally and then come out and say, "Here is what we think the science says and, just as importantly, here is what it does not say." We also try to define where there is a shift from the scientific evidence and a move into advocacy.

People asked us to make sense of the brain science and tell them what it says and what it does not say. In particular, we were asked to focus on the assumption that the first 3 years of life represents a critical period for all of development and the use of this science to support everything from Early Head Start and home visiting to Mozart tapes. What the scientific community was objecting to were statements that there was new research on brain development to support the assertion for critical periods. In particular, the issue was that there was evidence about the proliferation and pruning back of the synapses, that if we did the right kind of interventions from 0–3 we would have the right kind of pruning going on. In a way, we were turning policy makers into neuroscientists, which they loved of course, because what they did was going to shape the structure of the human brain. That was very exciting to them and a lot of useful outcomes occurred a result of this flurry of activity, including Early Head Start.

I also want to put the study in context because I am going to return to this context to explain how I think 0–3 might be special within the early childhood years. First of all, there has been an explosion of knowledge in neurobiology as well as in the behavioral and social sciences. Much of it has to do with the neurochemistry of early brain development, the "software" less than the "hardware." Part of our concern at the Academy was that, because of all the attention to early brain development, a great deal fascinating research on social and behavioral development was being ignored by the media. Secondly, marked transformations were occurring in the social and economic circumstances under which families with young children were living. Putting the two together we concluded, at a time when scientific advances could be used to strengthen early childhood policies and practices, that knowledge was frequently being dismissed or ignored and children were paying the price.

Because of the origins of the report, there were a couple of fundamental issues that developmental psychologists have been studying forever and probably will study forever that guided our review of the literature. They are the basic questions about the role of early experience in shaping development. The first has to do with the timing of early experience. Does it matter when a child is exposed to beneficial or harmful experiences? That was the focus of the 0-3 part of the report. The second has to do with the nature of early experiences. Are we providing children with the right kinds of experiences and protecting them from harmful experiences? That, if you will, is the pruning piece. Are there critical periods? We had to confront that one head on—how do you know a critical period when you see one?

Many people apparently did not even understand the meaning of this controversial concept. It derives from the animal research literature. In fact, critical periods are seen in occurrences like bird songs, maternal rat licking, and cat eyes, and these findings were being transferred over onto human development.

In the area of developmental psychology, we prefer to use the term sensitive periods, which implies that doors do not just suddenly slam shut. They may gradually close and they may not even close all the way. There are a couple of criteria for determining a critical period. One is that certain early experiences uniquely prepare the child for the future by establishing certain capabilities at a time when development is most plastic and responsive to stimulation. Therefore, if a child has the same experiences either before this critical period or after it, there will be either a dampened or "no influence at all" effect on the domains of development that one is interested in. Secondly, the young child is particularly vulnerable to the absence of these essential experiences and there may be permanent risk of dysfunction. A kind of "use it or lose it" approach to critical periods.

The committee concluded that there are few critical periods, in the technical sense of the term, in human development. However, there are a number of sensitive periods during which development is optimized by exposure to well-timed experiences. An example of this is in the area of speech perception, including fascinating research on deaf children born to both deaf and hearing parents who are introduced to sign language at different times. This research has really advanced our understanding of what is happening with language development—which aspects of it seem to be vulnerable to particular environmental inputs or lack thereof and which aspects are not. Another area is in the development of vision. Some very interesting research has been done on children with strabismus. As human creatures, we need exposure to patterned light and to binocular vision for our eyes to work properly. These examples provide evidence that in some of those basic aspects of development there are sensitive periods.

What about attachment? This is a huge question. Is there a sensitive period for attachment? The answer is that we do not know, but there is some interesting research on the topic. We looked carefully at the literature on orphanages. There is the older literature and there is now a second-generation orphanage literature. The question this literature is asking has to do with, "What are the effects of the variation in the extent and nature of deprivation that children experience and what about the timing of adoption? Does it make a difference? What about the nature of the adoptive family that the child goes into?" What this literature shows again, both in the older and new literature, is remarkable growth failure and severe developmental delays in babies in depriving orphanages, but on the other hand, incredibly dramatic catch-up upon adoption for many of these orphanage-reared children. In fact, one could think of adoption as a dramatic early intervention. If one wants evidence that early intervention works, look at the adoption literature. It is breathtaking. This also is evidence for our plasticity.

However, there are a sizeable number of children who show persistent emotional and cognitive problems, especially when they are deprived of stable relationships early in life, which is true for many of these orphanage-reared children. They tend to show problems with relationships, they do not have a best friend, their friendships are more superficial, and they have difficulty reading social cues.

At the end of this review we concluded that in some behavioral systems there is remarkable plasticity throughout the life span. It is true of learning and memory, and it is true of some aspects of motor functioning. Some aspects of language development are remarkably plastic, including learning a second language and remediation of some language disorders.

In developing our conclusions we asked, "When should we really worry about the beginning of the early childhood period?" We concluded that healthy prenatal development is essential. We examined the prenatal alcohol exposure literature; we looked at exposure to other teratogens and the effects of poor nutrition, prematurity, and sensory deprivation. We ended up calling for "the same old, same old": a good public health system, good prenatal care, good maternal care, and early screening for all children. By early we meant right after birth because sensory problems need to be caught very early on.

Next we go to the question about the nature of early experiences. Are the effects of early experiences somehow greater for the 0–3 age group? We concluded, as a committee, that society

is changing and the needs of young children are not being addressed. I will briefly talk about work, child care, and poverty, which are the three areas we highlighted, although they are not the only ones.

The *Neurons to Neighborhoods* report concluded that changing work patterns are transforming family life in the following ways: (a) parents of young children are working more hours; (b) they are working more nonstandard hours, which is probably even more critical than the sheer number of hours; (c) they are returning to work earlier after giving birth; (d) more are mandated to work as a result of welfare reform; and (e) there are more working poor.

One of the most dramatic trends influencing families is that a full-time job no longer guarantees an adequate standard of living, and there are more conflicting demands on parents. There is a new report from the Foundation for Child Development by Margaret Chin and Katherine Newman that talks about how parents are caught at the crossroads of education and welfare reform and the demands of work. We are now expected to do more and more with our children vis-à-vis their schooling and yet we also are expected to work harder and longer. We cannot do it all and that affects all of us, but it affects low-income families even more. The care of young children is being fundamentally reapportioned from mothers and fathers to others. In the NICHD study over a decade ago, the average age of entry into child care was 11 weeks of age. My hunch is that it is even younger now. An element of this that has not been thought through carefully is the effect of earlier and extensive exposure to peer groups. One issue is that they are going into child care at earlier ages before they are really socially ready to interact with unfamiliar peers, make friends, and negotiate with the peer group.

Access to quality care is beyond the reach of many working families and the burden of poor quality and limited choice rests most heavily on low-income working families. In many studies, we also find that the younger the child, the poorer the quality of child care. We did not find that in the NICHD study, however.

Finally, young children are the poorest members of society. Despite the sustained war on poverty and despite 5 years of welfare reform, young children are just as likely to be poor today as they were 25 years ago. Poverty may be more damaging during the early childhood period than at later ages. From the work of economists looking at the timing of poverty and its effects on educational attainments, we understand that poverty during ages 0–5 does seem to be particularly detrimental for graduating from high school and other similar educational outcomes.

The double burden of family poverty and an impoverished neighborhood is a particularly significant threat affecting minority children. The fastest growing population is minority children and in many ways we can look at the 0–3 age group as the harbinger of demographic trends that are affecting our entire society.

Some concluding thoughts: Do we need to argue critical periods for people to care about infants and toddlers? Why do we feel a need to say that 0–3 is not just an important stage of development like all stages of development, but that it is somehow more important than any other stage of development? What about the goal of simply nurturing, protecting, and ensuring the health and well-being of young children as an important objective in its own right, apart from the investment mentality that drives so much of public policy? Most importantly, what about time for parenting?

Takanishi: Deborah has given us a terrific context for the presentations by the other panelists. Developmental opportunities, as Phillips has put forward, are shaped by settings. Contexts and environments are shaped by national, state, and local policies and programs. One exciting aspect of Marcia Meyers' work is the connections she makes between policies across states and nations and their linkages to child well-being outcomes.

Marcia Meyers is Associate Professor of Social Work and Public Affairs at the University of Washington and she is affiliated with the Social Indicators Survey Center at Columbia University. She has a Masters in Public Administration from Harvard and an MSW and Ph.D. from the

University of California at Berkeley. She and Janet Gornick from City College in New York are completing a book that looks at policies across countries and how they affect some of the factors that Phillips talked about.

Marcia K. Meyers: I do not usually put this in my C.V., but it is relevant here—my first job out of college was in a Head Start program. I am pleased when I can go full circle and be back in a Head Start crowd. I am going to speak from the research that I am conducting with Janet Gornick. This is part of an ongoing project and a book that is going to be completed this summer. It is part of an ongoing research agenda in which we are examining family policies across 14 industrialized countries including the United States, trying to draw lessons about family policy, mostly from Europe.

What is the problem and what is a way of thinking about the solution? There is value in thinking big when we think about some of the issues that come out of what we know about early development and family dynamics. One way to think big is to look at Europe because they do much more than we do. There is a problem in all of the industrialized countries and a problem that is particularly acute in the United States. Families with young children are living in a "half-changed world" in which social norms and economic opportunities and necessities are pulling all parents into market work. However, social norms about parenting have not changed or they have not changed nearly as much, so as a society we still leave the care of dependents to families and in families, we leave the care of dependents primarily to mothers.

This means that we are creating a problem. Everybody is in the workplace, mothers are all in the workplace, yet mothers are supposed to be taking care of the children. The short version of the problem is "If everybody is at the workplace, who is going to take care of the children?" This problem of who is going to take care of the children if everybody is at work is not unique to the United States. Our study of European countries suggests that the problems are more acute in this country, and we are much more likely to define these problems as private problems in this country. We provide much less government support. We leave the solution to the problems of balancing work and family demands largely to parents and largely to their private resources.

The dilemma arises largely out of the tension existing in the fact that most mothers and fathers in the industrialized countries are now combining work in the market with work in the home. This is particularly acute in the U.S. because more people are working and we work more hours here. We looked at the ratio of women's to men's employment because in nearly every country all men are in the workforce and so the relevant question is how many women are in the workforce. In comparison to the other countries, we have a higher rate of female employment—the ratio is about 85%—lagging behind only the Nordic countries, which have the highest rates of participation of women in the workforce.

Where we stand out is in how many hours we work in the average workweek. This shows the combined number of hours worked for dual-earner couples with children. In the U.S. this is about 80 hours between the two parents—the highest across the 14 comparison countries. Families in the European countries are closer to a one and a half jobs—about 60 hours a week between the two parents.

The U.S. also has a higher rate of parents working nonstandard hours. To a far greater extent, all of our workers, and particularly families with young children, work nights, weekends, swing shifts, and odd shifts, which in Europe are referred to as nonsocial hours. Not surprisingly, families in all of these countries feel a time squeeze. They are really combining two jobs.

When asked, "Would you like a little or a lot more time with your family?" the great majority of respondents, across these same countries, preferred to have a lot more time with their families. Families feel "time squeezed" everywhere, but again, families feel more "time squeezed" in the U.S. Ninety-five percent of fathers and 90% of mothers in the United States report that they would like more time with their family.

Ironically, despite the movement of women into the labor force, we are not doing well on gender equality, either in the marketplace or in the home. Gender inequalities persist in the

home because women (mothers) continue to do a longer double shift than men (fathers). This is comparing the daily hours of unpaid work in the home between men and women across the countries we studied.

Across all of the countries, the double shift for women is about the same. Where the U.S. differs is in the length of the double shift for fathers, where we lag behind the other comparison countries, except Italy where the fathers apparently do not do much of anything at home. In the U.S., fathers are doing less than their counterparts in the European countries, and women are doing about the same. Of course, the big story is that everywhere women are doing much more work. They are not equal at home; they are not equal in the marketplace either.

We do a comparison of what we call child penalties. The way this is calculated is by looking at the reduction in employment or the percentage point difference in employment between two kinds of families in the same country—those with young children between the ages of 3 and 5 and those with children ages 14 to 17. The assumption is that reduction in employment has a lot to do with children in the home. Again, the big story is that men's hours do not change much when they have young children while women's hours change a lot. Families cope with the demands of work and home responsibility by mothers withdrawing from employment. That is what we call the child penalty or the employment penalty related to having young children.

Comparatively, the U.S. does not do too well in terms of the "child penalty." Women in the United States are very likely to be employed, but they are also very likely to withdraw entirely from employment when their children are young. In fact, in 8 of our 13 comparison countries, it is women who are accommodating to family responsibilities by withdrawing from work. Why is that important? It is important because those interruptions in employment lead to lifelong reductions in wages, career opportunities, and career advances for women. This is sometimes referred to as the "mommy tax", the lifelong gap in wages that women assume because of intermittent labor force attachments, largely due to their withdrawal from work when their children are young.

We measure the wage penalty or the mommy tax by looking at the share of all earnings earned by mothers and fathers together, women's take home, and women's command of their share of that total pile of earnings. If it were completely equal between mothers and fathers, that would be 50-50. Mothers would take home 50% of mothers' and fathers' earnings and fathers would take home 50%. None of the countries studied are near 50%, but again the U.S. is quite a bit behind many of the comparison countries at 27%.

The United States also does poorly in several other dimensions that we care about, such as family poverty, child well-being, child health, child school achievement, and adolescent pregnancy. Our research also indicates that we are at the same time doing much less in terms of policy than many of the comparison countries.

Ours is the richest of all of the countries in this comparison group and we certainly say we care about children and we care about family values. However, we are doing little to help families cope with and resolve these tensions, with the resulting problems of income and security, poor child outcomes, and family stresses and strains. Why are we doing so little? Why are we doing so badly for such a rich and well-intentioned country?

I believe that part of the reason is that we do not agree on a big vision. We do not have a big enough vision of what we could be doing for families or what government could be doing for families or what families should have. That is in part because those of us in this country who care about these issues have been talking past one another. This has led to at least three nonoverlapping conversations or perspectives that lead to three different visions for what government should be doing.

The first of these perspectives comes out of the work-family balance, or work-family conflict field, where scholars, researchers, and advocates have focused on what is happening for women—particularly on the issue of double shift and the stresses and discontent among women in the workforce. That conversation usually leads to the suggestion that we should make

workplaces friendlier for women. Furthermore, we should make it easier for women to combine work and caregiving responsibility, give them more flex time, have more part-time work options, and so forth.

The second perspective, which I believe represents many of us in this room, is the child well-being perspective. It was formed by research about the needs of children, particularly about the needs of very young children, and about the benefits for those children of sustained time with good caregivers and, most especially, with their parents. That conversation leads us to think about policy recommendations that give children more time with their parents and, in this case real "mothers," since it is still overwhelmingly mothers who spend time with the children. The policy recommendations that come out of that conversation have a lot to do with answering the question of how mothers may be able to spend more time in the home, for example, on family or maternity leave.

At the same time there is a third group—feminists—who are still thinking about the fact that women earn only 75 cents on the dollar compared to men. We have not solved the problem of inequality in the home and in the workplace between women and men. That conversation usually leads to thinking about policies that affect job opportunities and inequality in compensation, and about policies of replacing mothers in the home. Giving women opportunities in the market place means freeing them from their responsibilities in the home, for example, through more child care, or the expansion of child-care benefits.

These three groups of smart and well-intended people are talking past each other. This reinforces the idea that this is a private family dilemma to be solved by private means and that we are going to have to make some tradeoffs. These tradeoffs are between what families want and what the market needs, between either economic security or time for families, between children having time with their parents or parents having their careers, or between women getting what they want and men getting what they want. The result is that we may end up at loggerheads instead of working and pulling in the same direction.

I believe that we can resolve some of these contradictions if we reconceptualize the problem, if we bring the pieces together and we recognize that this is an issue of money and time for families, not one or the other. It has to do with men and women—women's opportunities in the market, men's time at home and opportunities to spend time with their children. It is an issue for both and it is not going to be solved by private solutions alone. We also have to look to public solutions. We must look to government policies to help resolve the tensions and strains on families while under the pressure of competing demands.

Our "big think" solution is the idea of a dual-earner, dual-care society—a solution in which we have dual-earner, dual-care families. In this solution, men and women both engage equally and symmetrically in caring for children in the home and working in the market place and we think of parents as the primary caregivers for children in their earliest months. This would be a change from what we usually talk about; in other words parents as the primary caregivers for the first year and as children get older and enter primary school, a continuum of options. There should be a system that does not impoverish parents. They should not have to bear the financial burden of having to leave work or bear the financial burden of buying high-cost quality child care, if they can even afford it.

The idea of a dual-earner dual-care society comes out of the European welfare state. Figure 1 shows a continuum of gendered divisions of labor. It is the way one can organize working and care giving, ranging from the more traditional male breadwinner and female caregiver to the dual-earner/dual-carer model. We know that the traditional model is increasingly untenable and presumably unacceptable in terms of gender equality. The second model is a dual-earner model where the female caregiver works part-time—men are working and women are working part time and spending the rest of the time caring for children. We see this model often in the United Kingdom. The next option, which we find most often in the U.S., is the dual-earner/other-care model. Both parents work full-time—which is how we get those 80 hour+ weeks in American families—and someone else is caring for the children. The two options for "other" care are the

state, found in Eastern European countries and some of the socialized European states, or the market (private child-care arrangements) most prevalent in the United States. We buy child care.

Figure 1. What is a Dual-Earner/Dual-Carer Society?

A continuum of gendered divisions of labor:

male breadwinner/ female carer	dual-earner/ female part-time carer	dual-earner/ state carer —or — dual-earner/ marketized carer	dual-earner/ dual-carer

I suggest that there is one more option along this continuum—the dual-earner/dual-carer family. This model allows both men and women to have careers and the society supports men and women. In this model, mothers and fathers are the primary caregivers in the first year or the earliest months and throughout childhood, for their own children. The dual-earner/dual-carer solution would depend on changes in gender relations, such that both men and women would share the full range of options and responsibilities for work in the family and the home.

We sometimes talk about men with young children reducing their work hours and women increasing their hours of work until they look more symmetrical in their hours of work in the home and work in the market. For this to happen there would need to be changes in workplace practices and culture such that all parents would have options for reduced-hours and flexible work schedules while children are young, without sacrificing economic security or career advancement. In addition, we would need changes in both social policies and something we don't often talk about—labor market regulations—in order to give families the options to pursue that kind of an arrangement.

It is ambitious to change society like this. I will not talk today about how we change men or how we change markets. What I am going to discuss is the easier problem, formidable as it is, of changing government and thinking about social policies that would help give parents this option of choosing a dual-earner/dual-carer solution. Part of what we can do is based on the lessons that we have drawn from the European welfare states. None of the European welfare states we looked at are a paradise. None of them have a dual-earner/dual-carer society in which all of these qualities have been realized and families have all the supports they need and no longer feel conflicts and work-family dilemmas. But they do feel less conflict and stress, and repeatedly on cross-national surveys we find that the European parents get more from government. Thus, they express less tensions and tradeoffs than American parents do.

Some of the lessons drawn from the European policy packages that we understand can help move the family, and maybe society, towards this kind of a dual-earner/dual-carer solution have to do with parental and family leave, early childhood care and education, and work-time regulation. In support of this option, nearly European countries all provide job protections for mothers at the time of childbirth, along with 3 to 6 months of extended leave with wage replacement, usually at a relatively high rate or a flat benefit. Parental leaves increasingly are being extended for both the mothers and the fathers; again with wage replacement in some countries, and with a flat benefit in others. In Sweden right now, parental leave and maternity leave have been combined. The family now has 15 months of leave at about 82% of their prior earnings. That is for mothers and fathers to share. Not only do they have a lot of leave, but they actually parcel it out. Parents can stretch it out up to their child's 8th birthday, combining part-time leave with part-time work. India has a similar policy, with 5 months for mothers at 80% of earnings followed by 43 weeks for mothers and fathers together at 30% of earnings. Even in Canada, which is often more like the U.S. than Sweden, mothers are entitled to 15 weeks of

leave at 55% of their prior earnings, which is supplemented for lower earners, so it brings it closer to 80% of their earnings. After that, families, both mothers and fathers, can share 35 weeks of parental leave at that same wage-replacement rate.

The European countries are putting in place generous leaves, not only during the first weeks, but also during the child's first year and stretching out, in many cases, to the first 8 years. By comparison, the paid leave policy in the United States is zero. We are still one of the five countries in the world that does not have paid maternity leave. We only have unpaid parental leave through the Family Medical Leave Act.

Arguably a child's first year is the most important, but children's needs do not end after the first year. Parents' need to be with their children does not end after the first year, so European welfare states have put together policies that give parents more flexibility throughout their children's earliest years. As I have already said, many of these European countries allow parents to stretch out their leave, sometimes up to 8 years. That is supplemented in most countries by something called Leave for Family Reasons, which is guaranteed paid leave for child illness. One of the most generous is Sweden, which grants up to 120 days per year of sick-child care at 80% of wages. Fortunately for employers, the average parents take is closer to 7 days per year, so parents do not bankrupt the economy and bring it to a screeching halt every year by taking 3 months off to care for sick children. However, they do have the right, if they need it, to take those kinds of breaks from work to care for family emergencies.

The good side of the leaves is that they give parents time with their children. The cost, however, is on the dimension of gender equality. The majority of leave days in Europe are still taken by women. That potentially creates the same interruption in careers—those same wage penalties or "mommy taxes" for women. This is nowhere near solved yet in the European welfare states, but they are moving in the direction of trying to create policies that are gender neutral or actually create incentives for men to participate along with women in taking advantage of these leave policies.

Critical and absolutely fundamental are wage-replacement rates. If there are low wage-replacement rates, or zero like in the United States, families keep the highest wage earner in the market, which is most often fathers.

Many of the policies in European countries also designate leave specifically for men. In Sweden, for example, men can take 2 weeks of paternity leave at the time of a child's birth that is separate from maternity leave. In addition to the 15 months of leave that can be divided between mothers and fathers, there is an extra month available solely for the father's use. If he does not take it, it is lost to the family, presumably creating an incentive for him because otherwise the family loses this leave altogether. Also, parental leave is financed through the use of social insurance funds, which minimizes the burden on individual employers.

European social insurance funds operate like our Social Security Fund where everybody contributes throughout their working lives and collects at the point that they need assistance. It does not resemble our unemployment insurance system, which puts the burden mostly on employers. What the Europeans have done, which is for us to think about in developing policies in this country, is to take the burden off individual employers and finance social insurance through general tax revenues.

In regard to early childhood care and education, as families return to the market to work at higher rates after the first year of childrearing, their needs change; they have greater need for substitute care. At the same time children's needs change. As they get older, they are more able to benefit from high-quality group care. In Europe, publicly supported care serves a large proportion of infants and toddlers while parents are at the workplace. Full-day preprimary programs enroll nearly all children between about age 3 and the start of public school.

The Nordic countries integrate systems of early childhood care and preschool so the children move through a single system from about age 1 to the start of school. About half of the children under age 3 are in these systems. If parents are working or in school, they have a right to a place in these systems. About 80% of school-age children are in these programs.

The continental European countries, like France and Belgium, enroll fewer children and have fewer public provisions for children under age 3, which usually is targeted for those families most in need. But by the time children are age 2½–3, nearly all of them are in full-day and fully-public high-quality early education, preprimary programs that are free to the parent. The government makes these programs affordable by heavily subsidizing them, providing for them directly, or adjusting co-payments to family incomes.

In Finland, Sweden, Belgium, and France the government pays 75 to 85% of the cost of the subsidized child care and the full cost of preprimary programs, leaving parents with either no fees for the pre-primary programs or somewhere in the range of 15 to 25% of the cost of care for younger children. In the U.S., the ratio is reversed. In this country the bulk of the burden of paying for care is on parents; the minority share is paid for by government. The need here is to shift the cost of care to government and off families.

We also need to learn from the European model of using both highly trained and well-compensated workers in these early childhood education and care programs as the most important ingredient for quality. This is also quite consistent with a concern about gender equality as one of the often under appreciated aspects of our country's market-oriented system, and the extent to which it creates a hugely feminized, extraordinarily low-paid workforce. We introduce another kind of gender inequality when we move care out of the home, but we move it into child-care settings in which we pay women at rates that used to be about the same as parking lot attendants.

Figure 2 shows the comparisons of the level of educational requirements for child-care workers in some of the European systems. I have arranged them parallel to our systems of family child care, center care and preschool or preprimary care. In general, just as in the United States, education requirements are lowest for those that would correspond to our family child care, higher for center care, and higher yet for preprimary programs. Quite striking, high levels of education are required in center-based and preschool care, which are the dominant form of care in the European systems. These are workers who have advanced education, specialized training, and university degrees. It is difficult to summarize training requirements in the U.S. because we regulate at the state level. We impose few educational requirements on workers in center care. As we move towards preprimary or pre K programs, there are still enormous variations. Only 39 states now require either a college degree or some substantial amount of specialized early childhood training. High skills, education, and the fact that many of these jobs are in the public sector in the European welfare states, bring with them another benefit—higher compensation. It is difficult to make direct comparisons of the salaries across these countries.

Figure 2. Education and Training, Early Childhood Education and Care Workers

	Child Minders (Family CC)	Center Care	Pre-Primary (Preschool)
Sweden	72% have childminder certificate	3 year university degree required	3 year university degree required
Belgium	None required	3 year technical training degree required	3 year post secondary degree required
Finland	varies; most supervisors have 4 year university degree	3–3.5 years vocational training required	3–4.5 year university training required
US	varies; none in most states	varies; fewer than 1/2 states have any standards	varies; 39 states require either college degree or specialized training

The comparison countries, the rates of pay for early childhood education and care workers are quite close to pay for teachers in the primary school system. That combination of training, skill development, and public sector jobs brings their wages up, therefore, to be much closer to those of primary school teachers. Again, in this area the U.S. is lagging way behind (see Figure 3).

Figure 3. Compensation of Early Childhood Education and Care Workers Relative to Primary School Teachers

Sweden	84%
Belgium	100%
Finland	81%
US	42%

Another dimension we studied was time and working regulations. What the European states are doing that we are not doing is regulating work to weekly employment hours of between 35 and 37 hours. This puts in place labor-market measures that improve the quality of part-time work so that part-time work has the same wages and benefits, although usually prorated, as full-time work. This means that workers do not pay an extra penalty for reducing their hours of work to part time. Labor-market measures also limit and/or compensate nonstandard work schedules without gendered protectionism. Those with nonstandard schedules make up an enormous part of our work force, and families with children often work the midnight to 6 a.m. shift frequently because they do not have child care.

Another lesson from abroad, the one that makes the U.S. audiences the most envious, is the degree to which vacation time is regulated in the European welfare states. Workers in these countries receive a minimum of 4 weeks, 6 weeks in many cases, of vacation—which I believe has enormous and important implications for families, giving them uninterrupted time with their children.

This is obviously an ambitious agenda for policy makers—the idea of changing society, changing gender norms, changing government, and changing markets. It may be entirely utopian, but I do think there is value in trying. Even if we do not get there in my lifetime, even if we do not get there in our children's lifetime, there is value in thinking big and looking beyond our own borders. We should "think big" about what government can do now to help dual-earner/dual-carer families. We need to imagine a society in which we actually support each of those goals: family well-being, children' healthy development, and equity for women and men.

Takanishi: Marcia talked about thinking big. Another aspect of the value of her crossnational research is that it puts a mirror in front of the U.S. on how we are doing. It also tells us that it is possible to approximate some of the policies found in other countries.

Our last speaker is Steve Freedman. I thought it was interesting that Marcia did not talk about health-care provisions because I have never have been able to understand why in the U.S. every child does not have a right to health care. Freedman is an expert in this area. He can tell you what some of the shocking statistics are in terms of large numbers of children. Lack of health care for immigrant children is probably 40 or 50%. Recent changes in welfare may change this.

Steve Freedman is the founder and Executive Director of the Institute for Child Health Policy of the State University System of Florida. He is a professor of Pediatrics and Political Science at Florida and an affiliate professor of Pediatrics and Public Health at the University of South Florida. He has the distinction of being one of a handful of nonphysicians elected to fellowship in the American Academy of Pediatrics. Prior to his academic career, Freedman served in senior staff positions in Florida's Departments of Education and Health. Freedman has testified before

Congress and legislatures on child-health financing and delivery systems. He serves as Chair of the Health and Human Services Commission of the Southern Regional Education Board and served on a committee on comprehensive school health programs of the National Academy of Sciences Institute of Medicine.

Steve A. Freedman: My background and experience is in turning dreams into political reality and that is the context in which I want to share with you an idea that I have not yet presented to any audience in the U.S.

At the Institute for Child Health Policy we have been told that many of our ideas and dreams cannot be achieved. What we attempted to do in the mid-1980s was develop pediatric chronic disease generalist nurses for children in rural areas. We were told that the subspecialists for those chronically ill children would not allow them to be seen by somebody whom they did not know. However, that dream actually turned into reality when the state legislature created a new class of nurse to do this work. Part of the message that I want to give you is that your ideas do not have to be privately held. You can make a huge difference by articulating them in public.

We knew that in many families who had children with serious medical needs, particularly in the early years, at least one parent had to give up employment to stay home with the child. We asked, "Why not have a medically and developmentally appropriate facility for dual-earner families where they can take their children in the morning and pick them up in the afternoon?" There was no such place available. We went to the legislature because that is the place to get action in policy matters—whether it is the U.S. Congress or state legislature.

We called this program "prescribed pediatric extended care." The name itself is important. If we had called it medical day care, it would have gone in the day care statutes and nobody would have been paid anything—right? Calling it prescribed pediatric extended care enabled it to become part of the health-care facility statutes. Initially people said the insurance companies would never pay you for day care, but because it went into the health facility statute, the insurance company said, "Sure, you are just like a hospital or any other similar facility."

Another problem was that of uninsured children. Because health insurance for children is too expensive for employers, we asked, "Why not use the school systems, where the children are located, as grouping mechanisms to act like the large groups that employers have?" Then we could go to the market on behalf of the children alone and see if we could get benefits.

The result is that there are now 250,000 children in Florida insured under school grouping mechanisms. What we are proud of is that when Congress passed the Children's Health Insurance Program Legislation in 1997, which put a new layer of insurance in place for children, our state was one of those cited in the statute as a model.

I love it when people tell me that my ideas are crazy because the critics of an idea turn out to be one's best allies. They help refine your message and they help find flaws with your ideas. They are spectacularly useful in that way, so if you become defensive, all that education is lost. Those critics also tend to become your champions.

The Institutes Vision Statement is as follows: All preschool children will have access to appropriate health care that is financed through a mix of parental, public, and private funds. By stating financed as opposed to insured what I am basically saying is that insurance as a model is completely inappropriate for children, and particularly for young children. The Statement continues: Routine health care for preschool children will be recognized and funded as a developmental, social entitlement program. The reason for this is that before most children enter formal schooling they are in a kind of unexposed black box of ages 0-3, 0-4, or 0-5. The Statement concludes: Access to health care for preschool children will provide early and regular contact with an objective third party and assure assistance to parents.

It would be nice if every child and every parent knew that they had somebody else involved in the developmental period that could take an objective look at what is happening within the

family and for that child. That is why I say that financing health care for children, particularly preschool children, creates the opportunity for a consistent third party in the relationship.

I tend to see education as an industry. Literally, education is the only industry that does not go back and deal with the vendors of our raw materials. There is no other successful industry that I know of that does not go back and say, "Look, the raw material you are sending me is not adequate because no matter what I do to it, it winds up flawed because of the flaws in the raw material. How about me only contracting with you if you improve the quality of your material?" There are many good reasons for seeing the early developmental period as one in which some other social institutions, health care being one, begin to take a look at the child on a regular basis to see whether the raw material is getting appropriate care.

The goal is to develop a new type of layered actuarial approach to financing children's health care, which would replace the insurance model for preschool children with care that is based on a schedule of services. Whether it is through Medicaid where the early periodic screening, diagnosis, and treatment program has a periodicity schedule that is advocated by the American Academy of Pediatrics, or a variety of other programs, there should be something in place that mandates a schedule of visits that children must have.

In addition, I advocate financing service pay for home visits as an alternative to office visits to physicians. How does one get a holistic picture of a child within the context of their family unless you visit their home? With the exception of immunizations, children probably do not need to be in a physician's office except when they are sick. The truth is that parents need a dependable source of information and need an objective advocate, and the children need an objective advocate during this developmental period. There needs to be that kind of supervision. Based on some of my experiences in social services, children need an objective advocate just to see what is going on besides the developmental progress.

About 85% of children under age 6 have insurance benefits because they are dependents of employees or they are poor. The term dependent is an interesting one and I tend to bridle when I hear children called dependents. It is like children being called chattel. It is as if they are not as valuable as the wage earner. About 30% of these children are covered by public funds, or their parents buy insurance separately. That is usually in cases where there is no group through which the parents can purchase health care and their child is regularly ill. That insurance comes at a high, pardon the expression, premium.

Alternatively about 15–16% of children are uninsured for the following reasons: (a) small employers do not offer any kind of coverage; (b) some employers offer coverage, but employees must pay for family coverage—they will cover the worker, but not the family; (c) single parents cannot afford family coverage even when it is offered; (d) some children are ineligible for government subsidized insurance; and (e) some parents choose not to insure for other reasons.

Some children are ineligible for government-subsidized insurance and that group is growing. Those are typically the children who are undocumented. Even if they are legal aliens, for some programs they still cannot get health insurance under public programs. I live in Florida and, of course, we have many undocumented people there. I cannot see how the family's choice should affect that child's insurance eligibility. I do not understand this as a practical matter from the public policy standpoint. Of course, I am also one of those people who believe that if the parents on a religious basis refuse to have their child treated, their child ought to be treated anyway. I try not to judge parents who just choose not to insure their children because I know that that is so because some parents simply say, "Look, my child is healthy. Why should I spend the extra money to insure the child?"

What we have found is that as one goes up from the federal poverty level, from 100% to 150% or to 200% of the federal poverty level, the lower the rate of Medicaid use. Part of that of course, is regulatory, but it is not until you are above 200% of the federal poverty level that families make the decision to buy health insurance. To me that means that a family has to have a certain level of income to consider buying health insurance. As the economy slumps and the

cost of insurance rises, the percentage above the poverty line will have to be even higher, 250% to 300%, before families can afford healthcare.

I read a study a year ago that really woke me up. The first question was how many employment-based plans are government financed. When you think about public and private insurance, what about if one works for a public agency and tax money pays for one's salary and insurance coverage, that is tax money. Yet in every categorization in the literature, that is considered private insurance. It is not. It is public insurance because it is paid for out of tax revenues.

If one begins to redefine what is private, some interesting facts emerge. Private employer-paid means that a private company actually pays for the insurance. Public employer-paid, that is if one is a public employee, is paid for by taxpayer dollars. If one is in a public program like Medicaid, that is paid by taxpayer dollars. As a point of fact, if one is a parent and pays for insurance or health care out of their own pocket, that parent is also a taxpayer. The argument that this country rests on an employment-based insurance program is one that we need to question.

One other issue that needs to be raised is the cost incurred to the individual or family through deductibles and copayments. My family has $1,000 per person deductible so the first $3,000, for those of us who are still in that plan, comes out-of-pocket. It raises the question about who pays. Think about it this way. Medicaid picks up about 29–30% of the cases while the Child Health Insurance Program, picks up yet another 10–15% of children. Therefore, in most states a combination of Federal, state, county, school district, and local employees' taxpayer money pays for more than half of the children's health insurance. If that taxpayer money was consolidated, what could one get in the marketplace from the providers?

One of the questions that was raised, that always gets raised, is why should children be insured separately? Why should there be different systems of care for children? Part of the answer is that adults do not come down with cleft lip and palate, cystic fibrosis, sudden infant death syndrome, spina bifida, tay sachs disease, or birth trauma. Adults have many lifestyle problems like heart disease, emphysema, stroke, and cancer. Again, why would you need a different system of care for children? Most people do not think about what would happen if infants were taken to an emergency room designed for adults. If they do not have tiny little needles, what do they do? Also, most adults are their own decision makers, while children come to the emergency room with a decision maker. There are good reasons for children to get the right practitioner at the right time. For adults almost any provider in the community can handle most of their problems. Adults do not have to worry about blood pressure cuff size, IV needle size, intubation device size, constant change in organ size, or parental influences on care choices.

The Adult Insurance Model is as follows:

- Casualty model based on unpredictability.
- Hospitalization is the big-ticket item.
- Rehabilitation assumes restoration of function.
- Most any licensed provider is qualified.
- Assumes stable physiology; change is a symptom.

The Children's Insurance Model is as follows:

- There are 10 visits prescribed in the first 48 months, and there are occasional ear infections, but most childhood health needs are predictable. Therefore, the idea of insurance for young children makes no sense because insurance is for the unpredictable health events.
- Hospital stays for children are rare events. It is rare that a family without a chronically ill child experiences hospitalization. Pediatrics is primarily carried out on an outpatient basis.
- Providers require specialized training and equipment.
- Physiological change is the norm. If a physician examines an adult and finds a large change in the size of the heart or liver, or any other vital organ, they assume it is pathological. If a child goes to a pediatrician and the size of those organs change, the physician

knows that this is supposed to happen. This is why the insurance must support the right kind of model.

Habilitation is the initiation of a function. Remember rehabilitation is to reestablish a preexisting function. Many insurers will say that they do not cover speech therapy for children because it is not considered rehabilitation. The children did not have the function and lose it through illness, so therefore it is not rehabilitation. There are many examples like this when applying the traditional adult insurance model to the case of children. It is not news to you that children ages 0–3 have different health care needs than those who are 10–13, or 20–23; therefore, benefits should vary with age.

I advocate, for young children, a first layer of regular planned services that all children receive and which should be financed by public and private funds, that is, private employers and public tax dollars. It would be inexpensive because there is no hospitalization included, and there are no rehabilitation services. It is for all planned services. The second layer would be nonroutine services. That is where insurance should come in. That is where parents and employers and, to some extent, public funds should be subsidizing an insurance program. The third level would be for children with special health care needs. I would argue here that the Federal definition of special health care needs is much too broad. For children who have serious health care needs, there needs to be public responsibility, because only the wealthy can afford the types of services that these children usually need. The public responsibility in this case would include a parental resources component, where their time put into care would be credited as a contribution to the financing. If we were to remove the high-end children with special needs and finance that separately and also remove mandated, everyday routine services, the cost to parents of insurance goes way down.

Our recommendations are listed here:

- Consolidate the purchasing power of government-paid child health care.
- Restructure the manner in which child health care is financed.
- Make routine health care mandatory in the same way that we make immunizations mandatory. Check to see if all the visits were made and look at the developmental results of those visits. This provides much more information to the school so they have a better idea of how to deal with the child.
- Identify child health provider networks from which government buys care.
- Offer nontax purchasers the opportunity to buy services from the children's networks.

Takanishi: I would like to paraphrase Margaret Meade who said, "It always takes a small group of people to make major social change," and I think of us as that small group of people.

In closing this conference, I would like to have the organizers come to the podium for the closing remarks: John Hagen from SRCD, Faith Lamb-Parker from Columbia University, and Mary Bruce Webb from ACF.

Faith Lamb-Parker: We are pleased with the incredibly warm and positive response that we have received for this conference. I am a bit shocked as well as pleased at how many of you came today and stayed through the entire conference. This is rewarding for the Program Committee who planned this conference.

Thank you also to those who have returned for several conferences. Many of you have approached me and said, "This is my fourth conference, or this is my fifth." This pleases us all greatly.

Mary Bruce Webb: I am here to thank you on behalf of the Head Start Bureau and the Administration for Children, Youth and Families and the Administration for Children and Families and also on behalf of Esther Kresh who could not be here. Finally, let me thank our staff, our partners, the Program Committee, and all of you for your participation. I have not seen this

much audience participation at a conference, at least not lately, so I want to thank all of you who created that interactive atmosphere that we have had over the past 3½ days.

John W. Hagen: Over the last few days I have made a case for putting the issues in a context. I realize the tremendous changes that have occurred over the last 11 or 12 years that we have been putting on these conferences. One that we might not think about is the electronic revolution. When I think back to when we held the first conference in 1991, few of us were spending most of our days on e-mail or looking at websites. That has changed our way of obtaining information. As with everything, there are good and bad aspects to that, but for the most part, if we use it appropriately, the good far outweighs the bad.

Another large change over the last decade or so is the extent to which we are now either drawing from or being told we should draw from research and findings regarding brain development. This knowledge needs to be used, and it will become even clearer over the next decade as to how it can be used. However, we are also seeing some uses of the findings that are probably premature.

In all of these conferences, translating research to policy and practice is important but also fragile. Overall there have been tremendous strides in the last decade on how we do that. We are doing it, but we must have patience and remember that research findings cannot all be applied immediately. Some of it works and some does not, and with the test of time we start to learn what seems to work the best. My final observation is that in our field, from both the research and the practitioner standpoints, we have come to the realization that early learning and academics is not just related to cognition or literacy, but is made up of all of the parts—the socio-emotional, the family, and so forth. We learned from some of the research at this conference that many of the physiological measures are showing us ways to relate to social-emotional development as the child gains different types of control. I believe that we are getting a much better understanding of the interrelatedness of domains of development, but we still have a way to go before we know how to fully use the information to benefit children and families. On that note, I certainly hope that we will be convening again in 2 years and we much appreciate your participation.

Luncheon I

INTRODUCTION OF KEYNOTE SPEAKER: Faith Lamb-Parker

KEYNOTE SPEAKER:

Windy M. Hill

Windy M. Hill was named Associate Commissioner for Head Start Bureau, on January 7, 2002. The program is responsible for overseeing a budget of more than $6.5 billion in fiscal year 2002, and serves more than 900,000 low income, preschool children and families each year. Prior to joining the Department, since 1993, Windy served as Executive Director of Cen-Tex Family Services, Inc., which administers nine Head Start centers in a four-county region of central Texas.

Windy brings a lifetime of involvement and commitment to the principles of the Head Start Program. As a child, she was enrolled in Head Start in Bastrop, Texas, and as a parent, her child also enrolled in the program. She has served as a parent representative on the center's policy council and later was part of the community group that developed and received a Head Start grant. Associate Commissioner Hill has one daughter, Kaley.

The Children's choir from the Edward Mazique Parent Child Center opened the luncheon and delighted the audience with an exuberant selection of songs.

Faith Lamb-Parker: Wade Horn, Assistant Secretary for Children and Families in the Administration for Children and Families, Department of Health and Human Services, was unable to join us today due to pressing issues on the Hill. Wade has asked Windy M. Hill, Associate Commissioner of the Head Start Bureau, to speak to you. The third Program Committee meeting for this conference was in December 2001, so we missed having Windy as part of our committee as we have had in the past, with Helen Taylor and Clennie Murphy. However, we know that she is a champion of Head Start, and a strong advocate for improving the lives of Head Start children and their families.

Windy M. Hill: I want to thank Faith for that introduction. I just met her, as she had said, earlier today. She, along with the Program Committee, is responsible for this wonderful gathering of practitioners, researchers, and policy makers. I already know that I like her, because she does things with such style. Congratulations on pulling this great program together. I am also grateful that Faith made plans for the children to come on the day that I was going to be here. It is good to see, and be reminded of why we do the things that we do, and why we work so hard. Seeing children, and seeing children who are obviously doing very well in a Head Start setting, is not only encouraging, but it keeps us moving forward.

I am here today because Dr. Wade Horn could not be here due to a scheduling conflict. I am quite honored that he asked that I fill in for him, given his responsibility for initiating this

conference during his tenure as Commissioner of the Administration on Child, Youth and Families. Also, I am honored by the opportunity to be here on a day when we have Dr. Edward Zigler and Mr. Saul Rosoff, who were early leaders of Head Start and set the course for all of us. I could not help but wonder, as I was meeting them, that had they not been such visionaries, would I have had the opportunity to be here with you today? Unfortunately, I think not. I am grateful to have met them, but also to have been honored by their presence during my luncheon keynote.

Head Start and I have a great deal in common. We both have Texas roots. We were both born in the 1960's from humble beginnings, and we both have gone on to accomplish important things against great odds. I began my lifelong connection with Head Start as a 5-year-old child in Bastrop, Texas. I continued that connection as a Head Start mother, then as a Head Start Director, and now as the Associate Commissioner for the Head Start Bureau.

I am truly a product of Head Start, and now it is my turn to give back to a program that made such a difference in my life and the lives of so many others. Head Start has often been called the "National Laboratory for Learning" in early childhood methods. This conference reflects a wide range of topics, disciplines, and professionals in attendance. So many developmental and early childhood researchers engage in projects, partner with Head Start agencies, and learn about Head Start programs.

In his State of the Union address in January, President Bush outlined critical steps in education reform. There is a need to prepare children to read and succeed in school, Head Start, and other early child development programs. The President believes that all children must begin school with an equal chance to succeed, to ensure that no child is left behind. To this end, the Administration proposed "Good Start, Grow Smart," and I will comment on three key areas of this initiative.

First, to strengthen Head Start, a new accountability system must be developed to ensure that every Head Start program assesses standards of learning in early literacy, language, and numeracy skills for every child.

Second, a national program to train Head Start teachers in early literacy techniques will ensure that all programs are given a baseline or a starting point. By partnering with states in early childhood education, we know that a stronger state and federal connection will aid in the delivery of quality early childhood programs, allowing states more flexibility in federal child care funds.

The last area is providing information to teachers, caregivers, and parents. We want to close the gap between the best research in current practice in early childhood education, and practitioners and parents. A range of partnerships will be established to ensure that parents, early childhood educators, and child-care providers are informed.

Why are these initiatives important? Simply, because research such as your own has shown that early childhood, the period in a child's life between from birth to age 5, is a critical time for children to develop the physical, emotional, social, and cognitive skills they will need for the rest of their lives. When children are provided with environments rich in language, literacy, and interactions, they begin to acquire essential building blocks for learning. A child who enters school without these skills runs a significant risk of starting behind and staying behind.

As the FACES study has revealed, we are doing well in Head Start, but we can do better. This is what the White House initiative is about; raising the bar and using research as one more resource for creating better learning environments and improved outcomes for children.

The Department of Health and Human Services (DHHS) is improving efforts to keep track of what children are learning and to use child outcomes to guide program improvement and accountability. Under this initiative, each local Head Start agency is required to assess preschool children's progress at the beginning, middle, and at the end of each school year.

This is specific to the congressionally mandated indicators of early literacy and numeracy skills. Programs are to use this assessment information to plan improvements in their curricula.

Federal on-site program monitoring teams will review program implementation of these and other requirements.

In addition, the President called for the creation of a national reporting system to collect child outcome data from every local program. The information will be used to target new training and program improvement efforts in Department of Health and Human Services' (DHHS) evaluation of local programs. The new accountability system will begin field-testing in the fall of 2002 and be in operation by 2003.

During the first week of May 2002, more than 20 practitioners, advocates, and researchers gathered in Washington, DC to share their best guidance and thoughts on the practical implementation of outcome systems. Last week, more than fifty researchers and educators met in Washington, DC to exchange ideas about how best to accomplish this charge. In July, a smaller group of researchers will reconvene to discuss more strategies.

The DHHS' efforts to develop the reporting system will take into account the comprehensive nature of Head Start. Both the First Lady and the President recognize the importance of comprehensive services to children and families.

In Head Start, we focus on the whole child and the family. It is important that we address not just the educational needs in the areas of literacy and language, but also the nutritional, social, emotional and mental health needs, while we partner with parents to facilitate parent involvement activities that are supportive of children's learning and participation in the program.

While we are in the process of developing the outcome system, we continue to focus on Head Start encompassing the whole child. It is the cornerstone of the program, and we are committed not to lose that.

This summer, we have provided teacher training called "Project Step." The summer teacher education program was launched in June 2002. The project was designed to provide nationwide early literacy professional development training that is based on literacy research. This will build on existing improvements and professional development efforts and create a consistent foundation of staff competency, including knowledge and skills in early literacy, to ensure that we can enhance the locally designed curricula and staff development efforts.

During 15 4-day training conferences around the country, approximately 3000 Head Start staff, including education coordinators and some lead teachers, will receive 32 hours of research-based training to support professional development, and become grantee-designated early literacy specialists. Their training will not only include approaches to teach early literacy, optimum classroom arrangements for learning, but also use and type of materials to provoke children's literacy and language development.

The trained Head Start staff will return to local programs to then provide training to local teachers. By the end of this summer, our goal is to ensure that every teacher has received basic literacy training. I should, however, provide one caution. Thirty-two hours of training will not create early literacy specialists.

We know from the research and the experts that it will take a long time for us to reach the plateau that we now strive for. What we do know is that we can begin to create an environment that is consistent across the country, where every program recognizes some of the basic concepts and values of early literacy. This includes an awareness and demonstration that programs know that early literacy involves letters, numbers, books, materials, and language throughout the entire classroom. So, 'Project Step' is not going to achieve everything in a summer, but 'Project Step' will get us to a good place to launch successful programming.

In keeping with the Secretary's one-department priority for the DHHS, Step training will also provide more than 100 state child care administrators and staff, at least two per state, the opportunity to participate in early literacy training.

The Step approach will continue with additional phases to expand and extend the skills and techniques that are used by Head Start teachers. New components will include in-classroom coaching and mentoring, evidence-based strategies to support children's social and emotional

development, managing challenging behavior, and improving child outcomes. It will include an excellence in teaching summit, as well as distance learning technology that supports the introduction of early literacy into Head Start programs.

Research shows that a child's success in school and in life depends on parents, teachers, and others around them. Parents in preschool programs can use specific experiences and strategies to help children prepare for school. This research makes partnerships between the Department of Education and other departments within DHHS important for our success in ensuring that all children are given the same foundation for learning.

Along with our shared goal of generating the highest quality, up-to-date research, we must ensure that the findings are made available to and usable by the people that will most directly benefit from them: the parents, staff, and other caretakers of Head Start children in their local programs.

I want you to know how much I value the work that you do. I want you to know how much I and those more than 857,000 families a year who receive Head Start support have benefited from your efforts to provide them with quality Head Start programs.

When my daughter was about 9 years old, I was working as the Executive Director for a small agency in Texas. Like most Head Start folks, we do not recognize weekends. We tend to work a little bit on evenings, Saturdays, and heavens forbid, after church on Sundays; whatever it takes to get the job done.

I had gone in to finish a couple of projects, and of course, I took her with me. I finished my work, we went home, and had a restful night. I went back to work the next morning to find that my business cards seemed to be kind of crooked and out of place. As I was reaching to shift them so that they looked more like, "Oh, there is the Executive Director," I noticed that my daughter had well spent her time in the office. She had taken some Liquid Paper, whited out my name and written in hers. Well now, this was a Head Start child. She did not get any Liquid Paper on the words "Executive Director." She did a perfect line and printed her name so that it was nice, bold, and blocked which read, "Kaley Hill, Executive Director."

I saved that card, because that was so symbolic of what Head Start can and will do for children and families. It allows them to go beyond ordinary dreams and to dream big. Texas big.

When I went home that day, I said to her, "You know, I noticed that you changed one of my business cards." And she said, "Well don't worry, Mom. I am going to put you up in a nice nursing home, and I'll come see you often, and you know that I'm going to take care of the kids." Now what more could I have asked of her? She recognized, even at that age, how important it is that we take care of our children, that we value our programs, that we value our families, and that we continue to fight this fight that Dr. Zigler and Mr. Rossoff started so long ago. I think that we are more than up to the challenge. I think that the field is expanding, and more people are recognizing what we can do: make changes in the lives of children.

I thank you, again, for your work. I thank you for this opportunity to be with you today. I know that you are going to have an enjoyable conference, and I look forward to seeing you over the course of the coming years.

Student-Mentor Award Luncheon

COCHAIRS: Michael L. Lopez, Carole Kuhns

AWARD PRESENTER:

Judith Palfrey

Judith Palfrey, M.D., is Chief of the Division of General Pediatrics at Children's Hospital, Boston, and T. Berry Brazelton Professor of Pediatrics at Harvard Medical School and Children's Hospital. She is also Professor of Maternal and Child Health at Harvard School of Public Health. She received her B.A. degree from Radcliffe College and a M.D. degree from Columbia University College of Physicians and Surgeons.

Dr. Palfrey has developed approaches for helping families and children achieve greater functional capacity, and has worked to solve problems based on a clear understanding of changing social and health conditions faced by families in our communities. She has served on many child health committees, including the Congressional Select Committee for Promotion of Child Health and the U.S. Office of Minority Health Resource Center. Dr. Palfrey is a past president of the Ambulatory Pediatric Association and chaired Building Bright Futures, the implementation phase of the nationally sponsored project to disseminate health promotion/disease prevention guidelines. She is currently the director of the national program office for the Anne E. Dyson community pediatrics training initiative.

AWARD RECIPIENT:

Julius B. Richmond

Julius B. Richmond is currently John D. MacArthur Professor of Health Policy, Emeritus at Harvard University. From 1983 to 1988 he was Director of the Division of Health Policy Research and Education at Harvard University. From 1987 to 1993 he served as Chairperson of the steering committee of the Forum on the Future of Children and Families of the National Academy of Sciences and served on its Board on Children and Families.

From 1977 to 1981 Dr. Richmond served as Surgeon-General and Assistant Secretary of the Department of Health and Human Services. During this time he had responsibility for administering all of the agencies of the US Public Health Service. In 1979 he issued the report, Healthy People: The Surgeon-General's Report on Health Promotion and Disease Prevention. *This report for the first time established quantitative health goals for the nation for the next decade—a process which has been institutionalized by the US Public Health Service through its recent report,* Healthy People 2010: National Health Promotion and Disease Prevention Objectives.

Dr. Richmond was trained in pediatrics and child development and pioneered in introducing psychosocial development into pediatric education, research and services. His collaborative work with Dr. Bettye Caldwell on the development of young children growing up in poverty led to his appointment in 1965 as the first director of the national Head Start program. He also served as assistant director for health affairs of the OEO and directed the Community Health Centers program.

Dr. Richmond has received the C. Anderson Aldrich Award of the American Academy of Pediatrics, the Gustav O. Lienhard Award and the Walsh McDermott Medal of the Institute of Medicine of the National

Academy of Sciences, the John Howland Award of the American Pediatric Society, the Ronald McDonald Award of the Ronald McDonald Children's Charities, the Sedgwick Medal and the Martha May Eliot Award from the American Public Health Association, the David E. Rogers Award of the AAMC, the John Stearns Award for Lifetime Achievement in Medicine from the New York Academy of Medicine and a number of honorary degrees.

His current interests are in the area of shaping health policies with a particular emphasis on health promotion and disease prevention, with special emphasis on children and families. He is especially interested in the developmental antecedents of habituation from conceptual, methodological, and public policy approaches.

Michael L. Lopez: I want to welcome everyone to the second Student Mentor Luncheon, now a permanent feature of Head Start's National Research Conferences. The focus of the luncheon is on mentoring. Mentoring is a very critical part of what this conference is all about. All the mentors here were carefully selected and not based on random chances. Some of you may speculate, but you were selected because we wanted to have a host of mentors and make a much more strategic effort to partner mentors with students based on the areas of the student's interests. We wanted mentors to interact and help facilitate some networking because it is our collective responsibility to ensure that we have a vibrant, thriving, and well-prepared research workforce to carry on the important child development work that we are all doing and all hope to continue to do. We see this as a great opportunity, within the Head Start Research Conference context, to help facilitate those relationships and partnerships through mentoring. Carole Kuhns has been my partner on brainstorming about the luncheon and graduate student programming in general. As with Carole, Faith Lamb-Parker was essential. Also thanks to Esther Kresh, who originally launched the graduate student funding that began several years ago.

Within the graduate student program, we have had many examples of what good mentor-student relationships should be about. A number of these, John Fantuzzo and Julia Mendez, Patton Tabor and Lisa Lopez, Catherine Tamis-LeMonda and her students, and other mentor-student pairs illustrate how and why mentoring is such an important function, especially for some of us who did not have the best mentoring in graduate school.

Mentoring is not just about signing a piece of paper or meeting with a student every 6 months. It is about developing a relationship. We talk about relationships in the context of all the Head Start research. Mentoring is about relationship building. The most fundamental and common aspect of good mentoring relationships is relationship building, because it is a selfless giving of the mentor to the student in the broader interest of the field.

There is a group of students from the University of Pennsylvania and New York University under the support and tutelage of John Fantuzzo and Catherine Tamis-Lamonda who have created a cohort of graduate students that work across universities. They have developed a creative roundtable called "Challenges and Commitments: The Role of Mentoring Relationships and Developing Junior Scholars," which they will be presenting at this conference.

That group also has been part of an innovative cross-university meeting. The second year they added a number of other universities: University of Miami, Fordham University, and Columbia University. I am sure it is going to expand even further, but it is mentor supported and encouraged, student initiated, student organized, and student run. It was under the guidance of their mentors, but the students were the ones who put it together.

For those of you who do not know about the Head Start Graduate Program, I think it is important to briefly touch on its four main goals. Obviously, the easiest one is just providing direct support for students who are interested in Head Start-related research. A more difficult goal is the focus on promoting mentor/mentee relationships to help support graduate students' training and overall career development. Mentoring does not stop with graduation. That is another important aspect of this goal—promoting relationships that will be enduring.

The third goal of the program is to emphasize the importance of developing working partnerships. Those of you who have done Head Start-related research know it is different than doing typical university-based research. These partnerships are tough. Having a supportive mentoring relationship is critical to developing relationships with the community and conducting the research.

The final goal of the Head Start research grant program is to support the active communication, networking, and collaboration among graduate students, their mentors, and other researchers. This luncheon is a great example; not just the mentors are here, but also other highly regarded researchers who were generous enough with their time to come and talk to students about their research and collaborative research opportunities.

Carole Kuhns, is a Society for Research in Child Development (SRCD) fellow at the Administration for Children and Families. She has been helping with the graduate student research program, among many other projects

Carole Kuhns: It has been my pleasure to work with Mike Lopez and the graduate students in the Child Outcomes and Research and Evaluation Office (CORE) last year and this year on this project. This has been outstanding group of students. I am going to mention the student's name and advisor. Helena Duch is at NYU and LaRue Allen is her advisor. Her study looks at parents' participation in education and training and how that relates to outcomes for children.

Mary Ann Fenske is at Wichita State and her advisor is Carol Westby. Fenske is doing an ethnographic study looking at caregiver behaviors to create a responsive environment. Paige Fisher is working with David Arnold at the University of Massachusetts. She is studying the relationship between children's early interest in math to their later math skills. Marlo Perry is one of several students working with John Fantuzzo at University of Pennsylvania. She is studying the impact of welfare reform on parents' involvement in Head Start and looking at children's outcomes as well. Beth Phillips is studying with Chris Lonigan at Florida State University. Her research looks at assessment and intervention strategies for children with problem behavior. Cathy Qi is at Vanderbilt University with Ann Kaiser. She is looking at the relationship of language and behavior disorders. Lina Robinson is at University of Virginia with Bob Marvin. She is looking at caregiver working models and attachment issues. Carol Stock is at the University of Oregon with Karen Rush. She is looking at the effects of the responsive interactive language intervention for children in Head Start. Jennifer Tschantz is also a year 2000 scholar, and she is working with Joan Lieber at the University of Maryland.

Those students are now in their second year of funding (most of the grants are for 2 years) and will be completing their dissertations in September 2002.

Another group of students was just funded in October 2001. They are halfway through their program. Rebecca Bulotsky is at University of Pennsylvania, also with John Fantuzzo. She is looking at the relationship of children's social adjustment in Head Start and their social and academic adjustment as they enter the primary grades. Rebecca Cortes, with Mark Greenberg at Penn State, is looking at parents' functional-emotional awareness and their childrearing practices. Jason Downer is studying with Julia Mendez at the University of South Carolina. He is looking at fathers' roles in promoting Head Start children's school readiness. Abbie Raikes is at the University of Nebraska at Lincoln with Ross Thompson. She is looking at mothers' self-efficacy and children's attachment. Ann Stacks is at Michigan State, with Marsha Carolan. She is looking at the relationship between maternal factors and children's aggressive behavior and attachment. Stacey Storch is studying with Janet Fischel at the State University of New York at Stony Brook. She is looking at assessment of curriculum practices in Head Start.

We have some former Head Start scholars in the room. Let us also acknowledge their contributions.

John Pascoe: I am pleased to be able to introduce Judith Palfrey. I jumped at the chance. I have known her for over 20 years. We met for the first time when I was a fellow in child development at Boston Children's Hospital in 1981. Then again, for 5 years, in the 1990's, we spent many hours together serving on the Board of Directors of the Ambulatory Pediatrics Association, and we were both elected president of that organization in the mid-1990s.

Judy's academic credentials are very impressive. She is chief of a large division of General Pediatrics at Boston Children's Hospital and is a T. Berry Brazelton Professor of Pediatrics at Harvard Medical School.

However, among the characteristics that I find most remarkable and inspiring about Judy are her personal values, including her strong sense of social justice. She has devoted a large portion of her career to activities that improve the lives of children and their families. In fact, a mutual friend of ours is fond of calling her a bulldog to describe her effective and relentless efforts in this arena.

In summary, Judy is an outstanding physician for children, an exemplary role model and mentor herself. She will now introduce this year's Mentor Award recipient, Julius Richmond.

Judith Palfrey: I have the honor of presenting this Mentor Award to Julius Richmond. In thinking about coming here and talking to you, a few images popped into my mind. I am going to tell you about three of these. One is real because it happened to me. The other two are ones that I imagined.

The first image is this. I am young. It is 1975. I have just completed the first year of a fellowship at Children's Hospital, and I have been invited to come to Washington to my first academic meeting. I cannot remember whether I was going to present anything or not, but it was a big deal to me. I decided to wear, for the first time in my life, a pantsuit. I was extremely nervous about the idea. I was a little bit worried about who was actually going to see me wearing this pantsuit. You probably can figure out the next part of the story, which is I get on the airplane. I am in the middle seat. I look over to my right, and who is there but the former Surgeon General. Julius Richmond is fond of talking about incidents of coincidence. That was the first time I met him. I am a shy person, and I do not like to talk to the person next to me in an airplane. However, this wonderful man, who knows how to draw out anybody, calmed me down. I forgot about the pantsuit and we began to talk.

I remember that hour like it was yesterday. I remember him talking about the incredible shame that it was that at a Harvard graduation in the 1960s, Lyndon B. Johnson had been invited to give the commencement speech, and that because of the activities in Viet Nam, he had had to scrap the speech that he was going to give on education and talk about the war. Richmond was in the middle of all that, starting Head Start and being a part of the Office of Economic Opportunity (OEO). To be able, as a young person, to sit next to this man and to have him tell me these stories was incredible. That is an image that I will never forget.

The second image is Julius Richmond and Bettye Caldwell sitting out in the back of a trailer. I imagine it as a trailer at the University of Syracuse. I see them sitting there, and they are looking at data. The data are telling them that children in poverty have never been studied before. Richmond and Caldwell were the first people to speculate on poverty's effects on children's development. Every once in a while, his brow furrows as he watches the developmental trajectory drop at 18 months. Why are the children in poverty not developing the way the other children are and it can already be seen is at 18 months? Then I see the same image 2 or 3 years later. I see Caldwell and Richmond sitting there looking at the data as the intervention they have put in place has changed that. The image I see is that twinkling eye and big smile coming over his face.

The third image is again not one that I have actually seen. It is a courtroom in Florida in the present. On one side of the courtroom there are the "suits," the rich lawyers for the tobacco industry. On the other side of the courtroom, there are just a couple of people, Ma and Pa Kettle

lawyers, frumpy. Sitting in the witness chair is a very distinguished gentleman. He is sitting very calmly. The "suit" keeps coming up and asking him very precise questions about science. Every time, he asks whether tobacco does this, whether tobacco does that. The witness says, "Now, if you just look on page 322, you will find the answer." Then the "suit" asks another question, and he says, "You just need to look on page 516." As each one comes up and asks a question, he answers similarly and sends them back. Finally, one gentleman comes up and says, "Dr. Richmond, how is it that you know this book so well? How is it that you actually went to the trouble of writing this book?" Richmond just looks back. This book is a tome that was written during the time that he was Surgeon General in the 1980s, on the effects of tobacco on health. He looks at them in the eye; steely eyed, and says, "I thought I might need it someday."

I tell these three stories to give you a picture of this wonderful man. This man is a scholar. This man is a policy maker. This man is a visionary, and this man is a mentor. Finally, this man is a wonderful friend. I have learned so many things from Julius Richmond. It would be impossible to express my personal gratitude to him for the things that he has taught as a mentor.

I thought it was interesting that Mike Lopez mentioned mentors having a kind of softball team worth of mentees. If you quantify how many people's lives have been touched by Julius as mentees, you would probably have the whole American League, maybe the entire major league. The importance of the kind of mentoring relationships that Julius has is that there is not a single one of those people who does not feel like I do, very special, very singled out, as if our relationship is deep and profound.

However, we are good siblings, and part of the reason we are an American League's worth of child development and child health scholars is because he has taught us to be that way. He has taught us how to collaborate, how to work at the frontier, and how to think in visionary ways.

There is a slide that Julius used to teach all of us, and it has to do with the power of science and the power of data. It is taken from four pathologic specimens of the human—the brain cell at birth, 3 months, 6 months, and 9 months. Over the period of those first few months of life, something special is happening to our human brain. We are connecting. We have the same cell, but now with its connections. It is talking to all the other cells. Julius was showing this slide to Congress in 1960. He showed people why Head Start would work from a biological basis. You cannot abandon young children. You must nurture them. You must stimulate them. He could show this with the intervention data too.

That is just one lesson that Julius Richmond has taught so many of us. The other kinds of lessons have been personal. They have been that he is always there for people. In my own experience, one of the things I do when I get a little discouraged is that I call him up. I say, "Can I come over?" He always says sure; the word "no" does not exist in his vocabulary. I often will come with a long list of things that I am not doing very well at. I will go through the list with him, and he will say in a nice way, "Just keep doing what you are doing." Somehow, that is just enough to keep me going. He does not believe in making priorities and throwing anything off the list; just keep doing what you are doing unless someone stops you.

Recently, I had one of the greatest honors of my personal life as a mentee—to be the faculty escort for Julius when he received an honorary degree from Harvard. I have a feeling that that honorary degree is not going to mean anything compared to what he is about to receive. He is graduating from Head Start. This is Head Start's Sixth National Research Conference Lifelong Mentor Award. Congratulations.

Julius Richmond: I have been introduced many times, but never like that. I am deeply touched that in this room there are so many people to whom I am indebted, who are so committed to a program that we all are committed to or we would not be here. However, there are so many people who have made so many contributions that one wonders why one is singled out. I guess I have to take some comfort in the fact that through some peer review process, I emerged to have been designated for this award. I was feeling very comfortable about that until this morning.

Over coffee, I was sitting with Rachel Cohen and Ed Zigler, and they were talking about the importance of getting material peer reviewed. Rachel appropriately pointed out that some recent studies of peer review have indicated that it is not too uncommon for some papers that have some significant defects to slip through the cracks. At that point, I became very apprehensive about the peer review process as it applied to me.

This is a remarkable occasion, and these national research conferences have become extremely important events, not only in relationship to Head Start and its own development, but also in relationship to the development of children and how we try in various ways to help each child attain his or her greatest potentialities, which in the last analysis, is what Head Start is all about.

Now the issue of mentoring is one that was very important in the early days of Head Start. It is difficult for me to talk about Head Start without mentioning those early days and the roots of the program. We are remarkably indebted as a nation to what President Lyndon Johnson was committed to when he saw the importance of developing the Economic Opportunity Act and establishing the OEO, which then gave an opportunity for the nation to develop a program for young children. He appointed Sargent Shriver, who at that time was directing the Peace Corps, to come over to the OEO on a part-time basis because he would not let go of the Peace Corps, as it was in its early days. Here we get back to the incidence of coincidence. Shriver had been serving as the Executive Director of the Kennedy Foundation, which was committed to helping children and families who had members with mental retardation. Through that experience, he had learned as a lay person quite a lot about child development.

One of his first thoughts in dealing with poverty was asking if we could with this at an early point in the life cycle? He intuitively knew that that could be important. He established a committee of fifteen people, and Ed Zigler is the only person in the room who was on that committee. It worked over a short period of time to develop a statement that is of enduring significance. I would like to read the first few paragraphs of that statement, because at this time the public dialogue sometimes gets confused about what the origins of Head Start were and what its program commitment has been.

It is time to go back to the roots and see what those people who thought hard about what the program ought to be had to say. This is their statement:

"They say there is considerable evidence that the early years of childhood are the most critical point in the poverty cycle. During these years, the creation of learning patterns, emotional development, and the formation of individual expectations and aspirations take place at a very rapid pace. For the child of poverty, there are clearly observable deficiencies in the processes, which lay the foundation for a pattern of failure and then a pattern of poverty throughout the child's entire life.

Within recent years, there has been experimentation and research designed to improve opportunities for the child of poverty. While much of this work is not yet complete, there is adequate evidence to support the view that special programs can be devised for those 4- and 5-year-olds, which will improve both the child's opportunities and achievement. It is clear that successful programs of this type need to be comprehensive."

I think that is an important emphasis these days, involving activities generally associated with the field of social services, health, and education. Similarly, it is clear that the programs must focus on the problems of the child and parent, and that these activities need to be carefully integrated with programs for the school years.

The title for this year's meeting, The First Eight Years: Pathways to the Future, picks up on that theme of continuation. Ed Zigler will recall vividly the fact that we even had a term for that follow-up into the school years. We called it "Follow Through."

For the mentees in the room, no matter how we define mentees, I would emphasize that we had a great deal of mentoring to do in those early days because the planning committee made the judgment in February 1965 that this program would be a national program operating that summer. We had our work cut out for us.

First of all the committee focused on the fact that we should not skim the cream. We said we wanted to try to get the program started in the 300 poorest counties in the United States. To get the 300 poorest counties in the United States to write an application for a program and to do it in a 6-week timeframe was a challenge. We took 6 weeks to review them. Then essentially, the communities had about a month to recruit their staffs and find facilities, and so forth. It seemed impossible, but nonetheless it happened.

I believe, and this is an interpretative point, that the American people have a tremendous interest and commitment to the care and development of children. Many people conclude that because we have not done all that is needed for children and families, we do not have a deep commitment. The commitment is there. It was illustrated in those early months of trying to organize Head Start. However, that commitment had been largely latent. What we did was to make it manifest. I would like to suggest to the mentees in the room to try to complete the agenda for getting all of the potentially eligible children for Head Start into the programs. It is important to focus the attention of people on what they can realistically do. With the coming of Head Start, we asked for volunteers. We could not use all of the volunteers who kept coming out of the woodwork to offer their services. I do not accept the fact that the American people do not really care about children and their development. To some extent, however, there has been a failure of leadership, a failure to crystallize and focus the attention of the nation on what people could do.

We wanted to have the 300 poorest counties into the program, children and families in greatest need. My ingenious Associate Director, Jules Sugarman, whom many in this room know, was a career civil servant. He said we have civil service interns scattered all around the agencies in Washington. They would like something like this and would be committed to it. We could train them and send them out to these communities. We sent out notices to the civil service interns and they too came pouring in. In the evenings we would train them to know and understand what the program was about. On weekends we would team one civil service intern up with an academic, usually from the academic community in child development. Together they knew the child development and the programmatic needs of the children.

The interns had been taught about the administrative and the fiscal side because we mentored them. They in turn went out and mentored people in communities about how to build these programs. We had about 500,000 children that first summer in 2,700 communities across the country. We did not quite get all 300 of the poorest counties in that first summer, but we got more than half, about 189.

We also needed teachers, and at that time, we could not even identify how many early childhood educators there were in the United States. Nobody knew. However, we knew there were not enough to deal with what we would need that summer. The only way we could start Head Start was as a summer program because we could recruit teachers. This reflects commitment. Elementary school teachers were willing to give up their summer vacations to come and work to get Head Start off the ground.

We again had to invent something whereby we could retrain these teachers, who had an interest in younger children, for the program. To do that we asked the National Universities Extension Association, the universities that run extension courses and were accustomed to ginning up courses in rapid fire, to develop a program whereby we could mentor these teachers. They in turn became available to develop the Head Start effort for that summer. Over time we shifted it over to a year-round program.

Regarding the role of scientific work, Judy focused on the importance of science, and in those days, Ed and I worried too about how to show the effectiveness of the program. As all of us in this room know, we keep struggling in finding better and better ways to do that. I would say to Ed, "The program that we are trying to develop has humanitarian goals. We ought not to apologize for giving children medical care, dental care, and improving their nutrition, education and social services, and all of the other components of the program."

I said if the science comes along to back that up, that is fine, but we should never apologize for feeding hungry children. I think that is a very important dimension of how we need to think about Head Start, its rich past, but also its future. To do that, I just want to read a little bit from a Head Start graduate.

Before I read her words, there is a little story behind it. A number of years ago when David Hamburg was the President of the Carnegie Corporation, he established a number of task forces on early life. Ruby Takanishi chaired the one on adolescence and Eleanor Maccoby and I chaired a council on 0 to 3. We were strategizing about how to get the nation to move toward what is now Early Head Start. We rendered a report on the 0 to 3 years, and after that, David Hamburg thought we ought to give grants to governors who had interests in moving toward this earlier period. We thought the money could help stimulate more development in this area. We announced the grants at a press conference in Washington where the program was announced.

As the meeting broke up, there was a young, thin, African American woman who walked up to me a little timidly and introduced herself. I do not betray any confidences when I identify her because she wrote a piece that I want to quote from. Rachel Jones is her name.

She said, "I'm the national correspondent for a national news service. I was in that first Head Start group in 1965." This is a long story that I commonly hear. She told me about how hungry she had been until she had gotten into Head Start, and I said she ought to write about that.

She said, "Well I am a professional correspondent and this would appear to be self-serving."

I said, "I think I can help you solve your ethical dilemma. Tell your editor that you are writing a piece, but you will send it to another paper." So lo and behold, she did. She sent it to the *Washington Post*. Rachel Jones' "When You Have to Pretend You're Not Hungry" is the title of the article.

She writes, "The year was 1965, the place, a Head Start classroom at the Sumner Elementary School in Cairo, Illinois. That is where I come from. I remember it well for one important reason. They had instant mashed potatoes and to this spindly legged, pigtailed 3-year-old, it was much better than those ugly real potatoes we had at home. Everybody got milk. My hand-me-down clothing may have marked me as less than affluent, but at least I didn't have to sit in a corner and pretend I wasn't hungry while the other kids ate hamburgers and drank their milk. I didn't really understand who was responsible, but I was grateful."

She said these memories had rushed back to her last summer, near the height of a tense debate over just how much help to give to the poor in America.

"I often felt compelled to bear witness that Head Start and many of these other so-called failed, antipoverty programs were a staple of my own life." Then later on she goes down to say, "A hot breakfast or a nourishing lunch can make all the difference to a poor child. A full stomach is a terrific equalizer."

We have to always recall these stories that we keep hearing of what has happened to the Head Start graduates. As somebody reminded me this morning, the Associate Commissioner of the Administration for Children, Youth, and Families (ACYF) is a Head Start graduate, and that tells us something too. I am enormously grateful to all of you who participated in designating me for this award, I also want to make a comment about the significance of the kind of collaboration that we see in these annual conferences. They include the scientific community, in the form of SRCD under John Hagen's leadership, along with the officers of that society, Esther Kresh, and others at the Head Start Bureau who have been so attentive over time, and the collaboration of Faith Lamb-Parker at the Mailman School of Public Health at Columbia University, along with all of the people in ACYF who have made these conferences a reality. It is that kind of collaboration between the public and the private sectors that has characterized these 37 years of history of Head Start, resulting in more than 20 million children having had the experience of being in the program.

For the mentees, I would only conclude by saying that we should always remember Louis Pasteur's edict to cultivate the chance favors and the prepared mind. It is extremely important that we be prepared to take advantage of the kind of opportunity that we had in 1965 when we had the political will and the resources with which to begin Head Start, the program that has meant so much to those 20 million children. Prepare yourselves in order that we keep expanding our knowledge base. Then, when the opportunity comes along, help more children in need to help themselves to fulfill their greatest potentialities. Be prepared, then seize those opportunities and do it boldly.

Luncheon III

Promoting Public Awareness of Issues in Early Learning

INTRODUCTION OF KEYNOTE SPEAKER: Kathryn Barnard

KEYNOTE SPEAKER:

Mona Lee Locke

Mona Lee Locke, wife of Washington Governor Gary Locke, became the state's twentieth First Lady on January 15, 1997. As First Lady, she is an advocate for issues related to children and education. She is the honorary chair of the Washington state SAFEKIDS Coalition, and honorary cochair of Healthy Mothers, Healthy Babies. She is also a member of the advisory board of Mothers Against Violence in America (MAVIA).

As cochair of the Governor's Commission on Early Learning, Mrs. Locke led the commission in its charge to ensure that every child in Washington state go to school prepared to succeed. It was comprised of leaders in education, child care, health, business and government. The commission primarily focused on helping all caregivers, whether parents, grandparents, or child care providers, get the tools they need to maximize the growth and development of children from birth to age five. The commission launched a statewide public awareness campaign and established the non-profit Washington Early Learning Foundation (WELF) to help reach this goal. Mrs. Locke currently serves as the WELF Board president.

Mrs. Locke, who left her career as a television reporter when her husband ran for Governor, is still a journalist at heart. In 1999, she co-produced and narrated a local Public Broadcasting System documentary on early learning in China. It was based on a cross-cultural exchange trip to China that she led. Fifty teachers, child care providers and parent educators from five Northwest states participated.

Mrs. Locke earned her bachelor's degree in English Literature from the University of California, at Berkeley. She has a master's degree from Northwestern University's Medill School of Journalism. She has worked as a television news reporter in Washington DC, Green Bay, Wisconsin and Seattle, Washington.

Kathryn Barnard: Mona Lee Locke is the wife of Governor Gary Locke. As First Lady and mother, she has worked passionately and effectively to herald the importance of early learning. She cochaired the Commission on Early Learning that Governor Locke put in place. This Commission led to the establishment of the Foundation for Early Learning in the State of Washington, on whose Board of Directors she serves. The mission of this nonprofit organization is to try to influence the state to focus more on the early years of life. She promotes the expansion of parental education opportunities, and works diligently to ensure child care quality for all children in the state. As part of Mona's efforts on behalf of young children, she has traveled throughout the state talking to parents, listening to them and to other caregivers about their needs and concerns. She has been involved in the Commission and the Foundation's efforts to bring about public awareness of the early years.

Mona is the honorary chair of a number of committees that serve children in the State of Washington, such as Healthy Mothers, Healthy Babies, and Safe Kids Coalition, and she has a wonderful association with a children's museum in the state capital. She is also associated with Mothers Against Violence, as well as many other organizations.

As the Governor's wife, she is a passionate crusader, but she is a journalist at heart. I first met her when she came to Seattle as a reporter for one of the TV channels. This is why I asked her to come and speak here. For those of us in science, and actually in programs such as Head Start and Early Head Start, we have been in the closet about our message and our knowledge. We need to be much more public in order to help other people understand. It is from this journalistic ability and experience that I asked her to come and talk to us today about how to communicate the importance of early learning

Mona Lee Locke: I am honored to be here among experts and luminaries in this field of early child development. Thank you for all of the energy and time you have invested in helping young children across this country get the best possible start in life. All of us remember the moment when we first became believers in the value of early childhood education and early learning. For some of you, it may have been during the course of your work with children, or for some of you, it may have been through scientific research. For myself, I vividly remember it was a slow and a gradual awakening. Actually, they were probably repeated awakenings from my first born, Emily, and then reminders from my second born, Dylan.

Emily was born shortly after we were inaugurated, about a month and a half after we had moved to the state capital. Nothing could have prepared us for the 24-hour-a-day responsibility that we soon faced. I had quit my job to be a full-time mother, while also being the First Lady. It was fascinating watching Emily develop day-by-day, minute-by-minute. This child was like a little sponge soaking up information. It is one thing to hear about the importance of early learning and brain development from birth to age 3; it is quite another thing to actually witness it happening as a mother. Who would have known, that by age 2, my young, little daughter could say those four important words, "No mommy, you're wrong." I just keep asking, "Is that normal? Do most 2-year-olds say that?"

When we became new parents, it was like we became instant members of a worldwide parent's club and identified with all of the characteristics: sleep deprivation, mumbling incoherently, incomplete sentences, and so forth. While we had so much in common with these other parents, we at the same time felt so isolated, so alone. We did not know exactly where to turn for information. That is when my husband and I decided to create the Governor's Commission on Early Learning. We truly felt that if we, the Governor and First Lady of the State, as first time parents, did not know where to turn to get information on how best to care for our child, wasn't every other first-time parent going through the same experience? The Governor appointed Melinda Gates and I to cochair the commission for 2 years. By traveling all over the state and talking with other parents and caregivers, we learned what was available in our state and what was not. We also learned about toddlers like little Ellie.

Ellie was born 6 weeks premature and addicted to heroin. As a newborn, she was administered morphine for 9 days just to help her through the withdrawal pains. Ellie's biological parents were chronic intravenous drug users and abusers. At age 2, her parents were deemed unfit to care for her. She was removed from their custody. This little girl was one of the lucky ones. Ellie had an aunt who stepped in and agreed to take Ellie into her home.

At age 4, Ellie was connected with a Head Start program in Washington State. By that time, she was already a handful. Counselors said she would throw tantrums that would last for 2 to 3 hours, and sometimes longer. She would throw furniture, flailing her arms; she would cry and scream uncontrollably. A mental health counselor found that although Ellie was now living in a stable living environment, she still had clear memories of those first few years of life, and she still had severe fear of abandonment. Counselors then began working with Ellie's family, her

Aunt Vicki and their family, to be sure they were all using similar language and approaches with the little girl. They also wanted to be sure that she was surrounded with acceptance and love. Over time, lots of kindness and gentleness allowed Ellie to make it through the tantrums. Eventually, they stopped. By the time she left the program and headed to kindergarten, Ellie was a changed little girl; not without her continued share of problems, but she had learned how to love and how to be loved.

We know that early learning makes all the difference in a child's life. We know that developmentally appropriate experiences and good mental and physical health are critical to success. Your work has proven it scientifically. Ellie's story makes it real.

Not everyone knows or believes in the importance of early learning and this critical period in a child's life. That is our challenge. Together, we must work toward helping everyone— parents, business, and policy makers— understand the importance of this period. We must raise the awareness of the profound impact early learning can have and support families and caregivers in their quest to do the right thing for their children.

The Governor's Commission for Early Learning held a series of parent meetings across the state. We heard directly from the source—parents—about their needs. It may come as no surprise to you that the greatest need of all was for information. Parents wanted to know what resources were available, and how could they access them. While many genuinely appreciated our efforts, not everyone embraced our mission. The Commission for Early Learning met monthly for 2 years. During our last year, we definitely got attention for our work, and it was not always positive.

What I have learned is that when it comes to children, people are extremely sensitive. I tell you that so you can learn from our experience. As word spread about our mission and our work, we started drawing protesters to our meetings. At first there were just a few, then a half dozen, and then dozens and dozens of protesters. These were citizens who firmly believed that government has no place in the lives of their families or their children. No program or public awareness campaign should interfere or try to influence families on how they should raise their children.

For an entire year, every month, 20 to 30 protesters would attend our meetings; speak at our meetings, and picket holding signs, which read, "Don't lock up our kids." They hung us in effigy. Talk radio soon took up their cause, and we were lambasted on the airwaves. Everyone joined the cause, people like John Birchers and every anti-government group. Our meetings even drew protesters from neighboring states.

From this, I can proudly proclaim that I have drawn more protesters than my husband has ever drawn on any single issues. Putting a spin on it, I would say it only means that people understand how important this issue is. Their concern was that government should stay out of people's lives despite the fact that the Commission was comprised of private individuals from the private sector. The Commission was made up of child-care providers, teachers, business professionals, pediatricians, health and development experts, and Kathryn Barnard. We never tried to dictate to people what they should do.

Therefore, the lesson that we learned is that everything we did had to be labeled "voluntary." We had to balance the objections of those protesters, because they truly felt that we were interfering in their lives. We also heard from other parents who were desperate for information. With that in mind, we moved ahead.

First, we developed a public awareness campaign aimed at all parents and caregivers of young children in Washington State. We aired television ads and print magazine ads for months. As part of the campaign, we partnered with the 'I am Your Child Foundation' from California to distribute hundreds of thousands of early learning brochures by direct mail, through advertising a 1-800 number, and a web site. The brochures were sent to health clinics, to pediatricians, to child-care providers, libraries, Head Starts, Early Head Starts, preschool centers, as well as to parents at their homes.

The campaign was designed to be first and foremost supportive. We definitely did not want to imply that parents did not know how to take care of their children, but rather let them know that if they wanted more information, it was out there and accessible. The print ad campaigns were published in local sections of national magazines like *People, Time, Newsweek,* and *Rosie.* One ad reads, "Who are you, little one? Does she have music inside of her? A gift for seeing things in a fresh way? An award winning butterfly stroke? Eloquence? A warm and compassionate heart? There is a great deal you can do to help your baby become the person she was meant to be. If you would like to know more, please call or visit our web site." Another ad reads as follows: "What will your dreams be? He has busy fingers and a hearty laugh, and excellent sense of direction, a preference for peaches, and a favorite book; the one with the little fuzzy farm animals. By the time your baby is a toddler, you know him very well, but the person he is becoming is still a work in progress. If you would like to give him the best possible start in life, just call for a copy of the ten simple ways to encourage your child's brain development or visit our web site."

In addition to these print ads, we also produced some television ads that were also aimed to be supportive. The ad says, "Help your child become the person he or she was meant to be. Call toll-free for your early learning brochure." In addition to the ad campaign, the Commission sponsored bringing a program called TEACH to our state. TEACH, which is part of North Carolina's Smart Start campaign focuses on raising the quality of child care. This program actually provides scholarships to child care teachers as an incentive for them to go back to school and get their early learning degrees. After than, they in turn promise to come back to the centers with knowledge and newly found expertise in the field. I am proud to say that 2 years after bringing TEACH to our state, we have 21 out of 39 with the program in place.

Finally, the Commission did not want its work to end with the conclusion of our 2-year timeline, but it was clear that government funding alone was not going to be able to support all of the work that we felt we needed to do. Therefore, we started a nonprofit foundation with a generous seed gift from the Bill and Melinda Gates Foundation, and created the Foundation for Early Learning. The Foundation's mission is to support the profound learning that children experience from birth to age 5.

With the outreach that has been done by the Commission, the ads by the Foundation that were working, and numerous other organizations across our state, we have a wonderful movement starting. Polling indicates that the general public is actually beginning to get it when it comes to early learning. Although people understand that early learning is important, they are still trying to figure out what they can do for their children and their community.

With this growing awareness, it is time to focus energy on translating the work into easy-to-understand action steps for parents, caregivers, preschool programs, and kindergarten teachers. Where do we go from here? There is growing energy in a movement. What can we do? Spread awareness. We must continue in our quest to help policy makers and the public at large understand that appropriate early childhood experiences are critical to the future of our country. Without their backing, nothing can change.

We are talking about spreading awareness and changing opinion. We need to educate child-care providers and parents. You have the power to do that. Start a campaign to lobby legislators for reform and change. You have access to parents. You have access to people who really care. Have them write letters. Go down to your capital. Lobby your legislators. Let them hear about the importance of early learning. We need to continue support for families by providing them with the programs and information they need to help their children succeed in life.

Form partnerships. As awareness grows, so do the number of businesses and organizations that want to support early learning. They have the capability to get our message across. If you look, you will find programs and organization within your own states focused on the importance of early learning that would love to partner with you, and learn from your expertise. Seek

business alliances. There are already some good partnership models out there. Child-care centers are teaming up with hospitals, businesses, and government to support early learning.

Join a movement. In Washington State, we have numerous businesses, including Costco, that are working with community colleges and local school districts to build best practices child care centers for their employees. I am sure that there are businesses in states across the country that could be convinced to do the same thing.

Start a dialogue. According to the 2000–2001 report of the Education Commission of States, early care and education is not so much a system as it is a nonsystem. It is a conglomeration of programs and policies that are largely disconnected from one another and from other levels of the education system.

Think back to your own experiences. We were talking earlier about how fragmented we are. When you think of Head Start, what do you think—is it a preschool or is it above preschool? How about child-care centers? Do we think in terms of working together in bridging the gaps, communicating, and starting a dialogue? In order to succeed, we need to communicate with one another and better align child care, preschool, and kindergarten goals. Early learning can be the spark that ignites community-wide conversation about our current system. We need to start focusing on pre-K through twelve, if not earlier.

Finally, show and inspire. Many people have heard about the importance of the brain development during the first 3 years of life. Few understand how that translates to the practicalities of everyday life. I found that while talking about the miracle of the brain is fascinating, there is nothing like the impact of actually seeing early learning take place. I recommend that if you have access to a politician, policy maker, potential donor for a program, or any other type of change agent, take them to two child-care centers. The first should be one that is struggling; a little run down and trying to make ends meet. The second one would be a child-care center that is doing an excellent job with well-trained professionals and thriving young children. Show them these differences. Inspire them to do something about it.

In this day and age of deeper and deeper budget cuts, the reality is that we are all forced to do more with less. Think about it. None of the things I suggested really has anything to do with money. They need you. They need someone, an advocate, to step in with time and expertise. They need you to lead the charge and help build coalitions to move opinion and get things done.

Remember Ellie, the little toddler I told you about at the beginning? Her Aunt Vicki and her family have adopted Ellie. She is undoubtedly better-adjusted and happier in life. This is quite a transformation from the aggressive, frightened toddler who used to alienate herself from all of her peers and adults. As you and I know, Ellie is one of the lucky few who did not fall through the cracks.

I am sure that I do not need to remind you that as we move forward and celebrate our successes, we must not forget that for every Ellie out there, there are thousands of children and babies who are missing out on the opportunity to have a good start in life.

We can make a profound difference in the lives of children, and ultimately in the very fabric of our society, by advocating for and fostering a loving, caring, nurturing, and stimulating environment for all children during the first few years of life. Together we can, and we will, create a better world one precious child at a time. Keep up the great work!

Symposia/Roundtables/ Conversation Hours

Improving the Performance of the Head Start Program: Findings From FACES 2000

CHAIR: Louisa B. Tarullo
DISCUSSANT: Margaret Burchinal
PRESENTERS: Louisa B. Tarullo, Nicholas Zill, Gary Resnick, Ruth Hubbell McKey

- **Constancy and Change in Head Start Classroom Quality and School Readiness Gains**
  Nicholas Zill, Gary Resnick, Ruth Hubbell McKey
- **Curricula Being Used in Head Start Programs: Who Gets What?**
  Ruth Hubbell McKey, Shefali Pai-Samant
- **Relationships of Type of Curriculum and Teacher-Directed Activities to Children's Progress in Head Start**
  Nicholas Zill, Gary Resnick
- **Relationships of Teacher Beliefs and Qualifications to Classroom Quality and Children's Gains**
  Gary Resnick, Nicholas Zill

Louisa B. Tarullo: We will discuss the results of the FACES 2000 study that is intended to provide a mechanism for Head Start to examine the quality of programs over time. The study represents two nationally stratified probability samples of Head Start programs, families, and children. It includes direct assessment of children when they enter the Head Start program, follows them through 1-2 years of the program, and again at the end of kindergarten.

We are focusing on the following research questions:

1. What are the similarities and differences between FACES 1997 and FACES 2000 with regard to Head Start classroom quality and school readiness gains?
2. What types of curricula are used by Head Start programs across the nation in our representative sample in 2000?
3. Is there a relationship between the type of curricula used and other factors in the classroom with regard to children's progress?
4. What is the relationship between teacher qualifications and the belief that they espouse with regard to classroom quality and children's gains?

The conceptual framework that underscores all of our work and performance measurement in Head Start has at the top of the pyramid what was originally called the child's social compe-

tence; this has now been expanded to be a concept of school readiness. The goal of Head Start is to enhance and foster the school readiness of children from low-income families. How do we get there? We ensure that there are positive outcomes for children and for their families as primary nurturers, through the provision of high-quality services.

Some of the outcomes that we will discuss focus specifically on cognition and literacy, but we have information on the outcomes of all aspects of development. We have a comprehensive picture of what children's development entails and we want to study all aspects of children's development.

The design includes two national cohorts, one started in the fall of 1997 and the other started in 2000. We followed a total of about 6000 children through kindergarten with observations of classroom quality, assessments, parent interviews, interviews of other relevant staff, and teacher and parent reports of children's literacy and learning, social-emotional, and other aspects of child development.

Our first presenter is Dr. Nicholas Zill from Westat. He will discuss constancy and change in Head Start classroom quality and school readiness gains.

Nicholas Zill: I want to begin by presenting some differences in the sample from 1997 and 2000. We had about 2400 children in 43 programs from a stratified national probability sample of Head Start programs. We used a different sampling strategy in 2000, because we wanted more stable estimates at the classroom level as well as a larger sample size. Our sample consisted of about 265 classes where we included all the children who were new to Head Start. We included 3- and 4-year-old children as they occurred proportionally in the program. This was a new, separate sample of 43 programs in 2000 as opposed to the 41 programs in 1997.

Comparing 1997 and 2000, we wanted to find the extent of similarities and differences in the outcomes and whether those differences were statistically significant, particularly in a positive way that indicates progress in Head Start quality.

Three research questions will be examined in this presentation:

1. Did average levels of classroom quality of Head Start classes change significantly between FACES 1997 and FACES 2000 (i.e., from 1997-98 to 2000-2001)?
2. Did average levels of early literacy skills attained by spring of Head Start year and fall-spring gains change significantly between FACES 1997 and FACES 2000?
3. In FACES 2000, Spanish-speaking language-minority children were given vocabulary and letter-word identification assessments in both Spanish and English. How did the literacy levels and gains of these children compare with those of language-minority children? How did they vary across the two languages?

The changes (or lack thereof) in average levels of classroom quality were examined on four observational measures: (a) overall Early Childhood Environment Rating Scale (ECERS) scores, (b) ECERS component scales which are in the ECERS Revised (ECERS-R), (c) Assessment Profile-Scheduling Scale, and (d) Assessment Profile-Learning Environment Scale.

We examined changes (or lack thereof) in vocabulary, letter-word identification, early writing (dictation), and early math (applied problems) using the Woodcock-Johnson Psychoeducational Battery. Comparisons were made for children assessed in English both times only.

The procedure was changed with language-minority Spanish-speaking children in FACES 2000. We assessed them in both languages in two components of the Scale in vocabulary and letter identification. The Spanish-speaking children received the bulk of the assessment in Spanish in the fall and then in English in the spring. For the first time, we were able to see their progress or changes in both languages in FACES 2000. Then we compared the literacy level and gains of these children with those of language-majority children and how they varied across the two languages.

Gary Resnick: When you compare quality in the classrooms from two cohorts and FACES, one of the big changes we made was that in the fall of 2000, we used the ECERS-R whereas in the fall of 1997 we used the original ECERS scale. All the items are on a 7-point scale. The change in levels of quality is somewhat confounded with the differences in the scales. To date we do not know whether those scales are the same or not and the publishers have not presented data on how they are compatible. Even individual items have changed in various ways.

The original ECERS has 37 items and the revised ECERS has 42 items. We only used 37 items of the ECERS-R; we did not use the adult and staff scale. We compared the average score across all of the items. With those caveats, we decided to look across the two scale measures. We found that the ECERS scores in FACES 2000 and FACES 1997 did show comparable scores overall.

We used similar scales in other measures of quality, for example the Assessment Profile Scales. Those stayed the same from fall 1997 to 2000, so we were able to say that the ECERS is different but the Assessment Profile is the same. The Assessment Profile is well correlated with the ECERS. Therefore, we have some indication of whether the classroom quality remained the same or not, or whether it was an artifact of differences in the scales. We found that the Assessment Profile measures showed the same scores from fall of 1997 to fall of 2000. Therefore, we have some basis for indicating that quality stayed about the same.

We calculated the average score that a classroom was assigned across all 37 items on the ECERS. Then we coded them in categories using the scale points as the midpoints of those categories. In 1997 there were no classrooms that scored 3 or below. In the fall of 2000, there were a few classrooms that scored a minimal 2 and 3. In addition, in fall 2000, we also had more programs scoring higher in the range of 6. This may be a result of the differences between the ECERS and the ECERS-R. The ECERS-R has more standardized instructions for assigning scores for each of the items. Therefore, it tends to stretch quality away from the center of the scale. However, many observers who are unsure about a particular item or a particular set of items tend to veer toward the center of the scale. There are more specific instructions with the ECERS-R for each of the scale points. It would tend to focus people more on the tails, the negative and positive traits.

In the fall of 1997, the total overall score across the 37 items was 4.93 in 518 Head Start classrooms. In the fall of 2000, 168 Head Start classrooms had a total overall score of 4.84, which is about the same with no significant difference. The scores were comparable in the subscales of personal care, furnishings, and language. Furnishings went up quite a bit from a mean of 4.96 to a mean of 5.48. The social scale also showed change, but that may have been due to an increase in social and interaction activities and the larger focus on the interaction between the teacher and the children on the ECERS-R.

We grouped the classrooms into low, good, and excellent quality categories. The low category is less than 4 on the overall ECERS score across all items. Good is 4 or 5, and excellent is 6 or above. There is a tendency in the fall 2000 ECERS-R scores for quality to come on the tails of the distribution, so that slightly more classrooms coded lower and slightly more classrooms coded higher. Again these were small differences that are not statistically significant. They reflect that quality has remained the same and that any differences are due to differences between the ECERS-R and the original ECERS.

We used the language scale fairly prominently. We found about the same number of classrooms in the lower quality group. It is interesting that the percentage of classrooms in the excellent category has shown a slight increase. The language items in the ECERS-R may work a bit better, but it may also reflect some changes in the Head Start curriculum that are focusing on literacy in language.

We wanted to confirm that the similarities and quality from fall 1997 to fall 2000 were not only an artifact of a change in the ECERS scale. We used two scales from the Assessment Profile: scheduling and learning environment. There were no significant differences on scheduling and learning environment on the raw scores from fall 1997 to fall 2000. This provides some indica-

tion that the quality on the whole has remained the same and has remained at a fairly high level in Head Start classrooms. In fact, the quality is much higher than other studies in early childhood settings. Furthermore, the substantive changes in the ECERS to the ECERS-R reflect some of the differences, but these changes are an improvement, because they are able to assist observers in discriminating between good and poor levels of quality and good and excellent levels of quality.

Zill: I will discuss the cognitive scores. On the PPVT-III, we found that children showed comparable standard score gains in vocabulary in FACES 2000 and FACES 1997. In FACES 2000, they began and ended with standard scores similar to those in FACES 1997. In 1997, the children began with a standard score of about 85, which is about one standard deviation below the national norm of 100. They moved up close to 90, an increase of 4.3 standard score points. FACES 2000 had similar findings: the children moved from 85 to 89. Again, these are the children who had the vocabulary test administered in English both times.

We found that there were greater raw score gains in letter identification, which meant that the children held their own against the national norms. In FACES 1997, they slipped backwards against the national norms. In 1997, the raw score on the Woodcock-Johnson went from 5 to 6.6. That meant that for letter recognition they went from being able to recognize three letters to seven letters. In FACES 2000, they went from a raw score of 5.3 to 7.3, which means they started out and ended up knowing more letters; 3.9 letters to 8.9 letters. The congressional mandate is that children should know 10 letters of the alphabet at the end of Head Start. In FACES 2000 the children were quite close to that. A Woodcock-Johnson score of 7.8 is needed to attain the mandate, and the children scored 7.3.

The children are still below the national mean of 100 in letter identification. In FACES 2000 the children's standard score starts at 92.4 and ends up 92.9. In early writing, the standard score gain was significantly larger in the earlier study than in the later one. There was a difference of 4.3 in 1997 and 2.0 in 2000. With our large sample, that is statistically significant.

In early math, the children had comparable score gains. In FACES 2000, children began and ended with higher standard scores than in FACES 1997. The level was higher but the gain was comparable although it was not statistically significant.

To summarize the gains, there was constancy in vocabulary and math. There was positive movement in letter-word identification and some slippage in early writing skills. The overall comparability of the raw scores and the standard scores indicates that the assessment and sampling procedures are reliable and reasonably well-standardized, considering that we used two national samples and assessed thousands of children. The comparable results supported that we are using a good measurement procedure.

Finally, how did the literacy levels and gains in Spanish-speaking language-minority children compare to those of language-majority children? How did the literacy levels and gains vary across the two languages? Spanish-speaking language-minority children entered with English language vocabulary skills that were considerably behind those of language-majority children, which is not surprising. They made greater gains over the course of the Head Start year, but remained behind language-majority children. The sample size of this group was 309 children.

In vocabulary skills, the Spanish-speaking language-minority children started with a standard score of 59.7 and improved their score to 66.7; that is a 7-point gain compared to the 4-point gain in language-majority children. When we combined the two groups, the overall Head Start sample now has a beginning score of 81.4 and ends with a score of 85.7 in vocabulary skills.

Spanish-speaking language-minority children entered the program with English-language letter recognition skills that were slightly behind those of language-majority children. However, they did not make gains over the course of the Head Start year, compared to national norms. They started at 89.5 but decreased to 87.5, compared to the language-majority children who are consistent in their scores. The overall combined sample is still below the national norm.

When we compared the two languages we found that the Spanish-speaking language-minority children made vocabulary gains in Head Start, but left with English vocabulary skills that trailed their Spanish vocabulary skills by a considerable margin. Their letter-recognition skills were roughly comparable in English and Spanish, but showed no gains over the course of the year.

In conclusion, Head Start classroom quality remained in the "good" range in ECERS-R and Assessment Profile scales in 2000, as they had been in 1997. Head Start children showed significant gains in vocabulary skills against national norms in 2000-2001 as they had in 1997-98. They showed modestly larger gains in letter recognition skills in 2000-2001 than they had in 1997-98. Language-minority children in Head Start showed significant gains in English vocabulary skills without declines in their Spanish skills. They did not show any gains in letter recognition skills.

Ruth Hubbell McKey: Curriculum is currently a topic of considerable interest because of the congressional mandates and the concerns about child outcomes, literacy, and school readiness. There are also several new studies starting to compare different types of curricula. We wanted to know what curricula the Head Start programs were using.

The Head Start Program Performance Standards require that every program have a curriculum. The Standards delineate the areas that must be covered by the curriculum, but do not prescribe any particular curriculum. Programs can select a curriculum from a variety of sources; they can develop their own or they can use a combination of curricula.

We addressed four research questions:

1. What types of curricula are used in Head Start programs?
2. Do Head Start teachers receive training and ongoing support in the use of their curriculum?
3. Are Head Start teachers satisfied with their curriculum?
4. Is there a relationship between the characteristics of a classroom and the type of curricula used in the classroom?

The sample for this study included the 265 Head Start teachers from the 43 Head Start programs in FACES 2000. The field staff conducted personal interviews with the teachers on-site. The family data are from the fall 2000 parent interviews, and the data are weighted to represent Head Start programs nationwide.

We asked teachers if they were using a single specific curriculum or a combination. About 70% used a specific curriculum, 21% used a combination, and 9% reported using no curriculum. The most frequently used curricula were High/Scope and Creative Curriculum. About 39% of the teachers used Creative Curriculum, 20% used High/Scope, and 41% used another curriculum. Some of the other curricula included High-Reach, Scholastic, Step-by-Step, Montessori, and Los Cantos/Los Niños. Some teachers said they used a Head Start curriculum—apparently that was the way their curriculum had been interpreted to them—and others talked about using theme units. The number of children exposed to these various curricula is similar to the numbers reported by the teachers.

Ninety-three percent of the teachers had received training in their curriculum. Most had received the training from their program's staff, followed by the curriculum developers, which is the Head Start Quality Improvement Center (HSQIC), a university's school of education, or another source.

Ongoing support is an important part of curriculum training. Almost all teachers reported that they did receive ongoing support in the use of their curriculum. Most often the support came from their supervisor or education coordinator. It also came from other teachers in the program, the curriculum developers, the HSQIC, or a mentor-teacher. It was interesting that the use of the mentor-teacher relationship was so small, considering that there is much interest in this approach now. The Head Start Disability Services Quality Improvement Centers (DSQICS) also provided some support, as did other sources.

When we were developing these questionnaires for the teachers, we had been told that sometimes the curriculum was locked away in a central office and the teachers did not have access to it. We found that was not the case. By far, the majority of the teachers and assistant teachers had access to the curriculum materials.

They also thought their curriculum had adequate learning materials. The teachers liked their respective curriculum for a variety of reasons. High percentages of them thought that their curriculum addressed multiple domains of learning, was easy to use and adapt, and involved parents as partners in the child's learning, which is also a Performance Standard requirement.

Question: Were these generated by the teachers or were these choices you gave them?

Hubbell McKey: These were choices where the teachers could agree or disagree. We examined where these curricula are being used across the regions of the country. The majority of teachers in the Northeast, Midwest, and West used the Creative Curriculum and High/Scope together. The majority of teachers in the South used other curricula. In all regions, teachers were more likely to use Creative Curriculum as a single curriculum. High/Scope is fairly evenly distributed across the regions. The majority of urban teachers used either Creative Curriculum or High/Scope, while the teachers in rural programs were more likely to use Creative Curriculum. The findings from the number of children that experience these curricula are similar.

Now I will present some differences in the quality measures. Head Start classrooms that used Creative Curriculum or High/Scope had significantly higher average quality factor scores than classrooms using other curricula. The quality factor score is a combination of the Assessment Profile-Scheduling Scale, Assessment Profile-Learning Environment Scale, and the ECERS language score. The ECERS language scores were significantly different. The classrooms using Creative Curriculum or High/Scope had significantly higher ECERS language scores than classrooms using other curricula. This is a classroom measure and not a child measurement.

There was a relationship between the income levels of these children's families and the use of these curricula. We found that children in classrooms using Creative Curriculum or High/Scope were from families with significantly higher monthly incomes than the children in classes using other curricula. This probably indicates that there is a higher level of program or community resources for these first two groups of children, so that they were able to purchase the more expensive curricula.

Teachers who used other types of curricula were more likely to serve families who were the poorest. There were more poor families in those classrooms. Teachers who used High/Scope or other curricula served higher percentages of Non-White children than did teachers using the Creative Curriculum. There seems to be a trend that some of the children that were more disadvantaged may be receiving other curricula than High/Scope or Creative Curriculum.

Our conclusions are that 91% of the Head Start classrooms used at least one curriculum, with a majority using a single, specific curriculum. Creative Curriculum and High/Scope were the most commonly used curricula. The majority of teachers received training and ongoing support in the use of their curriculum. Most teachers received training from their program staff. A copy of the curriculum was available to the majority of teachers and teacher assistants. The majority of teachers like their curriculum. The majority of teachers from the Northeast, Midwest, and West used either Creative Curriculum or High/Scope, while the majority of teachers from the South used other curricula. The majority of teachers from urban programs used either Creative Curriculum or High/Scope, while the majority of the teachers from rural programs used Creative Curriculum. Classrooms that used Creative Curriculum or High/Scope had significantly higher classroom quality scores and ECERS language scores than classrooms that used other curricula. Teachers who used other curricula served the highest percentages of poor children. Teachers who used High/Scope or other curriculum served more Non-White children.

Resnick: Ruth primarily presented the bivariate relationships between the use of specific curricula, teacher satisfaction with their curriculum, and characteristics of the classroom. Nick and I examined the relationships with a multilevel model to try and explain some of those relationships.

The general research question for this presentation is how do program characteristics, teacher qualifications, and beliefs relate to classroom quality in Head Start? I will address this, and then Nick will address how classroom quality measures relate to children's developmental gains in Head Start. We looked at classroom quality and the factors that predict classroom quality. Then we looked at classroom quality as a variable predicting children's gains and outcomes in Head Start.

There are different levels in the model we used for this study that included the level of the Head Start programs, the level of the classroom, and the level of the child. These kinds of analyses require going beyond the level of the classroom. There may be factors that are operating at the level of the Head Start program that organize these centers that are important to understand.

At the same time we explored factors in children and families and family backgrounds. We believe that there is a relationship where program factors affect what is going on in the classroom, which then lead to changes and fall-to-spring gains in children's outcomes. In addition there is a pathway where program factors are linked to family backgrounds that affect gains or changes in children's outcomes.

We wanted to assess the influence of program-level factors to explain the effects of teacher backgrounds, experiences, and beliefs on classroom quality. The rationale was that characteristics of the families served by Head Start programs indicated the challenges faced by these programs and the resources available to meet these challenges.

Our hypothesis was that programs that provide for a common primary curriculum across classrooms and that pay their teachers well have sufficient resources available to positively influence classroom quality through the quality of the teachers hired, their experience, and their beliefs. The analysis with two-level models used SAS PROC MIXED to predict classroom process quality from classroom- and program-level factors.

We conducted a prior study that examined the relationship between teacher background and experience and classroom quality. We found that there was an initial relationship between teacher backgrounds and experience in classroom quality where teachers with higher levels of education were in classrooms with higher levels of quality. However, when program-level characteristics were entered, those teacher background factors consistently disappeared from the relationship. They were no longer significant. Variations in quality seem to be strongly influenced by program-level factors, more than by the backgrounds or experience of classroom teachers. Programs located in communities that are resource-poor are limited in their ability to find well-trained and experienced teachers and to equip their classrooms with the learning materials and skills necessary to enhance quality.

The problem with our initial study was that we used the fall of 1997 sample. Program-level predictors were limited to proxy indicators or families served by the program, but did not include factors that could directly influence classrooms such as curricula, teacher beliefs, or teacher salary. We added some program- and center-level characteristics using new information from FACES 2000.

The new information in FACES 2000 included: (a) the primary curriculum used in most classrooms within a Head Start program, (b) average teacher salaries reflecting program resources, (c) teacher's beliefs about developmentally appropriate practices, (d) teacher salaries at the classroom level expressed as a deviation from the program average, and (e) the Teacher Individualizing Scale, which tracks each child's progress and modifies the curriculum for individual needs. We used primarily the observational items on the Teacher Individualizing scale. We broke the Scale into observational items and teacher-report items, and we are still analyzing the teacher-report items.

The program-level predictors are the characteristics of families served by the program and the type of curriculum that was used in the majority of programs. This addressed whether the curriculum was used by the individual classroom or across programs. Most of the primary curricula are used across all classrooms in a given program. Average annual teacher salary was used as an indicator of program resources.

The classroom-level predictors were teacher background and experience and teacher beliefs. The teacher background and experience included total years of teaching, whether they hold a BA or an AA, their ethnicity, and their salary as a deviation from the program average. We used the Developmentally Appropriate Attitudes Scale to measure teacher beliefs. There was a subscale of 10 items that measured their attitudes and beliefs toward developmentally appropriate practice (DAP). We coded it so that a higher score indicates a more positive attitude and more knowledge of developmentally appropriate practices.

There was a range of years of Head Start teaching from 1-2 years to over 10 years; 28.9% had 5-9 years of teaching Head Start and 29.6% had 10-plus years of experience. There was also a range of education levels. About 27% had a BA or undergraduate degree, about 21% had an associate's degree, and 32% (the highest proportion) said they attended college. Fifty-five percent of teachers reported that they had a Child Development Associate (CDA) certification. The ethnicity of teachers was 31% Black, 17% Hispanic, 2% Asian, and 49% White.

The classroom quality measure we used to analyze classroom processes was the overall ECERS mean score. That was 4.84 for 258 classrooms. We used five observational items on the Assessment Profile Scale. The alpha coefficient was .62, fairly low. This reflects that there was not much variation in this scale. We did not expect big things from it, but we used it for the first time. We hope that the teacher-reported items, once we have analyzed those, give us much better variation in that scale.

We measured the average child-adult ratio for classroom structure by recording observations of teachers, volunteers, and children at two particular points during day. We measured teacher sensitivity with the Caregiver Interaction Scale. The scale has 30 items rating the teacher's sensitivity, responsiveness, detachment, harshness, and encouragement of independence. The alpha coefficient and mean were good, .94 and 71.48 respectively. In addition, that did not change from 1997 to 2000.

Programs that had a high percentage of non-minority students and programs that had a high percentage of language-minority students, had higher levels of quality at baseline. At the classroom level, teachers with more positive developmentally appropriate beliefs were in classrooms with higher levels of quality. The teacher beliefs seemed to be important, as were the percentage of non-minority students and percentage of language-minority students.

When controlling for program factors, some of the factors remained important and some fell out. For example, teacher ethnicity was no longer significantly related when we controlled for program level characteristics. Program factors, including proportion of non-minority and language-minority families combined with teachers holding developmentally appropriate beliefs accounted for 23% of the total variance in quality and 47.8% of the variance across programs.

After controlling for program-level characteristics, average annual teacher's salary remained a significant predictor of child-adult ratios, with higher average salaries related to lower ratios. Hence, higher quality program's average teacher salaries accounted for 5% of the total variance but 28% of the variance across programs in child-adult ratios. Programs that can afford to pay teachers more are also those programs that have more teachers in the classroom.

We used the Caregiver Interaction Scale to predict teacher sensitivity. We found that the use of the Creative Curriculum was significantly related initially at the program level to quality. The same held for High/Scope, but it was a nonsignificant effect. The percentage of non-minority students was significant. At the program level, a greater percentage of non-minority students was related to higher levels of quality, but when classroom effects were controlled, the percentage of non-minority students was no longer significant. Creative Curriculum was still significant and

teacher's developmentally appropriate beliefs and years of teaching experience become significant. Teachers with BA or AA degrees were not related to quality once beliefs of developmentally appropriate practices and years of teaching experience were included. While ethnicity was related in a negative way initially, those factors were no longer significant once we controlled for the program-level factors. Programs with a high proportion of non-minority students and that use a specific curriculum in most of their classrooms, with teachers holding DAP beliefs and having more years of teaching experience, accounted for 20% of the total variance and 60% of variation across programs in teacher sensitivity.

Controlling for program-level characteristics, the proportion of higher income families remained a significant predictor of teacher individualizing while higher average teacher salaries became weakly related. In predicting teacher individualizing using the five-item observational portion of the Assessment Profile Scale, the only significant factor was higher income; these programs were located in communities where parents earned at least $1500/month. There were no relationships of classroom factors. This may not be a reliable finding because of the reduced variation in the scale. There may be more variation in the programs once we start using more of the items from the individualizing scale reported by the teachers. Predicting teacher individualizing showed programs with higher income families, but it did not account for a large percentage of the variation, so I do not consider this to be an important finding.

The results suggest that variations in the quality of Head Start programs may be explained by characteristics of the families and the children they serve, by resources available to them, by curriculum used in the program, and by teacher beliefs. The relationship between program-level factors and classroom quality is explained by teachers' beliefs about DAP and their years of experience, rather than by teachers' levels of education. BA or AA teacher qualifications were not related to classroom quality after controlling for teacher experience and DAP beliefs and program factors. This is not a causal relationship; they are correlational findings. Classrooms that had higher DAP teachers with more positive DAP beliefs were also those classrooms that used a specific curriculum.

Teachers' beliefs about DAP appears to be related to the programs' use of a specific curriculum in the majority of classrooms, and appears to have the strongest effect on teacher sensitivity. The child-adult ratio is primarily related to the average teacher salaries paid by the program. Programs who can afford higher salaries have classrooms with lower child-adult ratios and higher quality.

Zill: I will discuss the relationship of classroom quality and type of curriculum to children's progress in Head Start.

We addressed three research questions:

1. How much variation is there between programs and classes in children's achievement gains in Head Start?
2. How do program characteristics and classroom quality measures relate to achievement gains?
3. How does the use of a specific curriculum relate to achievement gains?

We used the same model that was discussed earlier, but for this study it was a three-level model: program, classroom, and the child. We used fall-spring gains as the outcomes. The analysis is a three-level linear regression model using SAS-PROC MIXED to predict achievement gains (or achievement levels) from program-, classroom-, and child-level factors. The child achievement measures were in word knowledge (PPVT-III), letter recognition (WJ-R Letter-Word ID), early writing (WJ-R Dictation), and early math (WJ-R Applied Problems).

The program-level predictors were the characteristics of families served by the program, primary curriculum used in a majority of classrooms, and program resources. The classroom-level predictors were teacher background and experience, and teacher beliefs. The classroom quality measures were ECERS Language Scale, Assessment Profile Individualizing Score, and

child/adult ratio. We used the same predictors that Gary used in his models and added the classroom quality measures as another set of classroom-level predictors.

As in FACES 1997, FACES 2000 found considerable diversity in the achievement of Head Start children, both across programs and within individual programs. The average level was about a standard deviation below the national mean. The upper quarter of Head Start children were at the national mean when they entered Head Start; the lower quarter were almost two standard deviations below the mean. We found similar variations across programs. The achievement differences across programs seem to have more to do with the socioeconomic characteristics of the population served than with quality differences.

Differences between programs were greater with respect to achievement levels than achievement gains. There was more variation across programs in their spring levels. Thirty percent of the variance in vocabulary scores was across programs and classes. There was much less difference between programs on achievement gains.

Achievement differences covaried with demographic variables, such as average parent education and percent minority. Program differences were greater for measures that correlated with SES and ethnicity. The PPVT-III showed considerable individual levels of correlation with ethnicity and with SES, and that showed greater variation across programs. Letter recognition and early writing skills showed less correlation at the individual child level with SES or ethnicity, and it showed less variation across programs.

There were small differences between programs with respect to children's gains in vocabulary, early writing, and early math. About 2% to 6% of the variance was between programs and classes; most of the variation in gains was within classes. The multilevel regression models did a poor job of accounting for these variations in children's gains. Less than 1% to 4% of the variance was accounted for with the multiple of .2 or less.

Programs with different average quality levels showed equivalent gains from fall to spring. On the PPVT-III, the programs that showed higher quality had higher scores in the spring, but also had higher scores in the fall. The lower-quality programs had lower scores in the spring and also had lower scores in the fall. The model does not explain much because there were equivalent gains at the different levels of quality.

In letter recognition, there were greater differences between Head Start programs and classes with respect to children's gain between fall and spring of the Head Start year. There was about 12% variance between programs and classes, and the remainder was within classes. The multilevel model did a moderate job in accounting for these variations in children's gains in letter recognition. It accounted for 12% of the variance, or a multiple R of .35. We accounted for the majority of variation across programs.

The factors associated with fall-spring gains in letter recognition were the majority of classes in programs using High/Scope, higher average teacher salary, higher child/adult ratio, and whether parents read to children once or twice a week. Classes that used High/Scope had a significantly higher gain with a difference of about 3.69 in scores of letter recognition. For every additional $10,000 in annual wages, there was a gain of 1.76 in scores of letter recognition. Paradoxically, higher child-adult ratios or larger classes showed more gain in letter recognition. Parents who did not read to the child at all in the previous week or read only once or twice a week had children who showed less gain in letter recognition than children whose parents reported reading more frequently.

How do we explain this higher child-adult ratio? It appears that there is greater gain with programs of high levels of African American children. These programs start below in letter recognition but show greater gains, so they catch up with the programs that have higher percentages of White children. Those programs also have higher child-adult ratios and fewer teachers with BA or AA degrees.

The factors that seem to be significant with gains in vocabulary are the percent of language-minority children in the program, child's age, and welfare status. Language-minority children

showed more gain with respect to vocabulary than did the language-majority children. That factor became non-significant when child factors were introduced. One of the child factors was being a language-minority child, so we believe that the relationship is somewhat divided between those two. Older children show slightly less gain in vocabulary than younger children. There was some marginal finding that families with welfare status show less gain in vocabulary than other families.

In conclusion, classroom quality as measured by ECERS was not associated with achievement gains in Head Start. Within the narrow range of class size in Head Start, child/adult ratios were not associated with achievement gains. Use of a specific curriculum, High/Scope, was associated with modestly larger gains in letter recognition. Use of a specific curriculum, either Creative Curriculum or High/Scope, was not associated with greater gains in vocabulary, early writing, or early math skills. Higher teacher salaries were associated with modestly larger gains in letter recognition. Teacher attitudes were not linked with greater achievement gains. The teacher's degree, having a BA or AA, was not linked with greater achievement gains. I want to point out that we linked the combined BA and AA degrees together. We should examine those with a BA separately. Then we might get a slightly different picture.

The letter recognition findings suggest that activities aimed at bolstering skills (or lack of such activities) are associated with differential gains. Currently, the associations between gains and teacher-reported and observational activity measures are being explored with FACES 2000 data. We are exploring that association because we have some measures based on observation and others based on teacher-report.

Question: In the two studies in 1997 and 2000, was there a difference in the sample size? It appears that one was smaller. Would that have made a significant difference in the outcome?

Zill: Yes, the sample size was larger in FACES 1997 when we had more classrooms.

Question: Do you think that would have made a significant difference in the outcome because you compared one to the other?

Burchinal: Both samples were so large that you probably could detect relatively modest effects.

Zill: You have enough statistical power for that.

Question: I was referring to when you said that an n was 500 and something and then said that an n was 268. You had a larger sample, then a smaller one, yet you compared them as if they were the same size. To me in normal analysis, it seems the more you have of something would make a significant difference.

Burchinal: I will try to work that into my comments if that is acceptable. As someone who has worked in the child-care field for longer than I would like to admit, Head Start has a record of being, at this point, probably the most-evaluated preschool early education program. The FACES study is one arm of the overall evaluation and research project within Head Start.

Head Start should be commended for informing us about what works and does not work for vulnerable children in preparing them for school. The research program includes FACES, the IMPACT study which will be a random assignment study looking at the effectiveness of Head Start, the Head Start Partnership Project studies, Early Head Start, Head Start Transition, and so forth.

The FACES project tells us a great deal about Head Start. The use of a probabilistic sample means that these results represent Head Start in the country. One of the major findings from this study is that Head Start programs are by and large providing quality child care. To put this

in context, I will compare the results that were reported from FACES to other major child-care studies.

Within FACES, there was a mean score of 4.8 to 4.9 on the ECERS. This is on a 7-point scale. Scores of 5 and above are considered very good quality, so a 4.8 or 4.9 is very good. For comparison, within the cost-quality and outcome study, which was a four-state study conducted in 1993, our mean for the preschool classes was 4.0. We are completing the first round of data collection of a study where we evaluated state or federally funded pre-K programs in six states. We found a mean ECERS of 3.8 in these programs. I believe this shows that Head Start, within the context of their Performance Standards, has done a good job of ensuring that the children attending these programs are exposed to at least good quality. The quality of the programs seem to be of higher quality than other programs they would be eligible to attend within the community or through subsidies, and perhaps better than the types of programs they would be able to attend within pre-K programs. The research would suggest that, on average, those programs are not very good.

We learned that most programs have curricula because it is required. The High/Scope and Creative Curriculum were the two most commonly selected curricula. That was the same finding in our pre-K project study as well. A high percentage, 40%, of the programs fell into that "Other" category. Children and programs within the "Other" category were not looking quite as good and that was worrisome to me. This suggests to me that it is a direction of future research. We should examine what kinds of programs are used, what is meant by a locally developed program, and whether it is fair to say that there is no curriculum. We should find out how well these curricula are implemented.

There were some interesting links to child outcomes in analyses that controlled for family and program characteristics. I think that this would be worth pursuing further, especially as questions are being discussed among policy makers about whether Head Start children are ready to learn when they enter school.

In response to the question about comparing the 1997 to 2000 results, while it is troublesome that one sample had twice as many participants, once you have a large sample, it probably does not affect the results at all. The statistical methods that were used were probably appropriate.

In addition, from working with the developers of the ECERS, we have reason to believe that the revised ECERS is a bit tougher. It is a little more difficult to receive a good score on the revised ECERS than on the original ECERS. In fact the goal was to spread the distribution out, so I am glad that this happened. This suggests that perhaps there were some modest increases in terms of quality on the ECERS overall. We certainly found that to be true on the language scale. On the language scale on the ECERS, there were more classrooms in the excellent range. That is the scale that probably links most closely to the development of reading skills.

I will provide a brief discussion of the Head Start families in the study. In a smaller scale study that we conducted within the NICHD study of early child care, we found that the Head Start families tended to be the most disadvantaged compared to children who were attending other types of preschool programs, whether it was public pre-K or local child-care programs. I believe this is an issue that needs to be kept in mind as child outcomes are discussed. Comparing these children to a mean on any standardized test is probably an extremely high hurdle to set.

It appears that the measures that were chosen are the standard measures used to evaluate young children and especially used within the child-care literature. The results that Zill and Resnick presented are similar to what other researchers are finding.

There are issues that should be considered when evaluating the FACES study of fall to spring change on these kinds of measures. One, these are measures that are designed to assess where a given child is in terms of their skill level; they are used in individual evaluations for a child's individual education plan. They are the most widely used measures; however, they are designed to measure a wide range in terms of age and skill level, so they do not have as many items at any one level or age. They may not be the kinds of measures that will allow us to examine whether

children are gaining the skills that are being taught in the classrooms. They may be too gross a measure to describe whether children have changed.

The second issue is change scores. There were two repeated measures and the change score is a very imprecise measure of true change. The methods that were used will only take into account true change to the extent that it is possible. With only two repeated measures, the ability to look at change and find factors that predict change is limited.

In terms of the gains over time and standard scores for children who are disadvantaged, there is nothing wrong with holding your own. Typically, standardized scores for children from families with very low income start to lose ground at about age 2 compared with middle-class children. Since the Head Start children showed gains, that was reassuring to me. It was beneficial to find that the data were presented both in terms of the standardized scores, but also in terms of the number of letters recognized and the R scores. The use of standardized scores can be misleading in that it may appear that there is no learning or change, when in fact the scores must be even to maintain the same score over time. It was interesting to find that there were some gains in the non-English speaking children.

Finally, I was impressed by the two-level and three-level analyses that found what predicts quality and then what predicts child outcomes. It is consistent with the findings in other child-care literature that teachers' beliefs about developmentally appropriate practices will be the best predictor of quality.

It was reassuring that curriculum was linked to both quality and outcome. Creative Curriculum was related to teacher sensitivity and High/Scope to acquisition of letter-word identification skills. Perhaps we have been too linked in trying to measure and observe quality. It is clear that there are mandates that we must go beyond and try to identify practices, as well as measure the global quality, that prepare children to learn. I believe that analyzing the curriculum is the first step in that, then finding how well the curriculum is implemented, what specific teaching practices are in the classrooms, and how those relate to quality and to child outcomes—these are directions for future research.

The child-adult ratio being negatively related to letter-word identification is not unique to this study. Other studies of child-care homes and some pre-K programs may have also found this. A very low ratio was reported and the mean was 5.4, which was well below what is typically seen within child care. For this age, the ratio is closer to 10:1. It is highly possible that within this study, the programs that were more professional and had a curriculum were also more likely to have more children in their classes. The fact that salary also linked was completely consistent with other research.

For future research I would examine the implementation of curricula and the documentation of specific practices and how these link to child outcomes. If the focus is on change that occurs within a given year for children in Head Start or pre-K programs, then we should consider more fine-grain measures of our outcomes that document what skills we expect the children to learn during the year.

As there is greater movement toward accountability, I would hope that there is consideration of the role of Head Start, which is a fairly centralized program, but where the Head Start Performance Standards have resulted in good quality child care for vulnerable children. I would like to contrast that to other programs such as with the block grants, where subsidy money for child care was given to the states, which resulted in children moving from high-quality programs to lower quality programs. At least the emerging evidence in our pre-K evaluation also suggests that there are not as high quality programs within the pre-K classrooms as there are within Head Start. I would hate to see a movement away from a program that has Performance Standards with accountability at such a high level.

Question: On the second presentation about teacher sensitivity, I was excited because we spend a lot of time trying to figure out what about the child and/or the child's family would make a

program fail or succeed. An important stream that seemed to run through your talk about teachers was economic such as the child's family's income. In terms of future research, would you consider studying teacher expectations toward the family income or the background of the child and their expectations for the child's success based on those factors?

Resnick: We measured factors from information that was given to us from the program and teacher interviews, as well as from observations. It is hard to answer the question because there is information that is mixed together if you only rely on a teacher's report of what they expect will happen in the future.

Comment: It would be a hard thing to do, but it might work on the sensitivity measure with observations and the interaction. If there was some measure such as how the teacher interacted with low-income versus high-income families' children. I believe that teacher expectations play into those interactions. It would be a stretch, but I wonder whether somewhere along the road that will be an important factor.

Resnick: One thing that we are observing more is what actually happens in those classrooms. We are moving towards looking at how those expectations might play out in terms of teacher-directed activities in the classrooms and the implementation of the curriculum.

Comment: Economics keeps coming through here.

Resnick: We discussed where economics comes from. It is not the teachers per se, but it is from the programs and the leeway that administrators have in hiring teachers, in their relations to the families they serve, the challenges that those families provide for the program, and how the program adjusts to those challenges.

Question: There seems to be clustering in the quality of the classrooms that I think would make it hard for the classroom measures to predict. Have you looked at the extremes?

Zill: That is an important point. With the child-adult ratio as well as the ECERS, we have a limited range within Head Start. It is easier to have strong effects statistically if there is a broader range. Indeed, in the child-care quality study there was a broader range; there was an association between ECERS quality measures and children's gains. We would expect that if we had that kind of variation within Head Start, we certainly would have stronger relationships.

The suggestion to look at some of the extreme cases is a good one. However, there is an important lesson here. The suggestion that by raising ECERS quality we will have dramatically greater gains is brought into question by these findings. We should find out whether we need to look at specific activities that are related to the measures that we used or whether we need to have substantially greater resources, as some findings from the classic studies would suggest. That is an issue we will attempt to address in future analyses. When interpreting these results this point must be borne in mind.

Burchinal: In other child-care research, low-performing, low-quality programs have a large association with child outcomes. It is worrisome that in looking at change over time, there are numerous issues that are going to make it difficult to detect. A big issue would be the truncation of range on the ECERS scores. For the Head Start children, the lack of low-quality programs is positive, but those are the ones that tend to carry the variance in the analyses of other child-care programs.

Zill: The higher quality programs also have children who have higher levels in the spring. It is the children's gains between fall and spring where there is not as strong a relationship.

Resnick: I will address the measure of change. We used gain scores because we had two data points. Whenever there are two data points, one does not know where the scores are on any kind of projection or trajectory. As a measure of change, it is a suitable unbiased estimate of change. It tends to be a conservative estimate of change where there is a lot of error in the variance category, but you do not know why it is there. We would prefer to, and plan to, add a third data point. With the addition of a third data point, you can try to do growth curve analyses where you look at developmental and skill trajectories. That is where you get out of the bind of using gain scores. There is really no alternative to using gain scores or different scores. We looked at some of the alternatives and if we used anything that controlled for the first score, such as a residual gain score, then we would have basically thrown out the baby with the bath water. When too much variation is thrown out that is part of the signal, not part of the noise.

Question: In terms of quality, would teacher salary make more of a difference in teacher quality than teacher education?

Resnick: Teacher salaries only made a difference in the child-adult ratios in the analyses. In regards to teacher sensitivity, it was not the teacher salaries per se; it was the developmentally appropriate beliefs and the years of experience. We found in earlier analyses that there was a relationship between teacher levels of education and their scores on developmentally appropriate beliefs. It is likely that teacher education is still an important factor; however, the way it plays out is through developmentally appropriate beliefs.

Comment: It is amazing what this study has done; however, I am worried about one aspect of it. With the kinds of trauma these children experience, it would be hard to interpret things when you have no social or emotional data. The number of life stressors among parents is enormous. Shouldn't you factor in risk and protective factors?

Response: We did interview parents and do have some of that information, particularly about the multiple risk factors that children have, such as violence in their neighborhoods and in their homes, and exposure to family members who are involved in the criminal justice system. We only presented a slice of the findings we have.

Comment: I am wondering about the extent to which you tested what was taught, the congruency between the curriculum that was used, and what the standardized measurements measured. My guess is that there is probably some incongruency there. Is some of that accounted for? I typically think of developmentally appropriate practice and readiness as almost competing perspectives. The measures seem to be more readiness-oriented, where High/Scope is a bit more oriented to developmentally appropriate practices. There is no direct instruction with children on letter recognition in this program.

Response: First of all, I want to emphasize that we are presenting a subset of the cognitive findings. We also have social and emotional findings, and we will apply the same kind of modeling to the social and emotional measures, which are a rich set. Unfortunately we do not have as carefully developed and normed socioemotional measures as in the cognitive and language domains. We want to consider that and we do take that seriously.

In addition, even in the cognitive area, we have some measures that are more closely linked to topics that children typically learn in Head Start, such as the names of colors and book knowledge information. We focused on the areas where there were national norms. It is impor-

tant that these measures are predictive of how children perform in school later on, and we have high predictive validity in accounting for children's reading and general knowledge at the end of kindergarten.

The FACES battery is a good predictor and the Head Start teachers' ratings of children's behavior and socioemotional development of social skills is a good predictor of teachers' ratings of the classroom adjustment of those children. We tried to do justice to what Head Start is doing, but we also noted that there is a mandate. Many people in Congress expect Head Start to bolster children's school readiness and narrow the achievement gap that tends to persist between children from low-income families and children from higher socioeconomic backgrounds.

Response: Income levels tend to go up in Head Start, but it is dangerous to attribute that solely to Head Start. As children grow older, mothers can work more, and incomes tend to increase. When we mentioned $1500 or more, that was the higher end of the poverty range. Our measure of programs is the percentage of families that are at the higher end of the poverty range. The average income in Head Start as a whole is even lower than that. It is a household income and it is from the fall when they entered the program. We did not look at a change in income over the course of their time in Head Start, but it does tend to increase.

Question: What are the policy implications of the findings?

Response: Someone was talking to me in the hall about translation of findings. I asked whether it was for practitioners or for policy makers, because it is important to translate the findings in both regards. These findings have not been fully digested in the program. Our experience with the first round of FACES 1997 data is that these findings are taken to heart and taken into account when decisions are made about policy. That is why we continue to do this. We are conducting the studies for accountability purposes, for the government Performance and Results Act, and to improve programs. You do that through how you set your policy.

The importance of standards and regulations in setting high-quality standards and increasing mandates such as teacher education appears to make a difference. If anyone has any interpretations of the findings and implications, we would like to hear them. Part of the reason that we share these findings at conferences is to receive feedback from the field, from policy makers, and from practitioners about how to interpret the findings and what the next steps for Head Start might be.

Response: If I could rush in where angels fear to tread, I think bureaucratic controls that federal Head Start imposes on local programs are working. There are not many inadequate programs; there are very few minimal programs. A generally good standard is being kept where Head Start is providing a positive child-care environment.

Expectations of dramatic gains in school-related skills or that type of quality is necessary, but not necessarily sufficient. Some of the experimental programs that are being done currently by the Quality Research Consortium examine specific interventions to boost literacy or address problem behavior in the classroom. They are applying many of the same FACES measures. That will provide a sense of whether it is possible to achieve more dramatic gains in the various domains. If so, then there would be some guidance towards the policy changes that may be necessary to produce additional positive results.

Question: Why did you single out African Americans as opposed to staff that was reflective of the communities that were studied?

Zill: First of all, we did not single out African Americans; we also looked at Hispanic teachers, language-minority children, and a variety of measures. It is the case historically that there are

correlations such as the South being the area of greatest need. It is still the case that poverty in Mississippi or Louisiana is a deeper poverty than in other areas of the country. Those tend to also be areas that have large proportions of African American teachers and children. The analyses showed that the community is more important than the individual teacher is. There is an interconnection between them, but as Gary suggested in his presentation, the root of it goes back to community poverty and the lack of resources in the community; those are far more important factors than ethnicity.

Question: What was the reason that a program would use its own curriculum? Were you speculating that maybe they were from more resource-poor communities? Was that something you asked programs when you asked them why they used the curriculum that they used?

Hubbell McKey: No, we did not ask the programs why they chose the curriculum they were using. It was through the funds that we discovered that other curricula than High/Scope or Creative Curriculum were being used in areas where the families tended to be poorer or more disadvantaged.

Response: There is of a sort of bimodal distribution because there are some teachers who have fairly high levels of education and do not want to use a packaged curriculum. Their belief is that they know better and want to put together their own curriculum.

Keep in mind that the use of a packaged curriculum requires a fair bit of resources. You do not write away for it, receive it in the mail, and start using it. It turns out that programs that have the resources for high teacher salaries also have the resources to get the curriculum as well as the proper training to use the curriculum. It is when there are Head Start programs in communities where they exist hand-to-mouth on the federal contribution. Many Head Start programs also receive additional funding and support from the community, but in resource-poor communities, there is no additional help. That may be why they cannot get the resources to pay the teachers more and use a specific curriculum. Furthermore, even the funding levels in those communities are lower. That is why it is important to study the communities where the programs are located.

A Tapestry of Head Start Families: Challenges They Face and Strengths They Possess

Findings From the Family and Child Experiences Survey (FACES)

CHAIR: Louisa B. Tarullo
DISCUSSANT: Hirokazu Yoshikawa
PRESENTERS: Louisa B. Tarullo, Robert W. O'Brien, Mary Ann D'Elio, Michael Vaden-Kiernan, Candice Grayton

■ Exploring Diversity Among Head Start Families

Robert W. O'Brien, Michael Vaden-Kiernan, Ruth Hubbell McKey, Shefali Pai-Samant

■ Head Start Families and the Challenges They Encounter

Mary Ann D'Elio, Robert W. O'Brien, Tina Younoszai

■ Evidence of Strengths and Resilience Within Head Start Families

Michael Vaden-Kiernan, Mary Ann D'Elio

■ Head Start's Role in Helping Families

Mary Ann D'Elio, Candice Grayton

Louisa B. Tarullo: I am on the Child Outcomes Research and Evaluation Team from the Administration on Children and Families (ACF). I will start by providing a brief overview of the Family and Child Experiences Survey (FACES). Later in the conference, we will hear more about Head Start children in the context of their families, programs, and neighborhoods. We will present the conceptual framework that governs this study. We were cognizant of the empirical link between the outcomes for children and their families and the provision of services within programs. In this session we are focusing on this second objective of Head Start to strengthen families as the primary nurturers of their children, looking at areas of strength, resilience, and challenges faced by Head Start families.

The particular data set on which we are focusing is from the FACES 1997 sample of 40 Head Start programs, which is a nationally representative sample. Children were enrolled in 403 classrooms, and data were collected from 3,120 parents in a 1-hour interview in fall 1997 to establish the baseline data, and again in spring 1998. There is a case study across all of the programs, referred to as the "validation substudy of 120 families." There is also a longitudinal sample of children whom we studied in both the fall and spring. Sometimes we will be talking about families at baseline and sometimes about change over time for a subset of families.

We will give an overview of the instruments that we have used in the FACES 1997 data collection. In addition to an extensive parent interview, child assessments looked at social behavior, early literacy skills, and early math skills. There were also teacher reports of child behavior, interviews with staff, classroom quality observations, and child play observations. One paper will particularly focus on the family case study that included home visits, monthly telephone contacts, and observations of the neighborhoods and homes in which the parents and children lived. Further information about the FACES study and all of the Head Start research sponsored by the Administration for Children and Families can be found at www.acf.hhs.gov.

Robert W. O'Brien: The primary purpose of the work to be presented is to learn about Head Start families. I will discuss the steps taken by our research team to learn about the diversity of Head Start families. The first step was to look at individual descriptors and particular variables of Head Start families. We found that there are many possible descriptors of family structure. For example, we found that the range of well-represented family types included dual-parent families. About one third were single-parent families where the caregiver was never married, and between 10-20% were single-parent families where the caregiver was widowed, divorced, separated, or living in blended families. Almost 50% of the parents were married, less than 50% of the children lived with both mother and father, and in one third of the households, mothers were the only adult. Two or more adults were present in just under 75% of the households.

One special type of family structure that we encountered involved grandparents serving as the primary caregivers of the children. Five percent of the Head Start children had grandparents designated as their primary caregivers. About half of those children were African American. Grandparents who served as caregivers had less education and lower rates of employment than other primary caregivers, but those households where the grandparents served as primary caregivers had higher levels of income. A grandmother, a grandfather, or both grandparents resided in about 14% of the households. In almost two thirds of these cases, a mother and a grandmother lived with the child or children. Grandparents can play important roles as members of the household. Our Head Start Final Report findings indicate that fathers are absent more than half the time, and they are not very active with their children, even if they do live in the household. Sometimes other household members, including grandparents, can provide some compensation in terms of activity with the children.

Back to the overall sample, we found that Head Start families are diverse in educational attainment. Three quarters of the parents had at least a high school diploma or Graduate Equivalency Diploma (GED). Almost all households had at least one individual with a high school diploma or GED, though not necessarily a parent. About one third of the parents had attended college and received an Associate of Arts (AA) degree. Only about 3% had actually earned a college degree. A quarter of the parents, at least at baseline, indicated that they were working on a degree, certificate, or license.

Similarly, Head Start families were diverse in employment status. Over half of the parents were employed at baseline, and about one third of those were employed full-time. More than one fifth of the parents reported having no employed household members and most parents experienced some change either between no employment and employment or between full-time and part-time employment, sometime during the course of the study.

We also noted that Head Start families are diverse across ethnicity and culture. Head Start families predominantly fell into three categories based on the ethnicity of the children: 29% were African American, 31% were White, and 28% were Latino. The remaining 12% in the "Other" category were generally families who reported having mixed race.

While we saw variation across the groups, we also found that diversity was evident within ethnic groups. Michael Vaden-Kiernan did some interesting analyses for our report, looking at variations within Latino families. For example, 17% of those families were living in Puerto Rico and 25% were families living on the mainland who reported that Spanish was the primary language spoken in the home. English-speaking, Latino families living on the mainland comprised 58% of the Latino sample, reporting that English was the primary language spoken in the home.

Comparing all the Latino families, those living in Puerto Rico were more likely to have parents with high school diplomas, GEDs, or college attendance. They were also more likely to be unemployed, living in households with an income below the federal poverty line, and less likely to experience family risk factors.

We had a set of six particular risk factors, and for the families living in Puerto Rico, 1 out of 10 of these families had four or more risk factors. Compared with other Latino families, English-speaking, mainland Latino families had more single-parent households and were actually more

similar to non-Latino families than to other Latino families in areas such as employment and income, and they were more likely to have family risks. In Puerto Rico, 1 in 10 families had four or more risks; here on the mainland, more than two out of five families had this level of four or more risks.

Finally, compared with other Latino families, the Spanish-speaking families who lived on the mainland were less likely to have parents with high school diplomas or GEDs, or to have attended college. They were more likely to have both parents living in the household, and they had fewer multiple family risks associated with negative outcomes for children than the English-speaking Latino families, but more than the families who lived in Puerto Rico. One can tell the difference across the three groups of families by the number of risks they had.

I will give a brief summary of some findings from the report that looked at individual variables, including income and education. Our interest turned to looking at how we can describe families by combinations of variables, and to do that we took the six risks that are used in the *Kids Count Data Book*: (a) single head of household, (b) household head a high school dropout (in our case, we did not identify an individual as household head, so we used the mother), (c) family income below the poverty line, (d) child living with a parent without steady or full time employment, (e) child's family receiving welfare benefits, and (f) child without health insurance.

We looked at cumulative or multiple risks. Individual family risk factors varied by urbanicity and by ethnicity. In terms of the individual factors, urban families were highest on four levels of risk, and were actually no different on single-parent households. They were slightly lower on Medicaid or health insurance than the rural families. For ethnicity, a number of them were highest for African American families on four of the cases, including single parents, household income below the poverty line, not having work, and receiving welfare. The other two risk factors of no health insurance and the mother not finishing high school were highest for Latino families. We then moved forward and counted up the risks per family, just as they did in *Kids Count*. They had set off four risks as a marker. There are real developmental concerns after that point. This is substantiated in the research literature. Again, we found that urbanicity is associated with the highest level of risks, with three or more. For ethnicity, the highest seemed to be for African American families. This is a cut off because the marker there looks for developmental concerns. While these analyses show that there is some variation on this rough cumulative measure of risk, it does not tell us what kinds of risks go together.

The third step presents some of the work we have in progress; developing clusters to see the different groupings. Cluster analysis categorizes cases, or in this case, families, according to groups of variables or characteristics that they have in common. The process that we have taken is borrowed from a framework that was laid out by the Rameys in the Transition Study. We used some of the variables they used, and added some additional variables that we knew were important, based on our earlier research. These are the primary variables that we included in the family-type cluster analysis. In this case, the critical pieces are caregiver work status, caregiver level of education, and household monthly income or use of entitlements, such as Medicaid, welfare, WIC, and food stamps.

Interestingly, maternal depression turns out to be an important variable, as is ethnicity. We generated six family types, but we have not yet devised a simple way to define each of these six. Therefore, I have ordered them in a particular way. The first family type, 16% of the sample, had a household income below 50% of the poverty line. It was mostly single parents and parents not working full-time and, in this case, many of the families had three or more children. The second type was a less educated group. Several of these families presented themselves as depressed and did not work full-time. The third family type had parents who did not work full-time and did not finish high school, but in this case there are few single parents. This group is primarily Latino, and we found a number of families where the parents were not born in the USA and English was not their primary language. In the fourth type, parents were educated beyond high

school, tended to be depressed, single, and working full time. This was actually the largest cluster, at 26%. Not every family in that cluster fits that mold, but these descriptions are representative. In the fifth type, the caregivers worked full time, they had income above the poverty line, and there were few single parents. Again, this was a case where a number of parents were not born in the USA and English was not the primary language in the home. Finally, the sixth family type includes cases where caregivers were educated beyond high school and parents spent a lot of time with their children, even though they worked full time. There were few single parents, and this group seemed to have the highest income of the six types.

This should give some indication of why I ordered them in this way, because I went back to the level of risks that we had and to the six *Kids Count* risks, and looked at the families in risk order. Therefore, in reverse order, on average, family type six actually had only one risk per family. Family type five had slightly less than two risks, on average. The level of risk goes up as we move to family type one, so that for family types one and two, there are almost three and a half risks per family.

Next I will review a preliminary study. We want to look at family types related to other family characteristics, along with some of the child outcomes. There does not seem to be a pattern related to risk and the parent-reported child behavior, but there certainly are significant differences across a number of the types. It will be challenging for us to revisit these family types and determine what aspects lead to one family type exhibiting a lot of positive child behavior or less child problem behavior versus other groups that have less positive child behavior and more problem behavior.

We used the Achenbach (CBCL) short scale. We also looked at this information using some of the child cognitive outcomes. We thank Westat for sharing some of these outcomes so that we could include them in the analyses. We have four measures: the Peabody Picture Vocabulary Test (PPVT), the Woodcock-Johnson Letter-Word Identification Test for letter recognition and word decoding, Woodcock-Johnson Dictation Test for early writing and letters, and the Woodcock-Johnson Applied Problems Test for math and problem solving. These also are going to be ordered by level of risk. The highest level of risk was for the first cluster and, as the clusters go up, they start to slowly move up to scale, so as the number of risks drop, the scores on these scales go up. The fifth cluster was one of the primarily Latino groups. This group had the lowest number of risks, and they got the highest scores in most cases.

To summarize, variability was evident across individual child and family characteristics and the number of risk factors. It varied across families, and looking at family types, it appears to be a useful strategy for linking individual and family characteristics without restricting the observed diversity that we have across families. Family types were related to differences in the number of family risks for developmental concerns, and cognitive and behavioral outcomes.

This leaves us with some next steps. We plan to continue to use these complex approaches to refine the family types that we found thus far. We want to continue looking at the family types and how they relate to other family and contextual characteristics. We want to look at what the family types tell us about risks and additional characteristics that may indicate negative child outcomes.

We like the six *Kids Count* variables, but we do not want to be tied to those, since we suspect that other variables may be equally important. We want to study the impact of family type on child performance, and hopefully we will be able to look at the stability of these family types over time.

Mary Ann D'Elio: I will talk about Head Start families and the challenges they encounter in their lives. As is the case for many families with low incomes, Head Start families often face multiple challenges. For the purpose of this presentation, however, I will focus on three of these challenges. The first is maternal depression. The second is the exposure that families have to violence and involvement with the criminal justice system. Then I will present some informa-

tion on the cumulative risk factors that O'Brien just described, and the effect on the lives of children and families.

The first thing I will talk about is maternal depression. For the FACES study, depression among Head Start families was measured using the Center for Epidemiologic Studies Depression Scale (CES-D). We used the 12-item version to measure levels of depression. The score ranged from 0 to 36, and then families were classified into four categories: 0 to 4 was "not depressed"; 5 to 9 was "mildly depressed"; 10 to 14 was "moderately depressed"; and scores of 15 or above were considered "severely depressed". We found that over one quarter of the mothers were classified as moderately or severely depressed. The larger proportion, almost 70%, was mildly depressed or not depressed. However, a significant group of almost 30% of families were categorized as moderately or severely depressed.

We also found that levels of depression varied by ethnicity. African American families had the highest levels of moderate or severe depression, and there were significant differences in those levels among the three groups. We also found that mothers were less depressed when fathers lived in the home. Thirty-three percent of mothers who lived without a father in the home were classified as moderately or severely depressed versus 23% who lived with the father in the home.

Maternal depression has significant effects on parents. Parents who were more depressed were more likely to have lost employment from the fall to the spring. They had lower household income and a need for and use of more social services. These parents had an external locus of control, and reported less social support in their lives to help raise their children. They were more likely to live with smokers or problem drinkers, and they engaged in fewer safety practices with their children, like supervising their child in the bathtub, watching the child cross the street, or keeping matches out of the reach of children.

Maternal depression also had significant effects on child outcomes. When parents were more depressed, we found that they participated in fewer activities with their children. They reported more problem behavior and less positive social behavior in their children. They also reported lower emergent literacy skills for their children. They were almost twice as likely to spank their children. Maternal depression also had an effect on children's cognitive outcomes. Children of parents who were severely depressed did significantly worse on one-to-one counting, book knowledge, color naming, creativity, design copying, social awareness, early writing and letters, the Woodcock-Johnson dictation tests, and the Woodcock-Johnson letter-word identification compared to children of parents who were not depressed.

The next challenge I want to address is families' exposure to violence. In FACES, we measured families' exposure to neighborhood violence and personal violence. We used a five-item measure where parents were asked to respond to questions by saying how frequently this had occurred in their lives: never, once, or more than once. This is a baseline measure, so it was used since the birth of the child. The five items were "saw a nonviolent crime in their neighborhoods," like selling drugs and stealing; "saw violent crime in their neighborhoods;" "knew a victim of violent crime in their neighborhood;" "were personally a victim of violent crime in their neighborhood;" or "were a victim of violent crime in their home." The score range on this was from 0 to 15, and the mean score was 6.1. We found that the reality of violence was very close to many Head Start families. More than one quarter, about 27%, reported that they saw nonviolent neighborhood crimes in their neighborhoods. More than 32% actually saw violent crime in their neighborhoods. Almost one quarter of them actually knew someone who was a victim of violent crime in their neighborhood.

We also looked at exposure to violence by ethnic group, and it varied significantly. Among parents of the African American children, 43.5% reported that they had actually seen a nonviolent crime in their neighborhoods, which is almost twice the rate reported by parents of White or Latino children. For reports of victimization, parents of African American children were again the highest, with 10% reporting having been victimized in their neighborhood, and 12% had been victims in their home. These figures were generally twice as high as the reports for parents of White and Latino children.

Exposure to violence had direct and indirect effects on child outcomes. It was related to reports of negative child behavior and maternal depression. Parents who lived in more violent neighborhoods reported more aggressive child behavior, more hyperactive child behavior, more withdrawn child behavior, and less positive social behavior. These parents reported more maternal depression. There is evidence in the literature that maternal depression might mediate this relationship. The question then became whether there was a direct relationship between neighborhood violence and child behavior. Or, perhaps living in a violent neighborhood somehow affected the mother's level of depression, which is another pathway. Mothers who were more depressed were then more likely to have children with negative child behavior or were more likely to report their children as having negative behavior. We tested this in a mediational model and found that that was true. Once we controlled for those other pathways, the significant relationship between neighborhood violence and child behavior fell out. We intend to further explore this area because there are many other factors that are involved. It certainly looks like the relationship is mediated in some way by maternal depression, with exposure to violence and the result of child behavior.

The third challenge that I want to talk about is involvement with the criminal justice system. In the FACES interview with the parent, we asked them whether or not they, another household member, or a non-household biological parent had been arrested or charged with a crime by the police since the birth of the Head Start child. I want to point out that this is not incarcerated parents; this is just involvement at any level with the criminal justice system. If the parents said yes, they were asked to tell us what the relationship of this person was to the child and whether or not this person had spent any time in jail.

We found that more than one fifth of the Head Start families had some involvement with the criminal justice system; 23% of the families had someone who had been arrested or charged with a crime, and 18% reported that that person had spent some time in jail. Of those who reported an arrest, 94% of those arrested were mothers or fathers. In total, of our sample, 17% of all fathers and 5% of all mothers in our sample had been arrested or charged with a crime.

Again, we looked at involvement with the criminal justice system by ethnicity. Parents of Latino children had the lowest rates or proportion of reports of someone in their family having been arrested or charged. This is about a half of the percentage reported by parents of White or African American children, which were relatively at the same level. We looked at how involvement with the criminal justice system impacted the families and the children. We found that families with members who had been arrested or charged with a crime were almost twice as likely to have depressed parents. They were also 2.5 times more likely to be families headed by single mothers, and over four times more likely to have parents who had been victims of violent crime in the home.

In looking at the relationship of this variable to children, children from families who had had someone arrested were at great risk for exposure to violence. Using logistic regression, we found that they were almost 5 times more likely to have witnessed violent crime or domestic violence and they were four times more likely to have been a victim of violent crime or domestic violence. They also were reported by their teachers to have more problem behavior or be more aggressive and hyperactive, and they had lower scores on the McCarthy Draw-A-Design Task and the Woodcock-Johnson Letter-Word Identification Test.

The final thing I want to talk about builds on O'Brien's comments on cumulative family risk factors. Using that six-item risk index, we came up with a score and used it in the analysis to look at the relationship of this variable to outcomes for children and families. We found that 21% of the families had four or more risks. The *Kids Count* data says in their findings that families with four or more risks were much more likely to show negative outcomes for their children, and we found similar findings. Parents from families with four or more risk factors were more depressed, reported less social support, and had an external locus of control. The children from families with four or more risk factors were also negatively affected. They were

reported by their teachers to have more problem behaviors. Looking at the cognitive outcomes, they had significantly lower scores on one-to-one counting, book knowledge, color naming, design copying, print concepts, the PPVT, the Woodcock-Johnson dictation, and applied problems in the letter-word identification.

To summarize, we found that a significant number of Head Start families face challenges in their lives, and these challenges have negative consequences for the parents and for the children. Fortunately, the flip side of this is that families are also resilient, in possession of strengths.

Michael Vaden-Kiernan: I would like to shift gears to talk about the findings from the FACES case study related to strengths and resilience of Head Start families. First, I would like to talk about the methodology of the case study as well as the analytic approach that we used. Then I would like to talk about our findings, again related to strength and resilience. I will organize them in terms of themes. The other thing I will do is highlight some of the findings with quotes from Head Start families taken from the family narratives, which were part of the case study.

The FACES case study had two overarching goals. The first goal was to provide a more complete profile of Head Start families, their neighborhoods, and the nature of their interactions with Head Start. The second goal was to support and expand on the findings from the larger study, pursue research questions that were independent of the larger study, and generate hypotheses for future research. In this way, the case study is to be both illustrative and explanatory, while developing a generative knowledge base for future research.

Given these goals, the design needed to have a large sample and a representative group of Head Start families in order to test independent research hypotheses. The case study had 120 Head Start families; 3 per site were randomly selected from the FACES sample. It was essentially a representative subsampling of the larger FACES sample. There were no statistically significant differences between the case study sample and the larger FACES sample in terms of basic demographic information such as household income, marital status, or ethnicity. Over the course of this study, which was about 16 months for the case study, we lost 14 families, mostly because they moved and could not be tracked, giving us a 12% attrition rate.

Tarullo touched on the measures in her introduction. Essentially, we had three primary data collections and components. One was home visit parent interviews, which were semi-structured, open-ended interviews with questions regarding parents' perceptions of themselves, their families, their experiences with Head Start, and their neighborhoods. These were given in fall 1997 and spring 1998. At each home visit interview, we also did home and neighborhood observations from the physical environment subscale and the neighborhood observations checklists of the HOME scale. Interviewers as well as the families completed both of them. They covered items from neighborhood resources to physical and social quality indices about the neighborhoods. The last components were monthly family telephone interviews, which were essentially month-to-month updates from families on critical variables in the study, such as their household composition, changes in child-care arrangements, employment status, health status, and Head Start participation.

There were three analytic strategies that we used to analyze the case study data. The first of these was content coding. We content-coded the open-ended responses given to us by parents during the home visit interviews. The responses were systematically organized in this fashion in order to generalize across cases. We used some of the content codes from an instrument that the Rameys had developed, and we adapted other preexisting codes. We also developed our own content code schemes for other new questions that were asked. The second analytic strategy involved descriptive analyses of the monthly telephone interviews to document change on a month-to-month basis.

The third analytic strategy was family narratives. These narratives were 6–12 pages long, describing the families' lives over the course of the study. They were developed using a narrative process, but basically the first step was to integrate the qualitative information and the quantita-

tive descriptive data from the case study measures while also including measures and descriptive data from the main FACES data. The narratives are organized around four themes: (a) the Head Start child, (b) the Head Start family, (c) the family's interactions with Head Start, and (d) the family's home and neighborhood. We used the narratives as a tool, or a vehicle, for identifying emergent themes within families as well as across families.

To sum up, these three analytic approaches were used separately, but also as part of a larger qualitative approach. The intrinsic value of this approach was in its capacity to attain rich, in-depth data and stories about families in salient contexts of their lives that support as well as challenge some of the quantitative findings from the main FACES study.

At this point, I would like to share some of the emergent themes related to family strengths that we found using this approach. The first theme was that parents had optimistic expectations for their children and they valued education. In the home visit interview, 75% of the parents reported hopes and goals relating to their children's education, such as doing well in school, completing appropriate tasks for their age, and having positive attitudes towards school. This is in response to a question that we asked about expectations, hopes, and goals for their Head Start year. Therefore, these are expectations about early schooling experiences.

In terms of longer-term educational attainment goals, 65% of parents had specific long-term educational attainment goals for their children, such as graduating from high school and attending college. In terms of early schooling, one parent said, "I would like for her to learn how to enjoy learning so that when she is in school, she enjoys it and she can build upon her dreams." In terms of longer term goals, another parent said, "Education means a lot to me. I really want them to go to college." A nice combination of both of those ideas regarding her daughter's future is that the mother wanted her to become an engineer and get a good job. However, she clarified that the most important thing is her learning. In many of the narratives, we found that parents felt a strong desire to have the best for their children, and they instilled values focused on education. When parents were asked about what they thought was the most important thing to teach their children, over half said it was to teach them values or morals and to show them the importance of education.

The second theme was about family relationships, which were seen as primary strengths as well as primary challenges for many of the Head Start families. Fifty-eight percent of the parents reported that their families' positive relationships were their biggest strength, and they characterized these relationships as family closeness or togetherness, including the ability to rely on one another and take care of each other. At the same time, improving relationships in the family, including marital, sibling, and parent-child relationships, was the most important and most cited area in need of improvement for Head Start families, even more so than meeting financial and physical needs of their families. Thus, family relationships are seen as a critical resource for Head Start families, ones on which they rely, as well as something many families recognize they need to work on. One parent described family relationships as a strength by stating, "We stick together. We just love each other and try and keep each other happy. We have a willingness to keep it all together. We work together as a family. All of us are here for each other." Another parent addressed family relationships as an area in need of improvement, saying, "I need to work on my child-parent communication skills. I need to be able to talk without screaming. I tend to get angry at my daughter. I have to work hard on fixing this."

The third theme that we saw was that Head Start families face challenges and demonstrate resilience. We saw this trait in a couple of different ways. Looking across cases, there is some indication that while most of the families described were relatively stable, they faced multiple challenges in the areas of employment status, health, child care, household changes, and relationships with significant others. In other words, for many of these families, change and the maintenance or management of change became a challenge in and of itself. This was also validated with our telephone month-to-month change data, which showed a large amount of change happening in the families on a month-to-month basis in terms of these basic structural

characteristics. In addition, across the family narrative, there was a persistent effort to develop and maintain a practical and feasible balance between the competing demands of school, work, and caring for children.

When reading the narratives, one gets a sense that balancing the demands of school, work, and child care preoccupied much of the parent's time and energy. For instance, the family in this next quote is a blended two-parent family with five children living in the home. Both parents' jobs involved shift work that included periods of heavy overtime as well as strikes and layoffs. The family had experienced a number of changes in child care over the years and was also dealing with fairly long-term health and mental health issues with one of their younger children.

The demands of balancing all the needs of a large family were subtle, but evident, in many of the mothers' comments throughout the narratives such as, "I hope I do not get really stressed out with five kids. I am doing really good, but I have a feeling I will get burnt out. Luckily, they are pretty good. I need organizational skills. I think having lots of kids, you need to get organized so you keep the children's appointments and things straight. I would like to improve the fact that we work too much and need to spend more time together. I think we will be able to do that when they are in school. Maybe their father will get another shift. I would like to be a normal family."

It is interesting that this parent is defining a normal family as one that is able to balance the demands of time between work and family. In addition, in terms of families' challenges and resilience, the narratives provide a different perspective in that one gets to work within cases. In that regard, perhaps the most striking theme from the narratives was that each family seemed to face their own set of unique challenges, and they demonstrated resilience in the face of their adversity.

This next quote is from a two-parent, two-child family who had recently emigrated from El Salvador to the USA. In the span of the narrative, the family faced deportation of the father and lived in a dangerous neighborhood where the children were not allowed to play outdoors. However, even in the face of these challenges, this family's resilience and value system is a predominant theme in the narrative. Perhaps the strongest example of resilience is the mother's belief system. She says, "Our family is poor, but honorable, and our surroundings make it hard to show [my daughter] how to be good. But we try. I love my children and want to see them grow. We are poor, but we try to keep her on the right path."

While voicing concerns about her low wages, the mother also focused on working to better her family, saying, "There's only one thing and that is to work for them." This quote gives a real sense of the obvious sacrifice on the part of this family, and the sacrifice is largely dedicated to the children. Similar to other narratives that we developed, the family's resilience in the face of their challenges is context-specific. They are tied to their particular circumstances, which leads us to believe that what is resilient in one context may not be resilient in another.

Finally, I would like to touch on Head Start families' interactions with Head Start. Despite facing various barriers to participation, Head Start families demonstrated a strong desire to be involved in their children's Head Start education, and they valued their involvement in the program. Ninety-five percent of the families felt that it was important or very important for them to participate in Head Start activities, and most indicated that it was important to them because it somehow helped their children.

Analyses using case study data also indicated that participation in Head Start activities positively moderated the relationship between neighborhood factors such as neighborhood violence and child behavior, indicating that parent involvement may play a significant role in reducing the negative effects of neighborhood factors on children's behavior. In sum, we found the parents had a strong desire to be involved in their children's education, they valued that involvement, and it may play an important role in protecting their children.

We found that Head Start families are diverse, but they hold hopes and goals similar to other families. Each of the families faced unique challenges, but in many ways they also have underlying values similar to other families, particularly in terms of valuing education and wanting the

best for their children. Head Start families find their family relationships to be an important resource—a source of strength as well as a source of challenge.

More work is needed to identify some of the critical dimensions of family relationships. For instance, the most common response that we got from families was something about togetherness and being close. What does that actually mean? How do we operationalize that? More work needs to be done to disentangle those concepts. Despite the challenges faced by Head Start families, they also possess strengths and resilience, both unique and shared among other families. Additional research in this area should focus on identifying and measuring family strengths or assets in the context of resilience, not simply focusing on risks or deficits. In addition, research should focus on context-specific strengths within the families. In other words, it was valuable to do analyses across cases as well as within cases, as we were able to do in this study.

Finally, despite barriers, Head Start families value their involvement in their children's Head Start education. Their participation in Head Start may play an important role in protecting their children from negative outcomes. These findings encourage an analytic framework that includes risk and protective factors together in predicting outcomes that are of interest to children.

Candice Grayton: In this presentation, we will look at families' involvement, perception, and satisfaction with the Head Start program, and the role that these factors play in Head Start's objectives of serving the neediest of the needy. In spring 1998, parents were asked about the ways in which they were involved in Head Start programs during the previous school year. Most parents were active in the program, and they identified that they had home visits with staff, parent-teacher conferences, classroom observations, volunteering in the children's classrooms, preparing student materials for special events, attending social events, and assisting with field trips.

In order to examine the relationship between involvement in Head Start and other factors, a summary involvement score and a categorical involvement variable were created for each parent. The scoring categories are based on a parent's report of how frequently they participated in each of the 12 activities over the past school year. The involvement score had a range of 12–36 with a mean of 22.1 and a standard deviation of 5.2. Involvement categories were low, with a score from 12–18, moderate ranging from 19–25, and high with a score ranging from 26–36. The amount of parent involvement varied by ethnicity. Parents of White children reported significantly higher levels of involvement than did parents of African American and Latino children.

We examined the relationship between parent involvement in Head Start and other family factors. The study data showed that parents who were most involved in Head Start were more likely to participate in weekly or monthly activities with their children. These types of activities include going to the mall or doing arts and crafts with their children. They were also more likely to have had prior exposure to the Head Start program through the involvement of another child or grandchild. About 51% of our families said that they had prior experience with Head Start. They were also less likely to be employed, had a more internal locus of control, and a greater satisfaction with the Head Start program.

To further investigate the role of parental involvement with Head Start, linear regression models tested whether or not involvement with Head Start predicted child and family outcomes. Parents who were more involved with Head Start had children with less aggressive behavior, more positive social behavior, higher emergent relation skills, and increased use of household risk and safety practices. In addition, children with parents who were more involved in Head Start also scored significantly higher on book knowledge, color naming, creativity, and design copying. While involvement seems to vary among different subgroups, in the 1998 interview we found that almost all parents reported that they and their children have a very positive experience with Head Start.

We found no significant differences in this rating by ethnicity, urbanicity, region, or prior experience with Head Start. Over 95% of parents reported that their children often or always felt safe and secure in Head Start. They were very happy to be in the program, their children felt

accepted by their teachers, their children were treated with respect by their teachers, and the teachers often or always made them feel welcome and supported as parents.

The high ratings of positive feelings toward the Head Start experience are similar to the parents' reported levels of satisfaction with the program. Over 80% of parents indicated that Head Start maintained a safe program, respected their family's culture, helped the children to grow and to develop, provided them with services, and prepared their children for kindergarten. While satisfaction with the program was very high among all parents, we found that parents with higher levels of satisfaction were more involved with the Head Start program and had less than a high school diploma. They lived predominantly in the Southwest or Midwest, were parents of Latino children, were unemployed, and were parents of girls. We found that benefits received in Head Start exceeded the expectations of parents.

In fall 1997, parents were asked to identify the major ways they felt Head Start could help their children and their families during the upcoming school year. For the most part, Head Start parents held optimistic expectations for their children and were less likely to report optimistic expectations for themselves. However, by spring 1998, many parents reported that Head Start had helped their families in ways they had not expected. For the most part, all of them received benefits and their expectations were superseded by the benefits they received. While most parents were satisfied and received many benefits, some saw room for improvement. In spring 1998, parents were asked if they could change anything about Head Start, what would it be? Almost half of the parents said Head Start does not need any changes, and they were happy with Head Start the way it is. However, some said that Head Start needs to focus more on academic skills, have extended hours, improve facilities such as playgrounds and classrooms, and provide transportation.

In further investigation of Head Start's role in helping families, we looked at other factors outside of the classroom. The reality of violence is close for many Head Start families, as noted by D'Elio. We know that exposure to violence predicted problem child behavior and exposure to extended violence predicted maternal depression. Does Head Start protect children and families from the negative effects of exposure to violence? In order to test the significance of Head Start's role in helping families, a series of linear regression models tested whether the extent of exposure to violence was associated with low levels of problem child behavior and maternal depression. This was in relation to parents' positive ratings of satisfaction, experience, and involvement in the Head Start program. We found that being satisfied with Head Start and having positive experiences significantly moderated the negative effect of exposure to neighborhood violence on maternal depression and child behavior for Latino and White families. We also found that higher involvement with Head Start significantly moderated the negative effects of exposure to neighborhood violence on maternal depression for Latino women. There were no significant interactions found for African American families.

In summary, the FACES data support the notion that having high parental involvement, positive experiences, and increased satisfaction with Head Start may help protect families from the risks and challenges they often face.

Hirokazu Yoshikawa: I want to outline some of the major strengths so far, and then offer some suggestions. First, important data on the strengths and diversity of Head Start families should be disseminated as widely as possible to Head Start staff. I am sure all the staff present are appreciative of these data, particularly on risk levels, resilience, and the challenges to service delivery. For example, we have new and urgent data on the extent of exposure to violence and criminal justice involvement, which has been a relatively neglected area of Head Start research and practice. The mental health practices that I am familiar with do not often consider the role of criminal justice involvement. What does that do in terms of increasing families' risks? These data suggest that they dramatically increase risks to parents, children, and maternal depression.

We heard some interesting new findings on racial and ethnic differences, and an array of

family, neighborhood, and Head Start experiences. Many of these were surprising, some of them compounded stereotypes, and some of them raise urgent signs. For example, African Americans are twice as likely to be victims of neighborhood violence as White parents in the sample, and 10 times as likely as Latino parents. There were many examples of differences by race and ethnicity that merit exploration.

A real strength across these studies was the use of both qualitative and quantitative data to address some of the same research questions. The finding that Head Start use appeared to moderate the impact of neighborhood violence on children's problem behaviors and maternal depression, which was found in both the qualitative and quantitative data, was quite creative. In the first study, the creative combination of a cluster analytic approach with a risk index approach, and then a comparison of those two methods, raised the interesting question of what each method can contribute that the other does not.

There were many contributions to both the developmental and intervention literatures on families in poverty that should be emphasized. Some of these studies raise questions about the theoretical bases of the studies. For example, in the cluster analysis, I was not sure what the conceptual basis was for including certain variables and excluding others. Clarifying the key questions that the clusters were meant to address would help to sharpen the study. Another contribution to the literature was the interesting findings on subgroups of Latino families. There were families living in Puerto Rico, Spanish-speaking families on the mainland, and English-speaking families on the mainland. I would have liked to have seen more discussion of those in the context of the literature on immigration and transmigration among Latino populations.

This is new data to Head Start, and it will be interesting to put it in the context of that literature. For example, it is a puzzle that when they compared those three groups of Latino families, they found that poverty rates were higher among the Puerto Rican families. At the same time, those families showed lower levels of risk on their risk index than the other groups. That might raise questions related to the cost of living that might be different in Puerto Rico versus the mainland. Are there other family history factors that might explain that? What do we know about the different kinds of immigration, not just from South American or Central American countries to the USA, but back and forth from Puerto Rico to the USA? That is not technically immigration, but certainly migration is significant between those two areas. It is not known whether the quantitative data may speak to that, but certainly there is qualitative data that could illuminate some of those questions. The overall emphasis seemed to be exploratory analyses, and that is one reason why these data were so rich, since the study was not investigating a particular hypothesis.

However, hypothesis testing could be integrated into the exploratory analyses a bit more. For example, the first presentation associated clusters to child outcomes. There might have been room for hypothesizing that certain clusters might be more related to certain child outcomes than others. The study could do some planned contrasts among those clusters to give more statistical power to answer those questions. It also makes for a more interesting study in some ways. What is expected when looking for ideographic patterns and diversity in families? Are certain factors expected to co-occur more often than with other factors?

I would have liked to get a sense of the strength of associations with child outcomes. In many of these areas, there were impressive associations with multiple child outcomes, but I could not tell the size of those associations or whether they were controlling for other factors that might also account for that association. For example, in the first study on the effects of cluster membership on child outcomes, I was not sure what the spread was on the outcome and how different those clusters were. In the second study, associations between maternal depression and family criminal justice involvement on child outcomes looked impressive, but I did not know the size of those effects.

The fourth study, the associations of parent involvement with child outcomes, raises the next point, which is caution around causal conclusions. I have not seen these analyses in great detail.

However, the fourth study suggested that parent-reported Head Start experience appeared to moderate the negative effects of neighborhood violence on depression and child behavior. All of those are parent reports, so if there is a shared method variance contributing to some of those patterns, it might be interesting to see if those can be replicated with teacher-reported outcomes or standardized measures.

As another example, the causal relationships were not clear for the relationship between maternal depression and parent-child outcomes in the second study. I was not sure what the authors thought were predictors of maternal depression versus consequences of maternal depression. More clarification on the theory of those factors would be nice.

To address the causality issue in this type of nonexperimental study, it is important to control for competing third variable hypotheses. The longitudinal nature of the data could help one address some of the causality issues in both the quantitative and the qualitative data. Particularly for the qualitative data, the longitudinal aspect of those data would provide useful information on what processes are involved in resilience over time. What are the processes over time in balancing family and work? What are the processes over time in dealing with multiple challenges at the family level?

Next, stretching the mixed method approach and integrating qualitative data into the quantitative studies would take a lot of work, but it would probably yield impressive benefits. A strength of this study is that ethnographic cases were randomly sampled from the larger studies with a sample of 120 families, which is large for a qualitative study. It is a wonderful opportunity to explore questions and mixed methods.

I have some suggestions and ideas that might be interesting to pursue. First, in the area of family relationships, qualitative cases could be sampled from those with the most stressed family relationships. For example, there are hints that those who report criminal justice involvement and those who report violence in the home may be overlapping groups. There is some serious concern about those families. What does the qualitative data show about how those parents report their family's experiences with Head Start? Do those experiences represent barriers to being able to access the benefits of the Head Start program? What are the implications for how Head Start staff should work with those families or what can those families reveal about how Head Start staff are already successfully working with those families?

As another example, do those families with different numbers of risk factors or those with different risk typology differ when looking at the qualitative interviews? On one hand, it is a validation question, which might not be interesting. However, the qualitative data offers additional information and a richer picture of the different families in those cluster groups or those in that four-plus risk factor category. An interesting question to explore is if the qualitative data suggest causal mechanisms for how these different levels of risk or types of risk are linked to outcomes. Can the qualitative data suggest mediational patterns?

Some of the puzzles around culture and racial ethnic differences would be interesting to explore with the qualitative data. Furthermore, a nice next step for these analyses would be to look at integrating staff practices and site characteristics, to make the findings more useful to staff.

I was on another panel this morning so I did not hear the first FACES panel. What if the two panels were put together to integrate the data? How do family experiences vary across different kinds of programs? How do programs address some of the challenges that families face? Could data inform Head Start staff on how and when they should target services to families who experience multiple risks? Many Head Start programs assess risk through checklists at enrollment or at other times during the Head Start year. What implications for practice are found to show that the multiple-risk group is at risk for poorer parent and child outcomes? How does Head Start program-level or classroom-level quality moderate the relationship of risk to child outcomes?

Obviously, it is a challenge to disseminate all of these findings to the Head Start community. Beyond these conferences, I am sure that issue briefs and other communications are planned to convey these results to individual program staff. Overall, congratulations on a set of important data.

Comment: Could you link what you said to how to tell Congress what we want? Have you seen data that could form the policy discussion that is upon us regarding Head Start, particularly about what the program looks like?

Tarullo: The reason we are doing this study is that Head Start is a comprehensive, two-generation program, linking the program to the child and the parent to their child. We must continue to focus our research on all the contexts of the child's development, not just the classroom, and not just the period of time focused on specific literacy instruction. Everything we hear about how the child is conceptualized within the program helps to support that feeling.

The data we described today about various kinds of family risk factors is challenging. Some of the more inspiring things that were described show that Head Start families are like all families in their love for and their desire to see their children do well. They feel that education is the key to do that. In terms of academic readiness, they had extremely high expectations for the program, and that is where they thought Head Start fell short.

That is a challenge, and it is what most parents say they want from Head Start. They do not know as much about family support, which they learn about over the course of the year. We continue to hear that Head Start is seen as a comprehensive program of multiple services to families, and we want to understand the full context of where children are developing.

One thing we have learned is that the more we can help to shape that message into what matters for a child's success in school, the better. We have to be able to continue to demonstrate the ways that these family factors impact the child's ultimate success in school, and we must make that message clear. In this session, we primarily discussed cognitive factors. We also are talking about social, emotional, and family factors. It is an important message to get across.

Comment: I appreciate the diversity in ethnic groups in these studies. I wondered to what extent the findings have to do with the degree to which the Latino group embraces their traditional culture. Might one answer be that Spanish-speakers embrace their culture because they speak their language? African Americans do not have the sense of identity that other ethnic groups have.

Comment: There are more risk factors that I notice among the African American population. I wonder why and conclude that the support system is a cultural issue. However, looking at Washington Heights and Patterson, neither has a plentitude of services, so it boils down to race, ethnicity, and the types of family supports that exist in the two communities. It was based on observations of two different communities.

Yoshikawa: A point to add to some of the racial and ethnic differences that I did not mention was that there is also the possibility of different responses to the same questionnaire items in the quantitative data. For example, it would be interesting to see whether the lower rates of criminal justice involvement reported among Latinos compared to Whites and African Americans are due to perception of the items in the same way or whether there are different levels of reporting such involvement to the researcher. One way to explore that is to literally ask the question in person or in phone interviews. If those questions were already asked, if some ethnic differences or the ease in the way that people talk about things like criminal justice involvement are noted, it can hint at whether people are responding to the questions in different ways.

Question: When will the FACES report be available?

Tarullo: The FACES report on the 1997 data is ready for web posting and is in its final clearance stages. We may have to go back and incorporate some of Yoshikawa's suggestions. Part 1 of the full Technical Report on the 1997 FACES study will come out first, and then there will be a

subsequent report addressing some of the aspects that we heard about this morning for the 1997 data. It will be a large report with many technical appendices.

Question: Is this 1997 data comparable to the 2000 data set? A lot has happened with public policy, with Temporary Assistance to Needy Families (TANF), and other things since 1997 that would impact income, employment status, and maternal depression.

Comment: Those families who are the most difficult to get off of public assistance would probably provide a whole additional set of data that we are addressing now in the field.

Tarullo: FACES 2000 does not have the case study component, but we do have the extensive parent interview data in order to look at the differences you describe. It is unfortunate because this has been a rich data set to work with.

Vaden-Kiernan: We are going to look at a number of different factors from a multilevel perspective. We are currently involved with the FACES 1997 cohort to geo-code family addresses to neighborhood census data from the 2000 Census. That should allow us some opportunities for community and neighborhood level analyses, but in addition we plan to look at classroom factors that may impact child outcomes, in addition to some of these other family factors. For instance, we have the opportunity with the census data to geo-code the centers and the neighborhoods where the centers are located.

Question: Will any summary or highlight report be available when 2000 is out?

Tarullo: Yes, we will put these presentations on the web as soon as we can and have a progress report, hopefully, by the end of 2002. Our current progress reports are on the web site.

Question: Parent involvement in Head Start predicted parent and child outcomes. In that cycle, it is hard to tell which came first. Have you done any research gathering the parents' school success, learning disabilities, or issues around the parents' comfort level in being involved with educators or education? All those other things can interfere with working with their own children. Was that type of information gathered?

D'Elio: Some of that information was not gathered in FACES 1997. We have some information on substance use, but it is limited. In the 2000 data set, we have a much more comprehensive data collection on substance use, for example, in the families. We do not have information on school success; we just know their education levels. It would be great to have more information on the parent's own history of special education or learning disabilities.

Tarullo: Maybe we can take that into account for FACES 2003. We do not have parent disability information. FACES 2000 gave parents illiteracy screeners, so we have direct information about their functional literacy. It is obvious that parents are concerned about educational issues for their children, but we do not know what their own actual involvement has been with schools when they were children. Head Start research has shown that parents feel comfortable becoming active with Head Start, but the further they go into public schools or any schools, the less likely they are to be closely involved. However, that is a factor that we had not taken into account.

POSTER SYMPOSIUM

Head Start Quality Research Centers: Interventions to Promote School Readiness for Head Start Children

FACILITATOR: Louisa B. Tarullo
DISCUSSANT: Martha Zaslow
PRESENTERS: Gayle Cunningham, Stacy Dimino, David Dickinson

Columbia University

- **Using Assessments to Improve School Readiness and Head Start Quality**
  Sharon Lynn Kagan, Jeanne Brooks Gunn, Stacy S. Kim, Elizabeth Rigby, Elsa Jones Nance

Education Development Center, Inc.

- **Supporting Literacy Development Through a Systemic Program-Delivered Intervention – PD LIT**
  David Dickinson

High/Scope Educational Research Foundation

- **High Scope's Quality Research Center: Achieving Head Start Effectiveness through Intensive Curriculum Training**
  Larry Schweinhart

Quality Counts, Inc.

- **Quality Counts' Head Start Quality Research Center: Individualized Learning Intervention**
  Martha Abbott-Shim

State University of New York at Stony Brook

- **Evaluation of Emergent Literacy Curricula in Head Start**
  Janet E. Fischel

University of North Carolina at Chapel Hill

- **The Preschool Behavior Project: A Socioemotional Intervention to Enhance School Readiness**
  Donna Bryant, Ellen Peisner-Feinberg, Janis Kupersmidt

University of Oregon

- **Promoting Head Start Children for Social/Emotional Success at School: Preliminary Results from the Preschool Adaptation of First Step to Success**
  Hill Walker, Edward Feil

University of South Carolina

- **The Companion Curriculum: Connecting Head Start Parents and Teachers to Promote Early Learning and Development**
  Julia Mendez

Data Collection Center

■ A Coordinated Approach to Evaluating Multiple Interventions Aimed at Improving Head Start Quality

Margaret Hunker, Kim Kwang, Louisa B. Tarullo, Ruth Hubbell McKey, Gary Resnick, Nicholas Zill

Louisa B. Tarullo: The Head Start Quality Research Consortium (QRC) includes both individual and coordinated sites. This large group has agreed to the following mission: to support the continuous improvement of Head Start by developing, testing, refining, and disseminating interventions to enhance school readiness of Head Start children. People have gone about this task in a variety of ways.

I will give a brief overview of the project, highlighting the goals of the individual interventions. The majority of the time will be spent with presenters and a discussant that represent our program partners. The first speaker is Gayle Cunningham, Executive Director of JCCEO Head Start in Birmingham, Alabama. The second speaker is Stacy Dimino, Executive Director of Communities United, in Waltham, Massachusetts. The cochair and third presenter for this session is David Dickinson from Education Development Center, Inc. (EDC) in Newton, Massachusetts. Finally, we will hear from our discussant Martha Zaslow from Children Trends.

We have a number of research project partners. The first one is "Using Assessments to Improve School Readiness and Head Start Quality" at Columbia University, with principal investigators Sharon Lynn Kagan and Jeanne Brooks-Gunn and project director Stacy Kim. They are partnering with the Child Care Center of Stamford, Connecticut. This particular intervention is testing whether training the administration and using observational assessments systems at the child, classroom, and center levels results in improved program quality and school readiness outcomes for children. There is an increased focus on accountability and reporting of local outcomes, so this particular project has gained increased relevance since we first began in March, 2001.

The second project is "A Systemic Approach to Fostering Language and Literacy Development." The principal investigator is David Dickinson, with a team from EDC, and Stacy Dimino from Communities United. They will be moving to Boston to work with the Action for Boston Community Development (ABCD) Head Start. This project focuses on a systemic program delivery, training, and mentoring intervention designed to improve children's language and literacy development.

The third project is "Achieving Head Start Effectiveness through Intensive Curriculum Training." The principal investigator is Larry Schweinhart from High/Scope Educational Research Foundation, and he is here with Marijata Daniel-Echols. Their program partner has been the Oakland Livingston Human Services Agency. They have been looking at intensive training and supportive mentoring in the High/Scope curriculum model in order to enhance children's development, especially focusing on language, literacy, and social skills.

The fourth project is called "Supporting Children's Individualized Learning in Head Start" led by Martha Abbott-Shim from Quality Counts and Rich Lambert from the University of North Carolina at Charlotte. Gayle Cunningham is their partner in Birmingham, Alabama, and three other Head Start programs in Georgia will eventually take part in their intervention. Their hypothesis utilizes a mentor/teacher and protégé/teacher model. They are testing how self-directed and collaborative learning experiences can help improve teachers' abilities to use developmental assessments. Their goal is to individualize teaching and learning for Head Start children.

The next project is "Evidence Based Emergent Literacy Approaches for Head Start" at the State University of New York at Stony Brook. Janet Fischel is the principal investigator for this project, working with Long Island Head Start Child Development Services. Their goal is to compare two classrooms' curriculum approaches, including the computer-delivered Waterford Early Reading Program and the ongoing curriculum in the Long Island Head Start, the High/Scope method.

They are looking at these two curricula that are particularly designed to support early language and literacy development, comparing them with the standard approach in that program.

The sixth project is "Social/Emotional Intervention to Enhance School Readiness" at the University of North Carolina at Chapel Hill. Donna Bryant, Janice Cooper-Schmidt, and Ellen Peisner-Feinberg are the principal investigators based at the Frank Porter Graham Child Development Institute of the university. They have been working with Person County Head Start in Roxboro, North Carolina, and will move next year into Chapel Hill and Carrboro. Their intervention is a translation of the Preschool Behavior Project, which they previously implemented through an external intervention. They are translating that into an intervention administered by the program. It is primarily designed to enhance social and emotional development.

The seventh project is the "Adaptation of First Step to Success" at the University of Oregon led by Hill Walker, Ed Feil, Annemieke Golly, and Herb Severson at the Institute of Violence and Destructive Behavior in the College of Education. They work with Head Start of Lane County, in Springfield, Oregon. They are adapting the First Step to Success Intervention. It has both universal and targeted components and is designed to enhance children's social skills and reduce behavior problems.

The final project is the "Companion Curriculum" at the University of South Carolina. Julia Mendez and Jean Ann Linney are the principal investigators for that project, working with the Gleams Human Resources Commission based in Greenwood. They are testing a parent involvement model, looking at whether Head Start families that participate in their multicomponent curriculum, which includes both sending materials home and having parents come in for workshops, show improvements in parental involvement and satisfaction in their children's learning and school readiness outcomes. Through a cooperative agreement, each of the individual sites is assessing the fidelity and implementation of their particular intervention, and is evaluating local measures targeted toward the kinds of outcomes they are hoping to achieve.

We are also doing core data collection based on the measures and procedures from the Head Start Family and Child Experiences Survey (FACES). We want to look at baseline information on these sites and see how they compare to a national sample of Head Start children and programs. The coordinated data collection in most sites used a pre/post design of assessing the children, observing classroom quality, interviewing teachers, and getting teacher and parent reports on children. A couple of sites have done a more experimental design in the 1st year because their programs were ready to do that. In the 2nd year, we are moving to a treatment-controlled design. Both the intervention and controls classrooms will get all these data collected through the coordinated data collection.

This is a quick overview of the assessments that will be familiar to those people with any of the FACES information. Regardless of the stated intention or hypothesis of these interventions, we are looking broadly at a comprehensive assessment of children's school readiness. We are observing in the classroom, looking at structural and process quality, and finally, interviewing parents on their involvement with Head Start and their demographic information. We are talking with the staff, particularly the teacher, as well as others who were involved in these interventions.

Our 1st year's work shows that the research team and program partners who were selected through peer review for the scientific merit of their interventions and research designs have come out to be fairly representative of Head Start in general. They do not differ in terms of the children's baseline cognitive scores or observed classroom quality, although we did find that the parents in these programs seemed to be relatively advantaged on several dimensions compared to typical Head Start families.

These findings lead us to conclude that the work we are doing might be even more useful to Head Start then we had first thought because this sample is an appropriate set of programs to test these interventions. Eventually, we hope to help refine, package, and make them available to Head Start in general, using the best aspects of them all.

Stacy Dimino: I am the Executive Director of Communities United in the Boston area. We are suburban to Boston with nine locations. We were part of the early QRCs as a data collection site, so we pulled out and extracted information from our classrooms and teachers. It is a true partnership to develop the curriculum and the in-service changes for teachers. Therefore, it is a much more powerful approach and is more likely to make programs sustainable. It also makes the program understand the data more clearly and be able to use it more effectively. We were able to look at classrooms and see classroom change. Teachers have reported their strengths, beliefs, and how their teaching has changed. Looking at that from the teacher, supervisor, and manager perspectives has been exciting.

In terms of partnership, programs come to the table looking for improvement and for how they build quality in their program. They seek out those factors and strive for quality. Each one of these projects comes from a different perspective. Our program had worked hard to gather the data, doing extras for 5 years, looking at program quality, and asking ourselves each year how we could improve our classrooms. All the teachers requested information and training on language and literacy. The program decided that this was a priority and something they wanted to do.

A number of language and literacy projects exist. The projects have some similar as well as different approaches to that goal. There is also a focus on social and emotional curricula for children and parents and a parenting support piece. Each one looks at quality differently, but is focusing on many of these same aspects, probably because the programs seek those strengths as well.

The maximum benefit of the partnership is that people come together and a leadership team of researchers and program people is created. The managers and the staff are involved. It meant that we sat at the table and decided the curriculum with teachers. How do we build on teachers' strengths? How do we make sure that they hear this information, try it out, and experiment with it? Our teachers were not used to the lecture model of in-service and our facilitators, because we cofacilitated the training, were not even used to an overhead projector. Through that process, we learned from teachers that they wanted more content in their training.

Our teachers also wanted to know the research behind what they were learning. When we got short on time and were trying to condense the information to a 6-hour training, we did not want to lose that piece because it helped them to understand the basis of information. They became more data savvy. They wanted to hear the information and see the charts.

Building the leadership team meant that the on-site managers had to help create the materials. If they were not part of the creation, they were part of the first training group, which meant they were able to understand and ask questions before their teachers went to the training. When the teachers came back, the managers were able to offer immediate support. That was a major influence on the success of this project. Overall, there is a desire for the programs to be able to sustain this model, even after the researchers leave. That is important, and certainly part of what we want to do at Communities United in terms of continuing. At the University of North Carolina at Chapel Hill, it is a big part of what they are doing. Quality Counts uses a mentoring component to build program capacity and strength. Everyone rallied and supported this initiative, from the teacher assistants to the parents. Even the bus drivers were clear on the project, building on the excitement.

Partnership is an ongoing dialogue. It involves understanding what the charts mean and what happened in the classroom. The project is excellent, because usually one does not have the opportunity to be part of that dialogue. This model allows programs exposure to and understanding of data. We are not researchers, but we can do these things. We can go into the classrooms and decide what we want to see. Head Start is pushing programs to be able to undertake the process, particularly with child outcomes. Information is thus more timely, because a program that wants improvement and quality cannot wait a couple of years to hear what happened. We need to know in the summer so that we can build on that information and make improvements by September.

We wove in the Head Start expectations on child outcomes and performance standards. When we focused on literacy, teachers did not feel pulled one way or the other between all their responsibilities. We tried to weave it all together for them. Each training session had content on language and literacy, but it also provided the domains for work sampling on how to collect information and what to look for. It is vital that teachers feel as if they can manage it all, rather than being inundated and unable to see the priorities. We reinforce the importance of the teachers' strengths and knowledge. They are not coming in not knowing what to do. They often want to know why it is important, and they bring a depth of experiences. For example, when we did phonemic awareness, we mentioned that they already do rhyming, through songs, chants, and games. Why do children like it so much? This approach was positive, because it was not saying, "You do not do this in your classrooms. We want you to do it." Instead, we were saying, "You do it, but let's see why it is effective, and then let's try and do it more often." Children are learning from the repetition, and it was effective in terms of emphasizing teacher strengths.

We are all doing child outcomes, and that is scary for programs to do. One wonders if child assessment is accurate, and why there is such variation between classrooms. More training is needed on this issue. The project will now go to a much bigger program in Dorchester, in Boston. In East Boston and for Communities United, we will do it ourselves and see how we do on our own. We will try to maintain the quality that we learned, do our training sessions again, scale up a training model for teachers, and collect our own data.

Gayle Cunningham: I am delighted to have the opportunity to share the work we have been doing in Birmingham, Alabama, and with the Georgia Project, which is Quality Counts Incorporated. This is actually the second round of QRC projects—we also had the privilege of being a part of the first round. I direct one of the programs that is a part of the Quality Counts Research Center in Birmingham, Alabama. We are a community action agency, serving 1,400 children through Head Start and Early Head Start in 29 locations.

I have organized my remarks on three levels, starting with myself, then talking about the value that this research has offered to our program, and then daring to talk about what the value has been on a project-wide basis. I have always been interested in research, but only interested enough to find out what is useful to take back and use. This has been a different experience, learning the guts of research and evaluation. I have learned that the old adage, "if you do not have data, you are just another person with an opinion," is true. Some of our opinions have not been proven by the data, and some have been proven, to our delight.

On a program level, one of the great things about this project is the diversity of programs that are involved, including programs with different curricula, sizes, locations, and grantee type. We have school systems, community action agencies, and independent Head Start grantees, so there is not just one type of Head Start program involved. The programs are also at various levels of quality development and relationships with themselves and others, with different abilities to use information.

One of the great things about the implemented program interventions is that they all benefited. The interventions have not come to look at what we are doing; rather they have helped us improve what we already do. In each instance, there is something that is making a difference in the program and something that we will be able to continue doing as we move beyond the initial years of involvement. We have also had the advantage of time, since this is a 5-year grant. There is time for planning, developing relationships between programs and researchers, and perfecting the intervention over time. They are real partnerships, which has made this project effective.

One of the things that they have helped us with is to become much better at developing and implementing evidence-responsive program improvement activities. We are looking at mentoring, because in the last reauthorization for Head Start it was required that all Head Start programs develop mentor teachers. When this project came along, we decided that mentorship

was important to study. We wanted to know the best way to do it, and how to improve the ways we choose and support mentor teachers and determine whether or not they make a difference. We went from having an outside trainer to developing our own internal mentor/teacher training, with the guidance and support of the QRC Project. Many participating programs feel that they have been in the right place at the right time, given Head Start's new expectations regarding outcomes measurement, analysis, and evaluation.

Our programs have become more sophisticated about assessment and data analysis. We have reached the point where we are actually adding assessment and data management capacity to the ChildPlus software that we have been using for years. We will have the opportunity to link child outcomes to family information and to look at findings in new ways. We can now look at the outcome data and see why it differs between centers, families, and individual children.

Our staff has also dared to develop an assessment instrument on language and literacy to fill in the gaps of other assessments we were using. We have been using it for 1 year, and we have received positive feedback. We also now have data from children that we will continue to collect for the next few years. The other thing that has been good about this project is that we have had a chance to compare ourselves to others, including the FACES data and findings. This cross-project data collection is useful to see how one stacks up against others in similar circumstances.

Overall, this is a special opportunity for eight projects to work together, meet regularly, and benefit from the leadership and guidance of research. Involvement with the FACES Project and the Impact Study has developed a special kind of synergy that has made all of our projects better. This is perhaps a model for how research can be even more beneficial. It may even be that looking at how this has been done over time could be as important as looking at any of our findings.

David Dickinson: I want to offer a researcher's perspective on the partnership, after listening to the partners talk from the practitioner perspective. There is much talk about research partnerships and the various ways they can play out over time. They are like marriages, which require good communication and a commitment to working through issues. Of course, there are also enormous benefits.

I want to briefly address two points. First, how are interventions actually shaped? I cannot say enough about the materials we developed for the 4-hour workshops. Dimino and her staff have made incredible contributions thinking through training activities, how things get phrased, and the actual shaping of the partnership as we go larger scale. It raises the question of how to feasibly allow some room in what we are creating and to encourage ownership and maintenance of our work together. As interventions are created, if one can hook up with some Head Start Programs that are willing to put time and energy into the project, there are great benefits because there is a reality test. As well as we think we know Head Starts, we lack that integral level of detail.

Second, how is data handled? Both Cunningham and Dimino made comments about the importance of seeing the data, even for their own use. That means that we wanted to know how Ms. X did in her classroom in the fall and in the spring. We want to know how the children in that classroom are doing. It does not mean they would like to see a model in 2 years about the impact of classroom quality on children whom they do not remember and staff who have long since moved on.

Where do research and program evaluation come together? How far down the road can researchers go toward sharing data without compromising data? There are some data sharing issues. As researchers, it raises some interesting questions. How do we use our data? Are the data used as promised in the initial conversations about a partnership? For example, we thought we knew what we meant, and she thought she knew what she meant, but we may have different notions about this central issue. What about confidentiality? Who gets access to the data? There is some interesting learning in both directions, and if we are serious about partnership, we need to think deeply about these issues.

Martha Zaslow: I want to talk about the unique challenges that emerged from looking across this set of projects, which falls into a young tradition of researchers working together to collect data in a comparable fashion across sites. We have seen these challenges in child care with the Infant Health and Development Program (IHDP), Welfare to Work, and the five-state project on state-level child outcomes. Through collaboration on these projects, results can be leveraged for much more information and a broader context.

Special challenges and issues also arise within the context of what we have heard. The first category of challenges is the set of implementations that have been described. In some partnerships here, people and programs make demands on the researchers and develop exciting collaborations. The programs are saying, "If you want to train, tell us the evidence base of what you are talking about. If you want to do assessment, let us help develop the assessment." Bridges exist within these programs between the staff and the researchers. This is not the usual posture of the researchers looking in and directing from the outside. This process is exciting and builds stronger evaluations, but it also poses challenges about appropriate borders. It is not surprising that if one pioneers different relationships such challenges arise; however, to be forthright and face those challenges is wonderful.

Another set of challenges emerging under the heading of implementation is the issue of going to scale. Some of the evaluations described here have been tested in "hothouses." They are models that have been tested when delivered by the experts, but if Head Start wants to work on quality, we have to be able to go to scale. How do we do that? What does it take? This is critical for these projects.

There is a pretest year to begin exploring some of these issues. At one site, the staff is taking over and running the intervention. In a number of projects, the relationship between staff and researchers is changing in that the staff are taking over, running an intervention, and seeing if it can be brought to scale. We have a set of research issues around fine-tuning the programs. What does it take to take over, and are these things only possible in a hothouse? Are they just demonstration projects or can they be brought to scale? There is an incredible richness of different staff/researcher relationships. Where are the lines blurred, and where should the line remain? What challenges are posed by having staff take over and run interventions and bring them to scale?

Assessment raises other challenging issues. These projects echo the National Education Goals Panel Purposes of Assessment documents, clearly distinguishing between assessment for particular purposes and having no such assessment. Assessment tools and technical requirements for the tools should be shaped around the purpose of the assessment. Within these particular projects, there are two special purposes for assessment. One aspect is assessment to inform and enrich the quality of instruction and programs. Whole interventions are based upon shaping observer skills in doing assessment: to learn where a child and teacher are and then feeding that information back into the system.

A second type of assessment within these projects focuses on reporting. How are these programs doing? We have heard that there is a challenge in distinguishing them and keeping them separate. Still, pioneering efforts are attempting new methods where two types of assessment can be mapped onto each other. For example, what information is being recorded in work sampling, which is the assessment to inform instruction? How does that map onto the FACES assessments? This will be helpful to tell us whether there can be sharing across these types of assessments or if we must be strict. These projects pose challenges about what types of assessments should be carried out and how strictly they should be kept separate.

A third issue from this set of projects that has posed challenges to us is the breadth of intervention. School readiness has always been defined as having multiple components. Reconceptualizing school readiness entails five dimensions. The question arises that if we want to strengthen children's school readiness, and school readiness is comprised of so many components, should we do single or multiple dimension interventions?

These issues are not simple. They are complicated, and the coordinated nature of these projects should teach us a great deal. I am not sure that a single-dimension intervention exists.

Some people talk about interventions that are strictly "literacy based;" however, there is a high correlation between children's scores on early math assessments and their literacy skills because many math issues get processed through language. What happens if an early language and literacy intervention fosters more talking between caregivers and children? Does that foster a different kind of relationship?

Do we change the nature of caregiver/child relationships in Head Start because of a language/literacy intervention? We will learn that through assessments of program quality. On the other hand, if we address both behavioral issues and language literacy, does that provide the child with a stronger push at the end of the day? We stand to benefit enormously from this set of programs that are now being mounted in thinking about the limits of any one dimension of school readiness and the uncharted territory of how closely are they related.

I want to briefly talk about research design issues. It is critical that this research program is linked with the FACES assessments in a number of ways. The first is that this issue requires that a language/literacy intervention not only look at language outcomes, but across domains. The second issue is using FACES as a benchmark. One of the things that they are learning from the pre/post test data of the 1st year is that Head Start is relatively homogeneous in terms of quality and children's background. We see the FACES scores and wonder if they can ever be budged. Even before seeing any impact or random assignment data, the pre/post data are showing evidence that they are not immovable and can be changed. This learning is critical to Head Start in general.

We are learning about progression from pre/post design to random assignment design. This important sequence will enable us to review the comparative and pre/post designs and describe what we have learned from them. Everybody was challenged and surprised at how much the FACES results, in a nonexperimental descriptive mode, nevertheless emerged as having critical practice implications that are supposed to happen from impact results. This kind of pre/post design will also challenge the limits in terms of what we learn from the different designs and how the results of different designs map onto each other.

One factor to discuss is how long the pre/post design period should be, because that period is also used to hone and refine the program itself. Other requests for proposals, such as those from the National Institute for Child Health and Human Development (NICHD), expect people to hit the ground running with a random assignment design right away. This work will challenge us to think about how long a planning period should be before testing a program design. I hope to hear how much time was needed in the early planning phase and the pre/post design phase before the programs were at a point to be tested.

I will conclude on this point. This set of projects is also challenging us with respect to traditional aspects of random assignment, which are often done at the level of the individual child. What happens within programs in terms of spread of program information? Should random assignment be done at the individual, classroom, or program level? Is it possible at the program level or are there too many differences in the populations across the program? We will also face important challenges in terms of design issues. I hope we will learn as much from the process of collaboration as we will from the results.

Similarly, I hope that we come back here at the next research meeting and reflect not only on the results, but also on the research methodology in terms of duration of pre/post testing, unit of analysis, and random assignment. What kinds of relationships should researchers, evaluators, and program staff have? What are the appropriate boundaries in these wonderful collaborations?

Question: I love the idea of bringing these interventions to scale. It is both a challenging and exciting time to see how things shake out once researchers get their hands off. I also wonder about fidelity and the extent to which program impacts reflect program implementation. How can partnerships be maintained as collaborative relationships? I am also curious about costs.

Dickinson: The question about fidelity is something we will talk about 3 years from now. What continues to happen as we let go? For those of us who are letting go, it is a matter of how to maintain quality.

Janet Fischel: We purposely take two previously packaged literacy programs. One is a full spectrum program delivered by the teacher. A professional comes and checks, trains, and checks. I am interested in teacher development in terms of whether teachers worry about the curriculum they are delivering on-site at the Head Start centers or if they go to workshops or national professional training.

The Waterford program has a 15-minute add-on computer program to produce the data. If a child has been absent for 2 months, then he will not have data for 2 months. We get the daily data for the children. It involves the teacher to some extent because there is printout material to expand it beyond the 15 minutes on the computer. However, it is a different fidelity question because the teacher is freed up to either do other things or continue to support the emergent literacy and oral language richness efforts. The teacher does not have to work individually while the child is interacting with the computer teacher.

We thought this was an exciting way of freeing a teacher from some of the nuts and bolts of teaching the domains of emerging literacy. They do not have to wait until we are done with this project. Our interest was in taking two different curricula and seeing how children fared in that realm and others, including school readiness.

Larry Schweinhart: The question of fidelity of the science-type FACES question is unclear. It can mean rigorous adherence to precise methodology without any deviation or intelligent application of methodology with reasonable variations. I do not know what "reasonable" is. It could mean some kind of application of principle. In fact, different educational models vary in how they define what constitutes an acceptable degree of fidelity. It is an enormous and important question, but it is difficult because one is looking at different models. To look at the different degrees of variability in replication at the same time is not simple. There is a history of attempts to bundle up criteria in that fashion. It was previously represented by the Program Effectiveness Panel and others that were primarily administered by the U.S. Department of Education. They then came up with a variety of criteria, including cost. We are not there yet with these interventions.

Dickinson: Questions about fidelity and cost actually go together because the cost of our program per child is analyzed as we work with teachers who have 18 children in their classrooms. If the impact is only for 1 year, then the cost is different than if we can say that the impact continues for 5 years, in which case the cost per child almost disappears.

Comment: It is important for the various programs to document how much time they spent in training, who delivered the training, when staff were involved, and how much of their time was devoted to this training as opposed to their routine duties. These measures indicate what that cost is. They are important questions because they help to shape the criteria used to develop an acceptable level of implementation.

Findings From the Head Start Mental Health Research Consortium

COCHAIRS: Michael L. Lopez, Cheryl Boyce
DISCUSSANT: Matthew A. Timm
PRESENTERS: Donna Bryant, Edward G. Feil, Steve Forness, Terry Hancock, Lisa A. McCabe

- **Results From a Classroom and Home-Based Intervention for Preschool Aggression**
  Donna Bryant, Janis Kupersmidt, University of North Carolina at Chapel Hill
- **Cross-Cultural Analysis of the Early Screening Project**
  Edward G. Feil, Hill Walker, Oregon Research Institute
- **Systematic Early Detection and Self Determination Approach for Mental Health Intervention in Head Start**
  Loretta Serna, University of New Mexico
  Steve Forness, UCLA Neuropsychiatric Institute
- **Early Identification and Prevention of Conduct Disorde in Head Start Children**
  Ann Kaiser, Terry Hancock, Vanderbilt University
- **The Emotional Health of Low-Income Children Over Time: Influences of Neighborhood, Family, Head Start, and Early School Experiences**
  Lisa A. McCabe, Jeanne Brooks-Gunn , Columbia University

Michael L. Lopez: Head Start's Mental Health Research Consortium was started in 1997 in partnership with the National Institute of Mental Health (NIMH). We got together to begin an initiative focused on developing new research in the area of mental health within the Head Start context. We wanted to try and support new research that would develop and test applications of theory-based research and state-of-the-art techniques for the prevention, identification, and treatment of children's mental health issues. That is a tall task in and of itself. We put out an announcement and assembled a wonderful group of partners for the Consortium.

Despite our attempts to cover a number of different areas, we ended up figuring out that the consortium falls into two main categories: assessment issues and intervention issues. In the assessment category, we have the University of Oregon Early Screening Project with Ed Feil. Lisa McCabe of Columbia University will describe the emotional health component. On the intervention side, Terry Hancock will present the Vanderbilt University project on early identification and prevention of behavior and communication problems. Then we will hear from our other two projects, including Donna Bryant of the University of North Carolina at Chapel Hill, and Steve Forness from the University of California at Los Angeles (UCLA), representing the University of New Mexico site. We will close with Matt Timm from Tennessee Voices. I will explain his connection and role in this activity, as he carries the torch of some of the research findings. This is the 5th year of the consortium, and I do not want to say final year, because we are doing some jointly-funded, cross-site data analysis which will continue over time.

Edwards G. Feil: I am from the University of Oregon and the Oregon Research Institute. I feel fortunate to be one of the grantees working with this consortium, blending Head Start with the

Administration on Children, Youth and Families (ACYF), and NIMH. We are focusing on children's mental health and trying to provide as much as we can, on both screening and interventions.

Why screen young children? I am probably preaching to the choir, but I would like to lay out a few things to help you understand where I am coming from. Problem indicators are evident in preschool. These behaviors are not the same as those seen among adolescents or even early elementary school-aged children, but rather it is a kernel of what those later behavior problems will become. These behaviors begin with simple things like noncompliance, as well as more serious behaviors, such as biting. I am talking more about behaviors that are fairly typical for some children and that make teachers anxious. Later on in the course of the school year, these behaviors may increase.

We are finding that when children reach preschool or enter any type of structured setting those behavioral problems start coming out in a fairly severe way. In some of the qualitative data we have collected for another project, we have found that the typical child's behavior gets worse over the school year, according to teachers. We need to do something early on to prevent that.

I am not talking about a large proportion, but these estimates are fairly conservative. I have heard that upwards of 15% of children are in need of mental health services. About 5% of the children have conduct disorders and are more aggressive, requiring a large proportion of teachers' time later on. About half of those children maintain some type of behavior problem into adulthood. This 5% of children account for over 50% of discipline referrals. Sixty-eight percent of youth, aged 10 to 17 years, are arrested at least once. If we can intervene early with these children, we can possibly make a change.

Some research has shown that if children are early starters with behavior problems coming into school, and are chronic offenders, these things will predict violent offending patterns later on. I think of those things as a tripod, which needs three legs or it will fall. When they come to us with behavior problems that we can affect, that is one leg. If we can stop that initial offending or that initial behavior problem, hopefully a continued pattern will stop. I think about it as a chronic disease after about fourth grade. Especially with Head Start and preschool, we have an opportunity from birth through fourth grade to intervene and "cure" them. After that, one is treating it as a chronic condition and just keeping it from getting worse. Early intervention in the school, home, and community is the best path.

One issue in working with young children and their behavior problems is that behavior problems are a part of normal development. It is not necessarily deviant or pathological to exhibit some types of antisocial behaviors, but it is telling to compare the frequency and intensity of these behaviors over time. For example, a preschool child's tantrum is far less indicative of behavioral problems than a junior high school child's tantrum. With young children, it is not whether or not they have the tantrum, but rather how often and at what level of intensity. Does it happen every day? When they have a tantrum, does one have to clear the whole room?

We look at this in two ways, along externalizing and internalizing dimensions: externalizing aggression, social skills deficits, hyperactivity, and lack of attention. For people who work in Head Start, three or four children probably come to mind who are internalizing children, socially withdrawn, with social skill deficits and inhibitions. Those are the two dimensions that we are looking at, so it is important to balance both the positive and the negative when doing assessment. This is an individualistic approach with the intervention focused on the positive.

Screening in diverse Head Start centers must use appropriate gender and cultural norms while being user-friendly, but few screening instruments exist. There is always an issue of labeling versus eligibility for services. We want to focus on eligibility for services rather than labeling, but sometimes it is hard to tease those two apart, or to link the assessment to the intervention.

Teachers have an amazing normative curve inside their heads. A teacher teaching for 10 years with 15 children in the classroom has a sample of 150 children with whom to compare social,

emotional, and physical development. The idea is to take all these sources of information and overlay them for what I would call convergent validity, or the "truth or goodness to fit" question.

For the Early Screening Project, we try to answer two questions. Is behavior affected by child ethnicity, teacher ethnicity, and minority status based on the classroom ethnicity? Does being "different" in the classroom change things for a child?

Our Early Screening Project instrument is adapted from the SSRS, which is an elementary school version. It has three stages. The first stage involves a teacher ranking on externalizing and internalizing dimensions. Teachers then rate the top-ranked children. After that, there is a parent questionnaire and direct observation for a few children. Stage one provides standards and definitions for both acting out and withdrawing behaviors. Teachers review the class list. They list and rank five children from most down to least on the two dimensions.

Stage two involves looking at more specific behaviors. There are critical events, which basically occur or do not occur. Direct observations confirm teacher judgments, but from a different angle. For normative data, we have 2,800 children in stage one. By stage three we are down to about 500 children, which is pretty good psychometrics, especially when looking at a 6-month test/retest and at the age of these children.

For our cross-cultural project, we had five Head Start grantees in Oregon with 42 classrooms. There were 164 children, one third of them were girls. Children were 4½ years of age. Child ethnicity was mostly White (54%), but there was a pretty good mix. More importantly, we found no significant differences on teacher ratings based on child ethnicity.

The teacher population was predominantly White (78%), and we matched child and teacher ethnicity to see if there was a match. There were no significant differences. Whether or not teachers and children had the same ethnicity did not seem to affect the teacher ratings. Interestingly, when we explored classroom ethnicity, we looked at the ethnic majority in the classroom. If the classroom was 40% Latino, we labeled it a Latino classroom. That is a rough measure. Again, child ethnicity matched with classroom. If the child was Latino and the classroom was 40% Latino then there was an agreement; if not, it was a no. Sixty-four percent of the children were a match. We did find significant differences on maladaptive behavior. What that tells me is that if one is different in the classroom, he or she will be rated slightly differently. Having someone within the community, a teacher of the same ethnicity as the same community, and rating the children or going through the screening process will yield a greater difference if that child is a little different from other children.

These findings are in the preliminary stage, and we still need to go through and fine-tune them. However, it is interesting to know that teachers do not seem to be biased based on ethnicity. They do not seem to be biased based on their own ethnicity or the child's ethnicity, but there seems to be a difference in relation to how different the child is within that classroom.

Steve Forness: My colleagues are Loretta Serna and Elizabeth Neilsen, and we are focused on a primary prevention program, which is a universal classroom-wide program for Head Start. We are assuming that many children in Head Start are at-risk. We will do secondary and tertiary prevention for the children who do not respond. However, we are basically a primary prevention program.

This primary prevention program in mental health is designed to teach social and self-determination skills to children. Since we are in Head Start, we embed these skills in stories, puppets, and songs. The children think that they are hearing stories about animals, but we are giving them primary mental health skills. Since we are located in the Southwest, coyotes and roadrunners star as the creatures in our stories. The story is embedded with a discussion for each of these four skills: discussion, rationale, modeling, and practice. For example, in the "sharing" story, Sally the groundhog wants to dig with some other children, but they will not share the shovels with her little playmate groundhogs. She goes to Wiley Coyote, and he describes to the whole group why it is important to share, how one can share, offers a rationale, and then they model how to share. The story is also embedded with songs and pictures. We then have centers

in the classroom that focus on the songs for the lesson with puppets and learning centers for practice and generalization. This is integrated as much as possible into the Head Start curriculum.

The major components of the project involve listening and following directions. That may not sound like a mental health skill, but if one thinks about children with Attention Deficit Disorder (ADD) and their difficulty following directions, it is one of the primary mental health adaptive skills. I also think it was Bob Pianta who found in a study that kindergarten teachers said "following directions" was the number one thing that kindergarten children did not do well when they began school. Then there is self-management in the group, managing one's own behavior in a group, problem solving, and sharing. Those were the four major components of our self-determination program.

For our study, we were in classrooms for two sessions per week for 16 weeks. We attended classrooms for 3 hours in the morning and then another 3 hours in the afternoon later in the week. We devote roughly 4 weeks to each of the story lessons, which are based on the major topical components described earlier.

These are our data from last year. Of the teachers, one had 30 years of experience, one had 15 years, and one had 2 years of experience. As Feil mentioned, they had different kinds of norm groups in their minds, depending on their experience. We had 98 students from six Head Start classrooms this year, with 51 children in three experimental classrooms and 47 children in three control classrooms. The participants were primarily Latino. There was a small amount of difference between our two groups, but we overwhelmingly had a Latino population with some Native Americans and African Americans.

I am going to use the data from our first year. We used outcome measures that all of us are using, and we got interesting data from the Problem Behavior Scale, including significance between experimentals and controls. In many cases, experimentals were going up and controls without intervention were going down, which tells you how much risk there is in children at Head Start, without any kind of intervention. They are in a downward trend in some of these skills over the year.

We found significant effects in a measure from the Early Screening Project (ESP) of adaptive behavior, and we came close on maladaptive behavior. There were significant differences on social interaction, but we did not seem to touch aggression and did not seem to touch critical events, which was a list of psychiatric symptoms.

Also during that first year, out of the10 or so measures, we got significance on a general measure of adaptation. On both the Attention Deficit Disorder Scales, particularly on the inattention measures, and on the Abbreviated Symptom Questionnaire, we got significant results. We did not touch opposition on defiant disorders or the aggression area.

Therefore, primary prevention does not seem, at least in this area, to touch aggression as much as it does some of the other behaviors such as inattention. We also did not have any impact on the overall measure of adaptation, a psychiatric measure of adaptation. We did find significance on 5 out of our 10 measures, and all of them were in the right direction.

That first year, we had what we might call a "Daniel effect." Daniel, a male teacher in the preschool class, is partly Native American and partly Latino, and obviously a good role model for these children. We thought that perhaps all of those great results were a "Daniel effect," rather than our primary prevention curriculum. The next year, we wanted to have the teachers carry this out. We wanted to have 2 full days of training for Head Start at the beginning of the year, and we ended up getting only two 2-hour sessions. As a "train and hope" type of procedure, we did not do as well during the 2nd year. Out of eight measures, there was significance on the same two measures of problem behavior and on the Conner Scales; they were the same ones as the 1st year. We did not seem to touch any other ones, so that can hardly be called a partial replication. Without Daniel there, we were not getting any effects.

We also thought it might be partly because what we are measuring may be different from what we are teaching, which has always been a problem in social skills. We added on other evaluation procedures in our 3rd year, and we also added on structured situations where we put

the child in a situation with another child where they had to share, and we then reported their behavior on a very gross measure. The observers who were doing this were blind to which were experimental or control classrooms. If the child was actually able to do the behavior correctly, he got a 2; partially, he got a 1. If he could not do it, he got a 0.

We took six probes throughout the year. We started at the beginning when we were pretesting. We did another one before the intervention began in October, and then we did four at the end of each 4-week segment. The baseline for listening and following directions was around 40%. After teaching, it goes up to close to 90 or 100%. For "managing your behavior," it is 20% at baseline, and it went up to 90 or 100% post-teaching. The same thing occurred with problem solving and sharing, but again we only had one data point to report. We wish that we had more data points, but the year ended before we could get another data point. The important thing is that they are learning the skills. Now we are starting to analyze other pre- and post-data on mental health measures to see if that corresponds. Are the children increasing on these skills, the same ones that are increasing on the mental health measures, and are there any correlations? There is always a problem of whether or not we are using good outcome measures for what we are doing.

I want to shift gears and talk about our future plans by using a pilot study that we did at our site this year. This pilot study was looking at how to identify children as having emotional disorders. What we were looking at, and what our consortium is going to look at over the next couple of years as we share data, are the various combinations. We took off of those top three lines and matched problem behaviors as with adaptive behaviors, maladaptive behavior, or social interaction. Then we took the Critical Events Index, which is a list of psychiatric symptoms, and matched those with three different measures of functional impairments. We did the same thing for aggression with three different measures of functional impairments. We found that 32% of children met criteria on at least one of these measures for having an emotional disorder that was fairly significant, of having both functional impairment and symptoms. However, the range was from 2 to 12%.

The difference in males was also significant. Depending on which measures were used, males or females were overidentified in some cases. In regard to what Feil mentioned earlier about ethnicity, in our particular site only 6% of children were White, but they were getting identified at fairly high rates with about 25% identified as having emotional behavior problems.

I do not know what exactly is going on there, but all of our teachers were Latino, and Latinos were slightly underidentified. They are slightly underidentified anyway in mental health services. The bottom line is that if these different kinds of measures are used, one must be aware in Head Start settings that one may be paying a price in terms of either ethnic or gender bias. This is only one site. Over the next few years, I look forward to joining my colleagues in a collaboration to pool all of our data and then tease out these issues again.

Donna Bryant: I am coprincipal investigator with Janis Kupersmidt on the North Carolina site of the mental health center there and we have been joined in this past year by a post-doc, Mary Ellen Vogalar Lee. We have two great research coordinators and data collectors, and our clinical supervisor is Donna Marie Winn from Duke University, who has been a member of the Fast Track Project for many years.

Feil did a great job explaining why we pay attention to our early child behavioral and noncompliance issues. I got into this field after doing measurement at a Head Start Quality Research Center for 3 or 4 years. Two of the directors at those meetings continued to ask when I would deal with the issue that most bothered them. They were concerned with the one, two, or three children in each class who were so difficult to deal with that they affected the entire classroom. When the RFP for this grant came out, I could not look these colleagues in the eye and not apply for it. I got into this through the backdoor, feeling like I owed it to my Head Start partners to study an issue that was most important to them.

This intervention has three main targets: teachers, assistant teachers, and parents. We try hard to include the assistant teachers, involving them in both the training and on-site consultation. We do not want a two-tiered system. We also deal directly with parents or the primary caregivers and the children. It is both a universal intervention and a targeted intervention for those children who are having problems when they come into Head Start. We use teacher-training workshops, one-on-one teacher mentoring, parent group meetings, and home visiting.

The goals of the teacher component of the intervention are to: (a) build positive relationships, to help teachers understand the behavior change process, (b) help them reduce inappropriate behaviors and learn good ways of increasing appropriate behaviors, (c) learn better classroom transition management techniques, and (d) use reading to enhance children's preliteracy and communication skills. We were influenced early on by Russ Whitehurst's dialogic reading results, which were coming out right about the time that we started this work. Ann Kaiser and Terry Hancock's work showing the impressive correlation between children with language problems and children with behavioral problems also influenced us. This is a chicken-and-egg issue; one is not sure which comes first, but the fact is they go together. Given that reading should be a natural and frequent part of early childhood programs, we wanted to build on that to infuse a mental health nature to it.

The goals of the home visiting component are to help increase parents' positive involvement in their children's education, to encourage parents to read more to their children, and to read dialogically. For parents, we encourage more positive approaches and fewer negative approaches to help the children learn how to solve problems and manage anger.

When we began this project in 1996, we were also working with some Office of Educational Research and Improvement (OERI) funding. During the first 2 years of this project, we had three interventionists working in the field supported by both Head Start and OERI, and we looked at the literature. My goal was not to develop a new curriculum, but rather to find what had been developed, tested, and shown to be successful with 3- to 5-year-olds. We wanted to know what a Head Start program could adopt or do, for which there was already some evidence. Excluding studies of children with developmental disabilities, we found few studies of typically developing young children that included any kind of data about 3-, 4-, and 5-year-olds.

Seventeen studies met our criteria, which was very loose. We started with stricter criteria, but we could not find many studies with such young children, so we had to loosen our criteria. Most of this kind of intervention has been done with first through fifth graders. What one would see was the moving down of those ideas into the preschool children's age range. Or one would see a number of studies that had children aged 3 to 8 years, which meant they had perhaps five children who were 3 years old and six children who were 4 years old; but the studies were not specifically geared for 3- to 5-year-olds.

We were looking for empirically tested interventions, and we found one led by Carol Webster Stratton, who had conducted a number of good studies in Seattle with her program, "The Teachers and Children's Series." The Committee for Children's Second Step program in Seattle had put together a nice intervention package for teaching children emotional understanding and how to solve problems. Russ Whitehurst's dialogic reading methods are easy to train, and one can easily understand the principles, but getting them to occur in classes every day in small reading groups is hard.

We wanted to take these empirically proven interventions and weave them together. The first two were clearly related to mental health issues, but the third, reading, is not. The fact is that through this dialogic reading, one should learn to communicate better, learn more words, learn that it is okay to talk and give opinions and tell ideas and that adults and peers will pay attention if one talks and explains things. We gradually wove those together over the 3 years. We have been adding additional pieces like managing transition and room arrangement to promote better social interaction and movement around the room. We now deliver a 27-hour training program, front-loaded in the beginning of the year and then scattered throughout the rest of the

year. We provide each intervention class with one Second Step kit and 30 children's reading books that have been tied to the lessons of the Second Step program, with one day of consultation per week, per class.

We spend one morning a week in each of the intervention classes, to carry ideas from the group-based training into the classroom setting. Given that a couple of our interventionists were previously teachers, they had credibility working with and being good role models and mentors for the teachers. The only thing that they were not allowed to do was to manage the class. They could not come in and allow the teacher to leave to do other work. They had to be partners in the class with the teacher, and they would often use lunch or nap times to meet with the teacher individually on the day they were in her class.

We had 22 intervention classes and 15 control classes. The classrooms were randomly assigned by center. We did not assign within a center because we know teachers talk to each other and they share materials and they share ideas. We matched up and assigned centers, which is why we end up with an uneven number of classes in each group. If a center was in the control group, the teachers were told that they could train the following year. We have a huge teacher turnover issue in my state, so only three teachers from the control group have ever come back in the following year requesting the intervention. We involve teachers and assistant teachers. We do fall and spring teacher interviews and observations in the classroom, and we also do parent interviews. We did ECERS observations and quality measures in the classroom. We also had the relationships of the teachers and children rated by our data collectors.

The measures I will report on today come from the Social Skills Rating System and the Child Global Assessment Scale. Forness had some results on this issue, and ours are just the opposite. I will also talk about Aggression Rating Scales, and a simple checklist of aggression developed in the first year of our project of children's behaviors and the frequency with which they do them.

Many questions measure on scales of "a lot, a little, or none." We wanted to find out about behaviors occurring every day, once a week, or once a month. Sometimes, misbehaviors can be so salient that they do not have to occur very often for them to be perceived as a problem, and a child gets labeled early. We wanted to see how those behaviors stretched out. We have an article from an issue of *Behavioral Disorders* that was published 2 years ago, looking at 400 children rated in 40 community programs.

This is the overall study design. In these classes, we had targeted both aggressive and nonaggressive children. In the fall, we had teachers rate all children in their classes on this issue, using measures of aggression and a couple of the Early Screening Project (ESP) scales. We had already obtained parent consent from a number of parents in the class to be a part of this study. We then looked at the ratings that the teachers gave to these children, still anonymous to us. We found out by initials which children were one and a half standard deviations above the mean on aggression and which children were at the mean or below on aggression.

We ended up with 107 children in our study who were rated by their teachers as highly aggressive in the intervention and control classes, and 86 less aggressive children. Remember that we are missing that middle quartile. We identified those children at the mean and below as not aggressive; they are "okay" children. Children who are already showing problems with aggression in late September are one and a half standard deviations above the mean.

This is data only from the children for whom we have intensive information, including parent interviews; if we look at the children who are anonymous to us in the total class, there are 714 children for whom we have data. Primarily, these Head Start programs were serving African American children who had African American teachers. About one third of the teachers had an undergraduate degree or higher. These were children from low-income families in Durham, Chapel Hill, Raleigh, Roxboro, and other places in North Carolina. The children were exposed to a lot of stress and violence. It is incredible how many children know about guns already. They are exposed to that in their communities, even in small rural communities of North Carolina.

These are the results on our measure of aggression. If we had not shown a difference, I would have been worried because this is how we selected the sample. In the fall of their Head Start year, what we see are large differences between the children who were selected because of their problems with aggression and children who did not exhibit this problem. What one also sees is that there was no improvement over time in the children who were rated initially in the fall as aggressive by their teachers. That sounds similar to Forness' result, that the intervention did not touch the high-end, aggressive behaviors. We are also seeing that there was an increase in aggression from the fall to the spring among children who were originally selected as not aggressive in the fall.

Unfortunately, when we look at other measures of behavior, they follow the same pattern. Whether we use the SSRS externalizing or the Conner's, they look about the same. However, we did see some effects when looking at the positive behaviors. Teachers rated most children with higher scores in the spring than in the fall on social skills using the SSRS. Perhaps what you are seeing, however, is a general effect of Head Start. There is some improvement from the fall and spring assessment on the child's social behaviors. Even the aggressive children in the control classes were rated higher on social skills in the spring. Adjusting for the fall scores in the spring, we saw a significant effect of the intervention on social skills. We did not see the effect on the misbehaviors, but we saw it on the positive social skills.

A measure that Forness talked about, for which we did not see any changes is called the Child Global Assessment Scale. It is like a thermometer with a rating from 10 to 100, and it is easy to use. Teachers read the simple ratings by 10, and they give the child a score. A score of 60 or below is a sign of difficulty, above 60 is better, and above 80 is great. What we see on this measure is that the aggressive children in the control group get significantly worse in the spring. We do not see a difference over the course of the year for the nonaggressive children. However, for the children who begin the year rated by their teachers as having problems, we see the children in the intervention group improving and the children in the control group getting worse.

Finally, what did the parents say? We did not see any differences in the parents' ratings of negative behaviors, but we did see differences in the parents' ratings, that is, a marginally significant effect of the intervention. We have presented these results from Cohort I before, and now we have another cohort. I thought that by the time we got both cohorts, we would see something. Even with both cohorts, it approaches significance but is not quite there. It also does show that the parents may see some changes.

Overall, we see that there is a positive effect on children's social skills but not so much on their aggressive behaviors, which is what we were aiming for in the first place. We saw that all groups improved on several of the teacher rating scales. We have to remember that the life stress faced by these children is very high. The Head Start teachers all do a great job through the course of the year. Some teachers taper off at the end of the year as they get worn down. If we are developing an intervention that will work within the context of Head Start, we must be able to deal with those issues and integrate the program into those kinds of problems that they are having. Teachers report that the control group is significantly more impaired at the end of the year than at the beginning.

For the future, we must look at moderator variables, which we have just barely begun to analyze. What is the quality of the classroom? What are the family moderator variables? Although they are all poor, there are different levels of poverty and stress. Can this intervention be adapted and used by Head Start programs?

Terry Hancock: Our group has been interested in looking at the connection between behavior and language. We know that there is a complex connection, so we are continuing to do studies looking at that connection in different ways. We have two different studies going on through our Head Start grant. One is a longitudinal study assessing children's behavior and language in Head

Start at 3 years, 4 years, and 5 years of age. We are doing that to look at the stability of children's behavior and language over time, to try to see that connection.

We recently presented a poster on our preliminary findings at the Family Research consortium in North Carolina. It was interesting because the children who had assessed language difficulties at 3 years old were three times more likely to be rated by their teachers at 5-years-old as having behavior problems. There is not a real clear-cut path, whether it is the chicken or the egg as Bryant described, but we are learning more about it. Our other study investigates parent-based interventions with children who have a behavior problem, a language problem, or both. We are engaging parents in that process and working with them on strategies that we know work well with those children.

Today I will present a parent-based intervention, its components, and the process we go through. Then I will explain how we work with a representative parent.

We know that when there is too much adult talk about behavior, there is too little talk containing important information that children need to learn language well and to get the language-rich labels that we have in the world. As adults, we give many instructions to young children. If you are a parent, teacher, or therapist of young children, I challenge you to monitor your own behavior when you go home, and see how much you do that. See how many instructions you give young children of preschool age, meaning 2-, 3-, or 4-year-old children.

We have done some observations of teachers. This study did not use Head Start teachers but rather early childhood teachers. In individual interactions, we found that 75% of what they said to children was an instruction or a command. Children do not learn labels or language that way. Hopefully, they learn how to follow instructions, and that is important. However, that should not be the bulk of what we are doing with children throughout the day.

We know that communication and behavior are learned in the context of interaction with significant others, teachers, parents, and adults with whom children spend time. We found that for some of those children, behavior problems are actually problems in communication. Sometimes that resides in the child, sometimes that resides in the adult. Most of the time there is a little piece of both. For example, children who have auditory processing problems do not understand what they are supposed to do when an adult gives them a complex instruction. They are unable to untangle it.

An adult can say that the child is noncompliant, stubborn, or they just do not get it or know what is expected of them. We see children with expressive issues, and we see that playing out when they do not have the words to say what they need. They may resort to hitting, grabbing, or whatever they need to in order to express themselves. We see aggression with peers and then with adults, including tantrums and "melt-downs" because they cannot say what they want.

Adults often give too many instructions. This is typical of the parents with whom we work. We do 10-minute sessions that I will tell you more about, and it is typical for parents to give 50 instructions in a 10-minute session; that is 5 instructions per minute. I would challenge any of us to go back and have our boss give us five instructions a minute. I can guarantee that all of us would look noncompliant. Sometimes we give too many instructions, and sometimes we are not clear. Sometimes, the communication behavior resides in the adult.

In the intervention, we work with parents and children. The child gets 30 sessions with our interventionist, and then we do the same thing with the parent. We model for the parent what we are doing, and the parent is also working with the child. We start with responsive interaction, which comes right out of play therapy strategies. We also discuss behavior management with basic and clear instructions, and follow through. There is a component of environmental arrangement, since making shifts in the environment often cuts down on some behavior. We teach parents not to have 98 toys out, and put the child where there is not as much going on. Sometimes, a little shift in the environment can make a real difference. We also are teaching children, through a prompting strategy, to use more words and longer sentences.

With responsive interaction, we teach parents and our interventionist to follow the child's lead and to go with whatever the child does or says. Part of why children are not talking more or

using more complex sentences, even when we do this piece, is because they do not have to use energy to focus on what the adult is saying. They may think to themselves, "Okay, she said something about a ball, and I know I need to do this. I think I got it." The adult is joining the child right where the child is, so the child does not have to use so much energy or reach as far to internalize what that adult is saying to them. It is right on top of what the child is saying. This is a powerful strategy.

We have another grant to work with children who have disabilities. Their parents tend to use a great deal of air space because they are used to their child not talking. For a lot of our Head Start parents, the balance turns was trying to bring them up to their child. We had a number of depressed mothers who did not say anything to their child. In this work, the balance turns was getting them to engage and talk as much as their child was talking.

Meaningful feedback was based on what the child was saying and then talking at the child's target level. There were some mothers, before we began working with them, who used sentences that were shorter than their child's. If that is their model, the children will not talk in longer sentences. Again, much of that was based on the mother's depression. It is important to get parents to speak in four and five word sentences to their children, using language-rich words.

Another important thing was the Match effect. If the child was upbeat, we would talk with the parent about being upbeat. One of the most powerful strategies within responsive interaction is expanding. Expanding is adding a word to what the word already means. This is powerful because it does two things. The child knows that the adult heard him because the adult is saying it back with added language; so the child is being pushed up to the next language level.

Interestingly, when we start teaching parents the responsive interaction without working on behavior, in some cases we would see negative behaviors decreasing. It was because the adult was being responsive, and the children were engaged and having a great time. The child did not need to do negative behaviors for attention since they already had the attention.

We would focus on the ones who were harder to deal with and begin the behavior management part. That basically involves limiting instructions to the ones that matter. Some interventionists would tell parents to pretend they could only give ten commands to their child a day, and to think carefully about when to use them. That approach helped the parents to be careful about what they instructed the child to do, instead of giving many commands, such as "sit here, listen, do this." Parents should give instructions with an action verb and label, so it is clear what the child is supposed to do. The parents should then follow through with positive consequences. We had some children acting compliantly and the adults said nothing to them. Or the adult gave many instructions and the child looked at them as if to say, "I do not think so," and there was no follow through either way. We taught the parent to think about things that were important to them, and to praise those things, using a "catch the child being good" strategy.

The enhancement teaching part is harder to teach, but it has to do with modeling so that the adult will tell the child exactly what to say. There is also question asking, how to ask questions and then follow up. Another method is time delay, where the adult has the material and waits for the child to initiate.

Incidental teaching uses all those techniques, but one waits for a child request. One knows that when children request something using language, their interest is really high. That is when the adult steps in and either says, "I want to play with the ball," or "Which one do you want to play with?" It is a prompt after a child request, encouraging the child to say more.

I will now describe a 31-year-old mother. She has a GED, and has four children under 6 years of age. She was unemployed when she took part in our intervention, but she later found employment. The child was about 3½ years of age when we started the intervention. When we started, the child had a Wechsler Preschool and Primary Scale of Intelligence (WPPSI) score of 68 and a Preschool Language Scale (PLS) score of 63. We did language assessments, PLS, and PPVT. We also had the teacher assess the child on the SSRS and the CBCL. When this child came into the intervention the teacher and the parent had pointed her out. We know that we need to

pay attention to children who have a language problem and whose parents and teachers both identify a problem. A session was set up using a transition of 3 minutes with the toy, clean up, 3 minutes with the toy, clean up, 3 minutes with the toy, clean up. We thought that pattern would elicit some behavior that parents had to address, but it did not. Since the children had their parents present to play, they were happy and did not mind switching toys. However, we still use those transitions as time for parents to practice commands.

In our data, baseline is the first 5 months, then the intervention, and then a 6-month follow up and a 1-year follow up. Responsiveness is the first thing that one teaches parents. If a child says something, say something back. We definitely impacted this aspect of communication. For advanced feedback including expansions harder, high-level interactions, we had significant effects. Parent negatives dropped out. We looked at parent praise and at three different kinds of praises. We looked at labeled praises, like telling a child, "I love the way that you are playing with the dog today." Unlabeled praise would be, "Great job." Unlabeled praise is acceptable, but we try to go for the labeled praise because the child can hear the language for exactly what they are doing and for what the parent likes. We are also monitoring physical praise.

We talk to the parent about what feels good to her, what she wants to work on, and what she likes. Then we try to put down the instructions in play, and give the parent the concept of when the child should be in charge and how in transition, the parent should be in charge. We had parents who said it was hard for them to let the child be in charge, even in play; on the contrary, some parents had difficulty being in charge at any time. This format helped deal with that issue.

Results showed that while we were there coaching parents, things went well, but when we were not there and were seeing the parent only once in a while, it was not enough to keep the whole thing going. We know from talking to parents that they did not do this at home once we were out of the picture. We saw that the child changed from pre- to postintervention. The posttest results right after the intervention went up 10 to 20 points. By posttest two a year later, the POS had dropped back down while the EBT stayed high. Again, the mother was not working with her, and we see it with the child. There was no a difference in how the parent or teacher rated the child's behavior in pre- or posttests. By posttest two a year later, she was getting down into the normal levels; the mother did do those strategies and saw a difference.

What did we learn? The contents of a parent's language impact children's language and behavior, and parents can learn these strategies and enjoy doing them. It makes their own intervention with their child much more positive. Parents need more support over time than we gave them in this study. It seems that all of our families have chaotic lives, yet they said it is a commitment to attend our sessions. In the short-term, it is stressful because it adds one more thing to their already packed lives. However, parents tell us it is worth it through rating scales and discussion. We see their stress levels drop on the Parenting Stress Index, and they tell us they enjoy their child. That is worth a lot.

Lisa McCabe: We have been looking at self-regulation and low-income children, and we are specifically focused on the influences of child, family, and neighborhood characteristics. We are interested in self-regulation because it is predictive of and related to a number of child and adolescent outcomes. For example, it is related to externalizing disorders, aggression, conduct disorder, and Oppositional Defiant Disorder (ODD). It is also related to internalizing disorders, such as eating disorders and depression. Social and academic competence is also related to self-regulation. The work of Walter Mischel has been particularly informative. He has found that in using delay of gratification tasks, children who are more able to delay while waiting for a treat demonstrate better social relationships in adolescence. They also demonstrate better cognitive skills; for example, their SAT scores are higher. Finally, self-regulation is related to the development of conscience. Children who do better on a battery of effortful control tasks demonstrate more conscience.

We focus on four key components of self-regulation. The first is impulse control or delay of gratification, where children are waiting for something desirable. The second is sustained

attention, which is the ability to pay attention to a task over time. The third is motor control or the ability to slow down motor responses. The fourth component is cognitive control, or the ability to inhibit automated responses in favor of a less dominant response. The classic example for adults is the strip test. For children, a strip variation would be where they are told to perform a behavior only if Simon says to. They have to inhibit the desire to perform a behavior on command.

Our project began with a pilot project called the GAMES Project. GAMES is a measurement for early self-control. We looked at low-income, 3- to 5-year-old, English and Spanish speaking children. We wanted to develop and adapt some measures that had been used in clinical or laboratory settings and see if we could get them to work in homes and classrooms. We hoped to use those that worked in a larger study.

There were three different batteries of assessments that we tested. The first was live coding assessments, which can be administered and coded on the spot in the home. I will focus on this for the rest of the talk. The other two we included in a battery of assessment could be administered, videotaped, and coded at a later date. The third assessments could be used both with individuals one-on-one and with a group of children. We took four familiar peers and tested them all at once with an administrator to see how different self-regulation would look in different contexts.

This is a quick look at our piloting sample of 115 children. They had a mean age of 51 months, approximately the same number of boys and girls, and were mostly Latino and/or African American. Seventy-two percent of the assessments were conducted in English and 28% were conducted in Spanish.

From that group of children, we developed the live coded assessment battery, which includes four different tasks. The first is the Circles task, based on some of the work by Kochanska. It is a fine motor control task where children are asked to draw a circle. They would have a sheet of paper with a larger circle and a smaller circle within it, and we asked them to draw a circle in between those two lines. One instruction says to draw at baseline speed, one says as quickly as possible, and then one says as slowly as possible. We are particularly interested in how well those children can slow down after we have just asked them to do something as quickly as possible.

The second test was Walk the Line, originally developed by Maccoby in the 1960s and used since in a variety of studies. It is a gross motor control task similar to circles. We put a line on the floor and ask children to walk once at baseline speed and then twice as slowly as possible. We did not do the fast trial since we did not want children running down the line.

The third test involves Gift Wrap, and is a delay of gratification task. Again, it comes from the work of Kochanska, who used it in laboratory settings. The variation that we used was to tell children that we had a present for them, but we wanted it to be a surprise, so we needed to wrap it. We would ask the children to help by not peeking while the present was wrapped. We would have them sit with their back to the administrator, and the administrator would make wrapping noises and entice them to peek. We would make them wait for 60 seconds, observing the peeking behavior during that time.

Finally, we used a measure from the Leiter battery, an attention sustained drawing game. It is a non-verbal test of the ability to sustain attention to a task. Based on the piloting work, we decided that these four assessments were appropriate for use in this larger scale study on human development in Chicago neighborhoods. The study has two major components, but I will focus on the longitudinal component.

The longitudinal study has an accelerated longitudinal design that involves 7,000 respondents from seven cohorts. The children are drawn from 80 Chicago neighborhood clusters. Our focus is actually on the 7 birth cohorts. During this third wave of data collection, the birth cohort is now 4 years of age. This is a quick look at the sample of 4-year-olds with which we were working. We had approximately 866 children, with equal numbers of boys and girls. It is a largely Latino and African American population. It is predominantly low-income, with about

two thirds of the families reporting an annual income of less than $30,000. The highest level of education for the majority of families was high school or less, and most of them were married families.

The data from wave 3 is new. It is not fully cleaned yet, so what I will present are some preliminary, descriptive findings. At the end, I will describe what we plan to do with these data.

Let us begin with the Gift Wrap assessment. The first thing that we wanted to see was whether these measures work, because this is one of the first large scale projects to include these measures in a home-based setting. We wanted to look at variability. The Gift Wrap measure is a 6-point scale, ranging from no peeks at all, all the way to getting up out of the chair and coming over and trying to peek in the bag. The majority of children did not peek, but a significant number of children, about 40%, did peek on this task. We were especially interested in those children. The mean peeking score, from zero to six, was a four.

In addition to looking at peeking behavior, we also asked our coders to record when children vocalized during the task. We categorized the vocalizations into two types. One was prompts, like "is it done yet, is it ready, can I have it now?" Another category included the sorts of conversations children would have. If one has ever worked with 4-year-olds, you know they can start random conversations about a birthday next week or some other attempt to talk. When we look at those prompting and talking behaviors, we actually see that the peekers are doing more of the talking in both of those categories than the nonpeekers.

We also looked at the latency to peek, of finding how long it took before peeking for those children who peeked. We found a mean of 18 seconds. More than one-third of the children peeked within the first 5 seconds. Three quarters of them peeked within the first 30 seconds. It does not take them too long before they are turning around, because remember it was only a 60-second period.

For our two motor control tasks, most of the children were able to slow down, but there were significant numbers who did not. In the Circle task, about 40% were not able to slow down, compared to 20% in the Walk the Line task. As one can see, the Walk the Line task is easier for this age group of children. The mean slow-down time on Circles compared to baseline was 1 second slower. For Walk the Line it was 3 seconds slower, and it is a large range from 38 seconds faster to 65 seconds slower on the circle.

In our preliminary look at gender, boys are more likely to peek, and peek sooner, than girls. This is as one might expect. However, boys were more likely to slow down on circles than were girls, so we are getting some contradictory data in terms of gender, and we are going to explore this in more depth. There were no differences on Walk the Line.

We are also looking at the potential influence of race and ethnicity. From the Circles data, one can see that the White children are doing better. More White children are able to slow down than either Latino or African American children. Again, this is something we want to pursue further. One hypothesis for this difference is that language issues could have an impact. It may be that our Spanish version of assessments did not work as well for whatever reason. Another hypothesis is that Latino children may have fewer formalized early childhood experiences, and they would therefore not be as familiar with these types of testing, namely one-on-one assessment situations and formalized games.

This is the influence of the primary caregiver's level of education. More of those children are slowing down who come from families where the primary caregiver had more education. Also, more of the children from higher-income families were able to slow down. This is again the Circles task. This relationship was not significant in Walk a line nor in Gift Wrap. It may be that delay of gratification is not as susceptible to this kind of environmental influence as motor control. There is some evidence in the literature that motor control, in particular, may be susceptible to environmental influences.

Finally, one of the unique aspects of the project on human development in Chicago neighborhoods is all the neighborhood level data that we are gathering. Across all three tasks one can

see a neighborhood socioeconomic status (SES) effect, such that children from neighborhoods with higher SES are doing better at self-regulating in all three of the tasks.

To conclude, Gift Wrap, Circles, and Walk a line seem to work well in this large scale data set. They have good variability and adapted well to the home environment. They were also easy to administer, which is key when working with 800 children and 20 different data collectors. Preliminary data also shows self-regulation is related to child, family, and neighborhood characteristics and expected directions.

For our future analysis we plan to use a variety of multilevel modeling techniques to capture the fact that we have child, family, and neighborhood levels, and we can tease apart the complex relationships that might be involved in the development of self-regulation in children. We can look at the relationship of self-regulation to cognitive development, to exposure to violence, to early school experience, and to neighborhood racial composition. We can also look at the development of self-regulation over time because this is a longitudinal sample that we have followed from birth to 4 years of age.

Lopez: In the consortium we learned early on that with five sites and the amount of data collected, there is no way that we can do anything but gloss over the surface. The latest Head Start Research Bulletin has a nice description of the consortium, among other Head Start-related research events. There is also a wealth of information on our web site where we list all of the consortium members and the publications they have been generating. This effort has been instrumental in keeping the movement going on mental health-related issues in Head Start, and we are in the process of reviewing our grants and proposals for infant mental health research projects.

That is a perfect segue to our discussion because we asked Matt Timm to be our discussant. He represents the link that we are trying to build between our research efforts and what actually happens in the programs. This research may be wonderful, but if it does not go beyond the academic research journals, it will not have any staying power. One of the efforts we have emphasized is the translation of research to practice. We funded a Center on the Social and Emotional Foundations for Early Learning, which is about the translation or identification of research-based best practices. We are trying to become part of the program community through training and technical assistance. The Office of Special Education funded a parallel center that does some of the same things, so we are fortunate to have collaboration across centers. It is an example of two different entities funded by two different parts of the federal government, working together in collaboration. Timm is the coprincipal investigator of the Early Childhood Intervention Study based in Tennessee Voices for Children and the University of Colorado at Denver. It is a long-term follow up investigation of families served by the Regional Intervention Program (RIP). He is a senior faculty member at both of these centers.

Matthew A. Timm: Every one of us that knows families and young children, and particularly those of us who have had the opportunity to be part of informal and formal longitudinal efforts, know that for the children who present serious challenging behaviors early in their lives, the grim realities or trajectory is often disturbing. Nicholas Hobbs, a mentor and a friend, once described these children as troubled and troubling, and it certainly applies for those of us who live and work with them. Ed Feil and others have shared some of that trajectory, but I would just like to mention three more, to remind us of what we are talking about and working toward. We know that in the absence of timely, effective intervention, the correlation of stability for extreme aggressive behavior from age 4 to 10 years is stronger than for IQ measures. That is an extraordinary study, but it holds and echoes what we have already heard from panel members. When it appears early and it appears strong, there is a high probability that it is going to persist in the absence of some significant, effective intervention.

Ken Dodge and Associates also concluded, on the basis of work across multiple centers, that when aggressive behavior persisted until 9 years of age the best we could expect in most in-

stances for the individual child is that antisocial behavior would be held in partial check through increasingly extensive and expensive interventions. Hope is not lost by 9 years old, but it certainly suggests that when it is still there by then, the chances become increasingly fewer and fewer. That is an individual who will be able to first of all survive, and secondly survive in a way that has meaning.

We know from a variety of Department of Education efforts that children who are classified as seriously emotionally disturbed (SED) within the special education classification miss more days of school than do children from any other special education category. We know that of those children described as SED, 25% of them will be arrested while they are still in school and that fewer of them will finish high school. Of those who drop out, almost 75% of them are arrested within 5 years of departure from school. That is the trajectory we are talking about for many of the children. While acting out visibly aggressive anti-social behavior captures most of the attention, we are beginning to learn more about other mental health needs of young children that are not immediately visible, but which also carry a significant, predictive, trajectory relationship.

I mentioned Hobbs and I would like to share another statement from him. It is one that it is deceptively simple on its face but profound upon reflection. It leads us to the next part of my remarks, which is to discuss how we frame research questions and what the implications of that framing might be for translation into practice. I do not have the answers, but I do have good questions that have been raised by many others.

First, Hobbs says that the manner in which one defines a problem will substantially determine the strategies used to solve it. That is simple and self-evident, and yet if we pause for a moment and consider its implications, it says so much. I would like to use the issue of school readiness, learning readiness, and reading readiness to look at the ways in which we initially define the problem, and then to look at some implications.

One of the first tasks of the National Advisory Board for the Center on the Social and Emotional Foundations for Early Learning, 9 months into the first year of operation, was to develop a web site. We encountered a microcosmic moment facing problems that we all confront. Once we begin to take what we think we know into the next arena, there are many challenges. There is so much concern about how much information is too much in the absence of ongoing technical system support and face-to-face collaboration.

What we do know is that if effective interventions are presented early and in an organized fashion they do work. We are weaving our way through the process of what works and what does not work. The good news is that there many that do, and can work powerfully. If more longitudinal studies commence and continue, we can realize that some of these facts have durability attached as well.

The bad news is that for those looking for the silver bullet, the golden goose, or the magic pill, it is not there in the work we know. These are complex considerations that do not lend themselves to a simple statement that says "do it and you're home free." The frustration that practitioners, teachers, and clinicians and family members and others have is that they are hungry for what works. They do not want to hear from the research side that something "works sometimes, maybe, if, when, if you'll be careful and watch out for this or that." That is not a message that most of us facing children every day, particularly children with challenging behaviors, need to wade through.

I would like to share four definitions of the problem from the senior four faculty members who are involved in both centers, including Glen Dunlap, Lise Fox, Phillip Strain, and myself. As you listen to these words, it is appropriate to suggest that one of those persons specialized in being cogent, another in being compelling, another in being combative, and another in being cryptic. You can decide who was who as you listen to this.

We decided to see if we might indeed look at that issue of ready to learn. Very often, that readiness to learn does suffer from an overly restrictive definition that equates readiness with getting a head start in the curriculum of early school grades. While some efforts based on this

particular definition of the problem have met limited success, we would suggest that for the most part there are far too many examples of developmentally inappropriate practice and a general neglect of children who are different or who are at-risk. In other words, if we are going to have children ready for school, the presumption is that includes children with challenging behaviors, children who are struggling to simply maintain themselves at the most basic level within a group setting.

Here are the four definitions. Developmental coherence is the first part of the definition. We would suggest that a great fraction of educational and psychological research compartmentalizes and treats various domains of performance, such as peer social skills or early literacy skills, as separate and distinct entities. This approach is more a matter of convenience than of logic and sound theory, and children, for the most part, do not desegregate when it comes to their skills. This being the case, the invitation is to utilize a curriculum and an intervention focus for being "ready to learn" that not only prevents and remediates challenging behaviors, but also impacts on children's overall development. The implication for measurement, and ultimately for practice, is comprehensive developmental assessment, repeated developmental and challenging behavior assessments, and then various examinations, the comorbidity of the conditions that might include developmental delay, part of the challenging behavior profile.

The second we termed ecological grounding, suggesting that both theoretical writings and empirical evidence support the notion that behavior is not just a function of purposefully planned intervention environments. Behavior is a function of all the environments in which the child participates, most particularly the child's family; yet we know that for some children, there are distal influences that have a powerful influence on challenging behavior.

Take for example the compelling data on violent neighborhoods, including what Bryant reported from Chapel Hill and Roxboro, around repeated media exposure to violent images. To understand being "ready to learn," we must understand the complex ecologies in which these children learn and to assure that "all children ready to learn" means that in many cases the child alone cannot be the sole focus of the intervention. We know from Carolyn Webb Stratton's work and other extensive literature reviews on early intervention with this group of children, that skill training with children alone often has limited effect.

The third definition is consumer social validity. In preparing children to be "ready to learn," it seems important and practical to examine the social and behavioral standards of teachers in the early grades. The literature in this area provides a consistent and clear picture of the entering school repertoires necessary for success. Pivotal skills, among others, include working independently, following multi-step verbal directions, self-regulation, compliance with class rules concerning deportment, following class and school routines with minimal assistance, making requests for adult assistance with socially acceptable behaviors, and resolving peer conflicts without verbal or physical aggression. That is a full plate for the young child who needs to be ready for school.

Importantly, the literature also shows that teachers differentially distribute their positive social attention in their instructional time toward the children who engage in these desired behaviors. Conversely, the children who do not have these skills primarily experience negative statements and fewer instructional interactions from teachers. There are obvious implications in terms of addressing not just the child needs, but also the implications within that setting.

The fourth and final point we would call the reciprocal influence. A colloquial reading of "ready to learn" would apply that the onus for readiness resides solely with children. This is obviously not the case because learning is an interactive process with a social and physical environment. Within these social and physical environments, there are variants in the readiness to teach appropriate skills in an effective fashion.

We have the rare opportunity to build upon the cumulative, critical knowledge interest, resources, attention, and concern regarding the needs of children with challenging behaviors and their families.

EARLY HEAD START: NATIONAL EVALUATION

Early Head Start: Program Impacts on 3-Year-Old Children and Their Families

CHAIR: Rachel Chazan Cohen
DISCUSSANTS: Judith Jerald, Helen H. Raikes
PRESENTERS: John Love, Ellen Eliason Kisker, Rachel Chazan Cohen

■ Impacts of the Early Head Start Program on 36-Month-Old Children and Their Families

John Love, Ellen Eliason Kisker, Jeanne Brookes-Gunn, C. Ross, P. Schochet, K. Boller, J. Constantine, C. Vogel, Helen H. Raikes, Rachel Chazan Cohen

■ Early Head Start Implementation, Services, and 36-Month Outcomes

Ellen Eliason Kisker, D. Paulsell, John Love, Helen H. Raikes

■ Mediators of Early Head Start Impacts on Children

Jeanne Brooks-Gunn, C. Ross, P. Schochet, A. Fuligni, C. Brady-Smith, Rachel Chazan Cohen

Rachel Chazan Cohen: Today we are presenting the findings from the Early Head Start Research and Evaluation Project, a random assignment study of approximately 3,000 children and families in 17 Early Head Start programs across the country. This is the first time the results of this study are being presented to such a broad audience of researchers and program staff, so we look forward to hearing your comments at the end of the presentations.

Early Head Start is a relative newcomer to the family of Head Start services, serving pregnant women and families with infants and toddlers up to age 3. The program provides comprehensive child development services through four program options: (1) home-based, (2) center-based, (3) combination options, and (4) locally designed options.

The program, which began in 1995 with 68 programs, has now grown to over 664 serving approximately 55,000 children. The authorizing legislation, the Head Start Act of 1994, mandated a rigorous national evaluation, and while we thought it was important to use a rigorous random assignment design in order to determine the impact of the program, we also knew it would not answer all our questions. Therefore, in addition to the impact study, we also conducted an implementation study to look at the early development of these 17 programs and learn about how they were growing and changing over time. At each of the 17 program sites, there also was a local researcher who teamed up with a program to conduct additional site-specific research of particular interest to that program and community. The local researchers collected much more information on program context and in-depth information on children and families.

Our speakers today are John Love, a Senior Fellow of Policy Research at Mathematica who has been conducting evaluation work in Head Start for approximately 30 years and has been a principal investigator on this study since it began. He will present the overall impacts, as well as impacts for a selected number of family subgroups. Next Ellen Kisler, a Senior Researcher at MPR and also a principal investigator on the study since its beginning, will present impacts for different program subgroups. I will then talk about the mediating role of parenting impacts at age 2 on child outcomes at age 3. Following these presentations we will hear from two discus-

sants, Helen Raikes, a Society for Research in Child Development visiting scholar at ACF. She has also been working on this evaluation since the beginning, and she will talk about the implications of the work for future research. Finally, Judy Jerald, the National Coordinator of Early Head Start, will talk about implications of the research for programs.

John Love: As you see each one of our papers and presentations have many authors. This is the group that collaborated to produce the final report. For the next hour or so, we are going to invite you to join us on a tour of the highlights of the Early Head Start findings and what they mean for children, parents, programs, and policy.

For the most part, Early Head Start programs did their job. They delivered their intended services to most families. We also saw interesting variations in what programs were able to do and that enables us to learn a great deal about the impact of those variations. While we see relatively modest effects, we see many of them in many different areas: both for children and for their parents, their families, and their home environments. Early Head Start serves diverse families and could make a difference for most of them.

How do we know all this? Let me take a few minutes to expand on Rachel's point that this was a very rigorous evaluation that was mandated by Congress. In 1995 and 1996, 68 Early Head Start programs were funded. From those programs we worked with ACF to select 17 that would participate in the research. Those 17 programs spent the first 9 months after they were funded beginning to develop recruitment strategies, doing outreach, and so forth. By July of 1996 they had recruited families that they began enrolling. When the families were recruited and came and filled out an application form, the program sent the names to us and we flipped a coin, ran a lottery. In this case it was a computer program, but in a totally objective way, that assigned half of the families to a control group and the other half to the program to which they applied. All the families that applied knew of this possibility when they filled out the application form.

We have two types of data that you will hear about—mostly about the impact on the child. We have a large collection of developmental indices that were obtained at different points in time. This information was collected at approximately 1-, 2-, and 3-years-of-age. There also is other information about services the families received in both the program and the control groups, which we thought was more a function of how much time they had been in the program. We collected these data at four time points, at 6, 15, and 26 months after random assignment and also when the families exited the program, based on the enrollment of the family and the random assignment. We also did a brief exit interview. This made it possible to compare the average outcomes of the program and control group members at each time point.

Early Head Start serves pregnant women as well as infants and toddlers. The entire sample was enrolled before the children were 1 year of age, with the average age of enrollment about 4 months. About 30 or 40 % were enrolled prenatally. Obviously, we could not get baseline data on language development for a child who is not yet born, but because this is a random assignment study, we know the differences we find at age 2 or age 3 or at age 20 or whatever, between the program and the control group, we know it is because of the influence of the program.

We looked at overall impacts across 17 sites and then identified important subgroups, the first being program characteristics. Within different program characteristics, for example, with different patterns and implementation are those that took different approaches to serving families. They were randomly assigned to program and control groups. We collected information about those characteristics at the time the families enrolled, so we knew at baseline family's race, ethnicity, age of mother, and so forth. Ellen will report on the patterns of findings related to program subgroups and I am reporting on patterns and findings based on family subgroups. Next, Rachel will talk about a special set of analyses that looked at the extent to which we found evidence that the program's impacts at 2 years of age function as mediators on the impacts on the children at 3 years of age.

The bottom line is that Early Head Start had positive impacts on multiple dimensions of children's development. Two measures used at age 3 were the Bayley Mental Development Index (MDI) and the Peabody Picture Vocabulary Test (PPVT). We found higher mean scores for the program group than for the control group, but perhaps even more importantly, we saw Early Head Start bringing children up from the bottom of the distribution, so that there are a smaller percentage of children who scored below 85 on these standardized tests. The program had that effect for both cognitive and language development.

At age 2 we found a number of indicators that social/emotional development was being affected, such as lower levels of aggressive behavior, increased sustained attention, and increased parent engagement. By age 3 we found a larger number of these variables being impacted by the program.

On the Bayley there was a 15% of a standard deviation size impact at 2 years of age and a slightly smaller impact, 12% at age 3. The pattern we found is what we consider important; 15% effect size at age 2 was significant at the .01 level and the 12% effect size at age 3 was significant at the .05 level. The same pattern appears with the percent Bayley MDI below 85.

In terms of vocabulary we see a slightly larger impact at age 3. One has to recognize that there were different measures used at age 2 and age 3 because at age 2 the PPVT cannot be administered. However, we did do a parent report called the MacArthur Communicative Development Inventory. We found exactly the same pattern on this parent report of vocabulary at age 2 as we found on the standardized direct assessment of children on the PPVT at age 3.

On measures of the social/emotional aspects of behavior that are important for the child's development, we found increased sustained attention with objects, engagement with the parent, and decreased negativity with the parent. These were coded from videotapes of the parent and child interacting. In the case of sustained attention and engagement, the impacts were not significant at age 2, but they were much larger and significant at age 3. At both age 2 and age 3, there were significant impacts on reducing aggressive behavior problems.

Along with the child impacts are a number of impacts on parenting in the home environment, such as more warmth and supportiveness, reduction in parental detachment from their child in a play situation, an increase in the quality of how the parent assisted the child in a learning task; which relates to support for language, literacy, and learning. Support for language and literacy were coded from the Home Observation for Measurement of the Environment (HOME) scale. These include questions about how much the parents read to their child. We saw that Early Head Start parents were more likely to read every day than were control parents. There also was a reduction in negative forms of discipline, both in terms of reported spanking and an increase in the parents being able to talk about more constructive or positive discipline strategies, when given a hypothetical conflict situation.

One goal of Early Head Start programs also is to enhance parents' economic self-sufficiency. It is not necessarily their primary goal, but it is part of what the programs are doing, while at the same time trying to enhance children's development and parents' interactions with their children. We saw a significant increase in the extent to which parents were engaged in education and training activities when the children were age 2 and 3 and having a job at some point. There was almost no effect early when the children were just 2 years old, but at the next time point, we begin to see merging at the .01 level impacts from being employed. There is a small difference favoring the program group to be more likely to be employed, but there is not a great difference of this impact on Early Head Start. Remember, however, that many parents are very young—there are many teenage parents in this sample—so some of them may not have been ready to be employed. In the third quarter of the 1st year, the program group was significantly more likely to be involved in education and training programs than the control group.

Early Head Start programs also focus on health services, but we found that the control group also had access to a wide range of health services. Both groups were close to 100% in receiving

some health services, in the number of doctor visits, the percentage visiting emergency rooms, the number of hospitalizations, and the parent rating of the child's health status. There was, however, a statistically significant difference in immunization; the control group was at 98% and the program group was up to 99%. An important difference we would like to learn more about is in the area of rates of hospitalization for accident or injury—the control group had a rate of 1.6 % while the rate for the program group was ¼ of that at .40%.

Early Head Start has not shown major effects overall in the areas of health, family conflict, and stress, although there was an effect at age 2 in child safety practices. Again, these analyses were done within the randomized design. The groups were defined at baseline before anybody knew to which group they were being assigned. Now let us look at subgroups defined by various characteristics of the family. The first is whether the mother was pregnant or the child was already born at time of enrollment. On the MDI there were no significant impacts for the families who enrolled when the child was older, even though it was significant overall. Interpreting a subgroup finding is actually a combination of science, statistics, and art, because there are so many factors to take into account. For the subgroups, the sample sizes are cut by about half so the same magnitude difference could be significant overall, but not significant for the subgroup. Looking at sustained attention, a whopping 47% effect size was found for the families who enrolled when the mother was still pregnant. For those who enrolled later the effect size was smaller (13%), but still significant. The conclusion is that the program also is making a difference for those families who enrolled later, but not as great a difference. The difference between the 47% and 13% has a significant high score of .01.

Question: Did you also include the families who did not stay in the program, at their various levels of participation?

Love: It is a little more complicated than that, basically, because these analyses are not based strictly on all the families that went through random assignment. However, we did an adjustment for some minimal degree of participation. The problem with that analysis is that one cannot determine who in the control group would have not participated had they been in the program group.

Question: Did the control group participate in any other programs or no programs at all?

Love: They could find any programs on their own in the community, and they did participate in a variety of programs. We have data on the control group, but not to the degree or intensity as for the Early Head Start families.

Another subgroup was in the category of whether the mother was a teenager or was older at the time that they enrolled. For this group the baby usually had already been born. We did not find that the programs are more effective for teen mothers than for older ones, but we did find that the programs were effective with this often difficult-to-serve population.

There was a subgroup of sites (8 out of the 17) where local researchers agreed to administer the CESD depression scale at baseline. We found that even though a mother was depressed at the time they began the program, the mother was able to work with the child and the program was able to have an impact on the child like in the area of increased sustained attention and encouragement—again, a group that is often difficult to serve. The mothers also came out higher in the program subgroup than controls on supportiveness, and were less likely to be detached in interactions with their child even though they began the program depressed. However, things like education were more likely to be an impact if the mother was not depressed at the time of enrollment. In conclusion, we can say that Early Head Start has delivered services to nearly all of the families and that the programs are making a difference.

Ellen Eliason Kisker: One priority in the evaluation was to get beyond the question of did it work, to learn as much as possible about for whom it worked and also what worked. In approaching the latter question of what worked, we focused on variations and impacts among programs taking different approaches to providing services to families, and among programs that followed different patterns of program implementation.

As specified in the *Head Start Program Performance Standards*, programs designed their services in response to community needs and in a particular context. As a result, program features varied across the 17 sites that participated in the study. It was not feasible to do a planned variation study, that is, to assign programs randomly to implement services in particular ways or to take particular approaches. It was feasible, however, to group programs according to the approaches that they took or the patterns of implementation that they followed, to look at impact separately.

These impacts are still based on the experimental design and they tell us about the effectiveness of the various program approaches and patterns of implementation among the programs that took those approaches or followed those patterns of implementation, given all of their other characteristics. They do not necessarily tell us whether those approaches would have been effective if other programs that chose other approaches had adopted that approach instead.

The Early Head Start Research Programs provided child development services in several different ways. Some of the programs provided child development services in center-based child development centers for at least 20 hours per week, supplemented by parenting education and family support services. Home-based programs served families primarily in weekly home visits and regular parent/child group activities, along with other types of parenting education and parenting support. Some of the programs in the research were mixed approach programs, which offered home-based services to some families, center-based services to other families, or a combination of home and center-based services to some families.

It is important to note that the approaches programs took were dynamic over the evaluation period. Over time, as welfare reform was implemented and parents began facing work requirements, some of the home-based programs added center-based services and became mixed-approach programs. For the research, we used the program approach in 1997, which we judged to best represent the type of services that families received through most of the evaluation period.

What we found when looking at the impacts on child development by program approach was that, for most child development outcomes, program impacts did not differ significantly by program approach. However, the mixed approach programs had a much stronger pattern of favorable impact with some affect sizes in the 20 to 30% range.

Impacts on the Bayley MDI did not differ significantly by approach, nor did the impacts on the percentage scoring below 85. The differences across approaches and impacts on the PPVT were not statistically significant. Only the impact for mixed approach programs was large enough to reach statistical significance, and the mixed approach programs also significantly reduced a proportion of children that score below 85 on the PPVT. They did that to a significantly greater degree than the other types of programs. That continues for a pattern of stronger impacts on language development among the mixed approach programs that we saw when children were 2 years old.

Both mixed approach programs and home-based programs also had some favorable impacts on positive aspects of children's behavior, such as engagement of the parent during a play task, while the center-based programs had a much stronger pattern of favorable impacts on negative aspects of children's behavior. Overall across the approaches, each approach had some favorable impacts on child development, with some modest variations in those patterns of impact by approach.

Early Head Start also had favorable impacts on important aspects of parenting when children were age 3. In fact, the impacts appeared to be stronger and more consistent across a broad range of parenting outcomes for parents in the mixed approach programs.

For each approach, the impact of Early Head Start on the home was favorable, but not statistically significant. When children were age 3, the impacts of mixed approach and home-based programs on emotional supportiveness of parents during play were favorable and statistically significant. Mixed approach programs had a significant impact on a range of outcomes related to stimulation of language and learning, as shown by the large percentage of parents who read to their children at least daily. Only the mixed approach programs had a significant impact on detachment of the parent during play. Overall, mixed approach programs had the strongest pattern of impacts across the range of parenting behaviors that we looked at.

Center-based programs also had a favorable pattern of impacts, but the sample was smaller and many of those impacts were not statistically significant. We found a few impacts in home-based programs, but the impacts on parenting were much fewer.

Finally, turning to parent self-sufficiency, the Early Head Start impacts on participation in education and training activities were favorable for all program approaches, but the mixed approach programs had significantly larger favorable impact during the 2 years after program enrollment than the other programs. Both home-based and mixed approach programs also significantly increased parents' average hours in education activities. The mixed approach programs also had a significant impact on the proportion of parents who were ever employed during the 2-year follow up period, with most of that impact emerging in the 2nd year. Their impact on hours of employment was also positive, but not statistically significant. We did not find any significant impacts on receipt of welfare cash assistance, either in the full sample or in any of the subgroups.

In addition to exploring variations and impacts by program approach, we also investigated whether programs that reached full implementation of the performance standards had different impact. We grouped programs for this analysis based on ratings of implementation of key elements of the Program Performance Standards and Program Guidelines using information collected in site visits during the fall of 1997 and the fall of 1999. Prior to making those visits, we selected 24 key program elements and developed five-point rating scales that characterized the degree of implementation on that particular element. The selected elements covered were related to child development services, family development services, community building, staff development, and program management.

Following each round of site visits, a team that included the site visitors, other evaluation team members, and several outside experts independently created ratings for each program on each of the scales that we developed. Then the team members met to discuss any discrepancies in their ratings and to arrive at consensus based on ratings of the program on each of the 24 program elements, as well as to create a rating of overall implementation. To be rated as fully implemented overall, the programs had to achieve a high rating on most of the elements that we rated. It is important to note that these ratings were completed before any of our impact analyses were conducted.

Based on these ratings, we identified three groups of programs. There was a group of programs that we called early implementers. They were the programs that were rated as fully implemented in both 1997 and 1999. Six of the 17 programs in the study were early implementers. The second group (6 of 17) consists of later implementers and those were the programs that were not rated as fully implemented in 1997, but reached a rating of full implementation in 1999. Finally, there were a group of programs that were not rated as fully implemented in either 1997 or 1999, and we called these the incomplete implementers. It is important to note that although these programs did not reach ratings of "fully implemented", overall, they did have some strengths and showed improvement over the evaluation period. In particular, some of them had a strong family support emphasis.

Looking at the different patterns of impacts, we saw among these three groups of programs, when children were 2 years old, a clear pattern of stronger impacts among the early-imple-

mented programs. When children were 3 years old, the differences between impacts became less distinct and we found some important impacts in all three groups of programs.

In the case of child development outcomes both the early and later implementers had significant impacts on cognitive development. The later implementers also had significant impact on receptive vocabulary, as measured by the PPVT. The incomplete implementers did not have any significant impact on children's cognitive or language development, but they tended to have the most consistent favorable impacts on children's social/emotional development.

Moving to parenting, when children were 3 years old, Early Head Start impacts on parenting behavior were mainly concentrated in the early and later implemented programs. Very few impacts on parenting emerged in the incompletely implemented programs. At age 3, the programs had a favorable impact overall on the HOME, but the impacts on the HOME were significant only among the early implementers.

Early Head Start also had some important impacts on emotional support among parents. In the case of parent supportiveness during a play task, the impacts were significant among the later and incomplete implementers.

Cohen: I will present an overview of early parenting impacts as mediators of program mpacts on 3-year-old children. This includes: (a) the purposes of mediated analyses, (b) the hypotheses guiding the analyses, (c) the analytic approach, (d) mediators of overall impacts, and (e) mediators operating within program approaches.

The purposes of the mediated analyses in the context of the impact study was to estimate the extent to which impacts on parenting at age 2 were associated with impacts on children at age 3. Additionally, the mediated analyses allowed for an investigation of the plausibility of programs' theories of change, and a vehicle for deriving guidance for programs in the area of parent education and engagement.

Hypotheses guiding the analyses were: (a) greater supportiveness, cognitive stimulation, support for language and learning, and daily reading are associated with enhanced cognitive and language development; (b) greater warmth, emotional responsivity and support for language and leaning are associated with higher levels of child engagement of the parent; (c) parent support for language and learning, knowledge of child development, and lower stress are associated with higher levels of child sustained attention; (d) reduced spanking and parenting stress, more regular bedtimes, and greater warmth are associated with lower aggressive behavior; and (e) reduced spanking, parent distress and intrusiveness, and higher warm sensitivity are associated with lower levels of child negativity toward the parent.

The analytic approach to mediation in the context of the impact study are as follows: The 3-year outcomes were regressed on the mediators and other explanatory factors (moderators). Then, regression coefficients for each mediator were multiplied by the impact on that mediator suggesting "implied" impact. Finally, implied impacts were compared to actual impacts on 3-year outcomes. One needs to be cautious when interpreting mediated analyses since significant relationships do not necessarily allow for the attribution of causality. This is true because of possible upward bias due to the tendency for child outcomes to be better in families with better parent outcomes. With this caution in mind, there were several finding of note from these analyses.

For the overall analysis, impacts on 3-year-old Bayley and PPVT were associated with parents who were more supportive of children and provided more language and literacy supports in the home at age 2. Additionally, impacts on engagement of the parent and sustained attention at age 3 were associated with parent's warm sensitivity, emotional responsivity, and knowledge of development at age 2. Lastly, reduced aggressive behavior and negativity at age 3 was mediated by parenting with less physical punishment, lower distress, and greater warmth.

The results of mediated analysis for within center- and home-based programs were that in center-based sites, parenting with children were 2 was a weak mediator of 3-year-old impacts.

Furthermore, in home-based sites, impacts on parent supportiveness, cognitive stimulation, and language support at age 2 were positively related to impacts on cognitive and language and social-emotional behavior at age 3, and inversely related to aggressiveness at age 3. Finally, impacts on negative aspects of parenting at age 2 were inversely related to positive aspects of social-emotional behavior at 3.

Results of mediated analysis mixed approach programs were that parent supportiveness in semistructured play at age 2 was associated with higher PPVT scores at age 3. Also, parents' warm sensitivity was positively associated with child engagement at age 3; parent detachment at age 2 negatively related to child engagement at age 3. Reduced parenting distress at age 2 was associated with lower aggressiveness at age 3.

In conclusion, in the full sample, the results are consistent with the theory of change that at least a portion of program impacts on children when they are 3 could be due to favorable impacts on parenting and home environment at age 2. Additionally, for the within approaches, the strongest evidence was for the role of parenting as a mediator of program impacts on children seen in home-based and mixed-approach programs.

Judith Jerald: A key lesson to take from these results is that for practice and policy, implementation matters and different approaches and program options matter. It seems that there has been a community ripple effect over time in that the quality of the programs has improved. In the policy arena, more emphasis should be placed on partnerships and attention to infant/toddler and maternal mental health. Those that care for young children should have a strong base in child development and an understanding of how to impact children's educational and socioemotional outcomes. For both policy and practice, the biggest challenge is to develop strategies for how to get the results of research such as this disseminated.

Helen H. Raikes: We need to learn more about how to effectively serve low-income families with infants and toddlers. There is much to do and more research will be done in this area.

Peter Lenrow: What is wonderful about Early Head Start is that we still have an opportunity to be innovative. We have experience of 35 years or more of Head Start, yet we also have a newness, which means that we do not need to be held back just because something was done in a certain way. I also want to say that the *Revised Program Performance Standards* allow us to make sure that the programs are not told something has to be done. The Standards say, "This is what needs to be part of your program, but how you do it is based on your own community." This means that the choice to use home-based, center-based, the delivery of services and how long it takes a program to implement them, depends on the particular needs in those communities and they are very different. I appreciate that.

Raymond Arons: This is essentially a landmark national study. When do you think our students and graduate students would have access to the public data of the entire study, stripping away some of the confidential variables and allowing us do to somewhat weighted sampling that would generalize the data for the nation?

Raikes: That is a very important question. There will be a public use data set. The data are now in the process of having the identifiers stripped so that confidentiality can be maintained in an impeachable impeccable fashion. It is not a very simple process and so it is going to take a few months for that to happen. We have to be absolutely certain that confidentiality is respected. Most likely, there will be a support system issued around the release of the data. People will be able to apply to use it by going through the procedures that are issued since it may be restricted data.

Cohen: I want to add that these data will not be able to be weighted to a nationally representative sample. This is not a representative sample in any way. However, there are linkages between

this study and the ECLSB study. That is a nationally representative study and we hope to have a link between the two data sets.

Jerald: The study is defined as a purposively selected sample representing the demographic characteristics that existed in Head Start and Early Head Start at the time the sample was selected.

Margaret Kane: I am with a large Early Head Start program in Tampa, Florida. In response to the legislation and the accountability in the eight domains, the State of Florida has started to purchase outcome managers who are researchers housed in an Early Head Start center. That is my role and I am charged with creating an in-house assessment and evaluation infrastructure that is self-sustaining and where we will not have to rely on external evaluators. I am interested in obtaining more information about the partnerships that you describe between local researchers and yourselves and other national evaluators. I find that there are not many others like myself in this particular role. There are external evaluators and my role with them is conflictual. I wonder what that relationship looks like, because this is a rigorous study and I doubt that I could ever replicate that within my center. There are components that can be modified or adjusted for our particular program and should be done because I am concerned about our EHS program. They also want to link up with the Head Start evaluation process that they also want me to create. Besides being frustrating, I do not know how to best analyze or create assessments and evaluation processes that incorporate these domains, especially infant mental health services.

Jerald: First, it is innovative and exciting that your Early Start Head Start program has hired somebody to take a look at this. I think it is an open book, so you can create, at this point, whatever you want to create. Soon there will be performance measures for Early Head Start to help you. Please do not take the outcome measures or the measures for 3- and 4-year-olds and begin using them with the infants, because we have not yet completed our work on infant measures. However, I do think that you could get some support, perhaps from some of the local researchers who are involved in this process—we have a list of those names. Where you want to start is within your own organization, asking them what it is they want to know. If you could get a group of people together in your organization and your community to begin to look at that, that is what you want to do. I believe that some of the local researchers would be more than happy to talk with you and help you with your own self-evaluation.

Question: Did you consider stand-alone Early Head Start programs versus those that were part of an existing Head Start structure? Did you control for that?

Raikes: Yes, we had programs from many different auspices in the evaluations. That is the short answer, but I will ask Ellen to talk about how she thinks our analyses addressed them. There were sites that had been CCDPs in the past, there were sites that had been Head Starts and added an Early Head Start, and former parent/child centers.

Kisker: In terms of estimating impacts, we did not distinguish stand-alone programs and programs that were part of Head Start programs as subgroups that we looked at. However, we learned from that, and in the implementation study we looked at some of that information.

Ronit Kahana-Kalman: I am at Albert Einstein College of Medicine and I am conducting an evaluation supported by ACYF of a mixed model of Head Start programs in the Bronx. Families obviously make use of the program at different levels. Some of them use the program to its fullest, whereas other parents and children only attend the program for some of the time. Are you going to look at your data based on levels of engagement of the families?

Jerald: The quick answer to that is that we have several measures of engagement, in addition to the services we talked about where we collected data on program and control groups at these three intervals. We asked our program staff to rate the engagement level of all of the families who had been in the program. We have duration data also and then we have their uptake of services, the number of home visits they had, and the percentage of home visits they completed. We have extensive analyses that are underway right now.

Edward Zigler: First, I want to offer my own congratulations to this group. This is monumental work. I am glad that you did it. This, of course, is part of a long tradition in Head Start, namely one that I started way back in the 1970s; "We are more than Head Start, we are a national laboratory."

A special thanks to my friend, John Love. The first spin-off was Home Start, now called the home-based programs. They are still there and my remembrance is that you did that evaluation for us. People like me have to testify about your program and I want to be as supportive as I can. When I go to Congress and talk about Head Start, whatever our problems are with the GAO about whether it is efficacious or not, nobody questions what the treatment is in scientific lingo. We know the components, we have this, we have that, if we don't have that, you do not have Head Start.

We hear about these different models. We are living in the time when there is much more data than we had when Head Start began. The fact is that we have heard about two generation programs. We say, "If you want to impact the life of the child optimally, you had better work with both the parent and the child." Now I hear that there is this model or that model—I would like to hear from you because at some time you and others are going to have to answer the question, "What is Early Head Start?" You learn from these types of studies what it should be—the pregnancy data are dynamite. There are two ways to look at it—as a dosage affect or as a critical period; latching on to parents at that time there is a better chance for effects than at any other time. The only thing that makes me a little bit nervous is whether we can make Congress understand what it is that we are talking about.

Jerald: I believe you already know the answer, Ed, because it comes right out of the Advisory Committee and those nine components that we mentioned earlier. Early Head Start is a program for children and families that is intensive; that is continuous; that is based on relationships; that is integrated with the community; that involves quality and staff development; that is community based, family based, and child centered. Everything we do, regardless of what the model is, has to include all of those elements.

Raikes: We happen to have several options by which this can be carried out to the extent that they are responsive to community needs. However, it is a discrete set of options.

EARLY HEAD START: LOCAL RESEARCH

The Early Head Start Research Consortium's Poster Symposium on Mediators and Moderators of Local Early Head Start Outcomes

MODERATOR: Kathryn Barnard
PRESENTERS: EHS Research Consortium
DISCUSSANTS: Robert N. Emde, Catherine S. Tamis-LeMonda

Catholic University of America

■ Early Identification of Disabilities in the United Cerebral Palsy Early Head Start Program

Shavaun Wall, Nancy Taylor, Harriet Liebow, Christine Sabatino, Michaela L. Zaijek-Farber, Elizabeth Timberlake

The Catholic University of America (CUA), research partner of the United Cerebral Palsy Early Head Start (UCP EHS) Program in Alexandria, VA, conducted this qualitative study in order to develop an understanding of the pathways to acquiring early intervention/special education services for families with low incomes whose infants and toddlers were referred due to suspected developmental delays or disabilities. While EHS must include at least 10 percent of infants and toddlers with eligibility for early intervention services (Head Start Program Performance Standards Final Rule, 1996; Head Start Publications Management Center, 1999) and collaborate with early intervention services (Head Start Act, 1998; U.S. Department of Health & Human Services, 1994), these mandates can be challenging to meet. Although families with low incomes face a higher risk of delays and disabilities (Brooks-Gunn & Duncan, 1997; Klebanov, Brooks-Gunn, McCarton & McCormick, 1998; Meyers, Lukemeyer & Smeeding, 1998), they are less likely to obtain early intervention services than higher-income families (Hebbeler et al., 2001; U.S. Department of Education, 2000).

The UCP EHS program served a multicultural population of families along the Route 1 corridor in Fairfax County, Virginia, providing home visiting, family child care, and center-based child care. This study focused on 32 research families (19 in EHS, 13 in a comparison group) whose infants and toddlers had suspected or confirmed developmental delays or disabilities and were referred for early intervention assessment. Case studies integrated in-depth interviews of mothers and EHS program staff with reviews of program and research records. From reviews of transcribed interviews and records the researchers developed matrices, created categories, and identified themes and exceptions, applying the constant-comparative method for trends across cases.

EHS enhanced the likelihood that families pursued referrals for assessment and obtained early intervention services. It also played a role in the factors that contributed to mothers' attitudinal shifts toward their children's developmental status and the need for assessment and services. Specifically, these factors included (a) the parents' acceptance of the expertise of the referring agent, (b) the parents' understanding of child development milestones and how their children's status compared, (c) the parents' willingness to make adjustments and organize their lives around the needs of their children (becoming "child focused"), and (d) the parents' perception that their basic needs were met. The work of EHS appeared to influence the contributing factors in a positive direction, such that barriers were often transformed into facilitators to pursuing early intervention assessment and services. EHS staff accepted families' priorities, in effect meeting them where they were. They built trust and established relationships by assisting with problem solving and resource identification to meet urgent basic family needs. They were then able to help parents with the less familiar challenges associated with understanding child

development, recognizing and accepting their child's unique challenges, comprehending what early intervention might offer, and navigating the complex early intervention system. Cases illustrated how EHS staff scaffolded their work with parents differently according to individual learning needs, such as, through information sharing, task analysis and the achievement of small successes, teaching by modeling, and learning by doing.

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Harvard University

■ Early Head Start Program Effects: Maternal Distress, Parenting Stress, Child Language, and Socio-Emotional Behavior

Catherine Ayoub, Barbara A. Pan, Catherine Snow

This study explores the relationships between parenting stress, parental distress, children's language, and socioemotional behavior for children at 36 months of age enrolled in early Head Start. Our research question is the following: What selected mother and/or child characteristics are impacted by Early Head Start participation by the child's third birthday?

The sample consists of 141 mothers who are part of the Early Head Start Research Partnership at Early Education Services in Brattleboro, Vermont (VT). More than half of these rural families, like many of their urban counterparts, consists of single-female heads of households. Most mothers were between 20 and 29 years old at enrollment in the study; the youngest was 17 years old and the oldest 41. The majority of the mothers enrolled in the study just after the birth of their first child. In contrast to families in some urban sites, the majority of families in the VT sample are White, native English speakers. Families in the comparison group received services typical for this community.

The constructs and respective measures included in these analyses are the following:

1. Parenting stress and maternal distress (Parenting Stress Index [PSI]; Abidin, 1995).
2. Child language development by parent report (The MacArthur Communicative Developmental Inventory [CDI]; Fenson et al., 2000).

3. Child problem behaviors (Child Behavior Checklist [CBCL]; Achenbach & Edelbrock, 1983).

Analysis began with simple comparative statistics including *t* tests. Multi-level analysis of change over time was applied to time-varying predictors and outcomes. All analyses were controlled for maternal age and education. These variables were removed from the models when they did not contribute significantly to the final model.

There were statistically significant program impacts at 36 months on the following:

1. Children's destructive behavior (CBCL) (program = 59.24, comparison = 65.88; $p = .03$).
2. Children's somatic behavior problems (CBCL) (program = 51.56, comparison = 54.09; $p = .02$).
3. Children's language production (CDI) (program = 73.7, comparison = 62.05; $p = .02$).
4. Maternal stress related to parenting (PSI) (program = 65.13, comparison = 74.26; $p = .001$).

Program and comparison mothers demonstrated two patterns of change in parenting stress over time. In each case, program mothers decreased their overall parenting stress significantly more quickly ($p = .001$) than their counterparts.

On average, program and comparison mothers became less distressed over time. Although maternal distress fell in both groups as children got older, there was a statistically significant difference ($p = .0001$) in the rate of this decrease over time with the program mothers showing a significantly lower level of distress than the comparison mothers.

In summary, there are statistically significant differences between 36-month-old children in the Vermont Early Head Start Program and children in the community who are not enrolled in the program. The program group includes children who on average have fewer destructive behavior problems, fewer somatic problems, and improved language production. Mothers with children in Early Head Start experienced reduced distress and overall parenting stress. Furthermore, growth models revealed that the rates of these mothers' reduced distress and parenting stress were significantly greater than those of the comparison group.

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Iowa State University

■ An Analysis of the Home Visitation Model Provided by the Mid-Iowa Community Action's Early Head Start Program.

Gayle Luze, Carla A. Peterson, Diane Draper

(Summary not available)

Medical University of South Carolina

■ Parental Mental Health and Child Outcomes in the Sumter School District 17 Early Head Start Program

Richard A. Faldowski, Gui-Young Hong

While parental mental health conditions such as depression, substance abuse, and other psychiatric conditions are widely acknowledged as risk factors for adverse child developmental outcomes (Mayes, Bornstein, Chaworska, & Granger, 1995; Radke-Yarrow & Sherman, 1992; Greenberg, Lengua, Coie, & Pinderhughes 1999; Gross, Conrad, Fogg, & Garvey, 1995), and Early Head Start (EHS) programs are mandated to address family and child mental health issues [Head Start Program Regulations and Program Guidance for Parts 1301 and 13011, 45 CFR 1304.40(f); 45 CFR 1304.24(a)], little is known about how comprehensive services like those delivered by EHS can impact family mental health functioning or child development outcomes over time. The Sumter School District 17 EHS program is one of two school-based programs represented in the EHS Research Consortium. It was designed to focus on the special needs of adolescent and young mothers in a small South Carolina (SC) town and rural community. The eligible service population included a high percentage of adolescents and young mothers with various social deficits: educational (lack of high school degree), teen pregnancy, and (perceived) significant degrees of alcohol and drug use. It is estimated that 36% of Sumter's children were born to mothers who had received inadequate prenatal care, 26% were raised in single-parent households, 30% were raised in families with incomes at or below the federal poverty level, and 20% were born to mothers without a high school diploma or equivalency (Wray, 1995).

Consonant with the broad EHS mission, the Sumter EHS program focused on working with enrolled children, young mothers, and their extended families (often the infant's grandparents) to promote a normal developmental trajectory for the child and to help the young mother work toward her own educational and other self-sufficiency goals. Families could receive services through either home-based or center-based service delivery options. Center-based children who were at highest risk for abuse, neglect, or adverse developmental outcomes were also eligible to receive Therapeutic Child Care (TCC) services.

Consistent with the EHS program goals, mothers in the SC research sample are overwhelmingly young (85% less than 20 years old, 50% less than 18 years old), unmarried (94%), still in school or training (79% without high school diplomas and 75% in school or training programs), and possessing few economic resources (77% with annual incomes less than $15,000). Relative to the Sumter community at large as well as the Sumter School District population, African Americans are overrepresented in the EHS program and research sample (88%). Just over half of the children in the sample are female (52%), of which a substantial minority had low birth weight (16% weighing less than 2500g at birth). About 31% of the cases were applied for services before the child was born.

Several key results have emerged from analyses so far. First, few of the SC EHS-eligible research mothers had clinically significant psychiatric disorders according to DSM-IV criteria. This result held true for all three primary mental health conditions considered—depression, alcohol use, and drug use—and rates did not differ between EHS or comparison conditions. The lack of clinically significant depression among the participants, however, does not imply that they were free of depression symptoms, and indeed, many participants expressed substantial depression-spectrum symptom loads. Second, comparisons of the marginal trajectories of change over time (i.e. without taking covariates into account) revealed few differences between the EHS and comparison conditions on most outcomes (psychiatric symptoms, parenting stress, parent child interaction ratings, or child development measures). Only when key background variables—especially degree of program participation—were taken into account, did systematic benefits of EHS emerge.

Overall the results emphasize the challenges to EHS programs working with young mothers. In addition to giving birth at an early age, many of the mothers may experience substantial degrees of psychiatric distress without exceeding clinical severity or duration thresholds. Mothers from this population may be difficult to retain and engage in services, but benefits can be realized among those mothers and children who can be kept in services.

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Michigan State University

■ Family Functioning as a Mediator of Parent, Child, and Family Outcomes: A Preliminary Analysis

Rachel F. Schiffman, Lorraine M. McKelvey, Hiram E. Fitzgerald

Poverty and economic need have been linked to decreased levels of functioning for family systems (Fisher, Fagot, & Leve, 1998; Gomel, Tinsley, Parke, & Clark, 1998). Parents who are living with financial strain have been shown to engage in more disrupted parenting behaviors when interacting with their children (Brooks-Gunn, Leventhal, & Duncan, 2000). The purpose of this study was to begin preliminary investigation into family functioning as an intermediate outcome of the Early Head Start (EHS) Program at the Community Action Agency in Jackson, Michigan and as a mediator of parent, child, and family outcomes.

The sample for this study was 160 families with low incomes who participated in the Michigan site of the Early Head Start Research and Evaluation Project; 84 families were randomly assigned to the program group and 76 families to the comparison group. Interviews and observations of parents and children were completed at enrollment and at 14, 24, and 36 months of the child's age. Data for this study were taken from the 36-month assessment. Family functioning was assessed by the 12-item general functioning scale of McMaster Family Assessment Device (FAD; Epstein, Baldwin, & Bishop, 1983) with two subscales, healthy and unhealthy functioning. The following outcomes were investigated: parenting stress (Abidin, 1990), family conflict (Moos & Moos, 1984), support and stimulation of the child (Home Observation for Measurement of the Environment [HOME]; Caldwell & Bradley, 1984), physical punishment, child vocabulary (Dunn & Dunn, 1997), child cognitive development (Bayley, 1993), and child behavior (Child Behavior Checklist [CBCL]; Achenbach, 1993).

Scores for family functioning were high for healthy items and low for unhealthy items. Program families had significantly higher mean scores on the healthy items than the comparison families (4.51 + .7 vs. 4.27 + .8). There were no significant group differences for the unhealthy items. The healthy items were dichotomized with families at or above the median (4.67)

in one group (Higher Health, HH) and families below the median in the other group (Lower Health, LH). There was a significantly greater proportion of program families in the HH functioning group (64.3%, $n = 54$) than comparison families (44.7%, $n = 34$). There were significant main effects for the healthy functioning groupings in all areas except physical punishment and Bayley scores with families in the HH functioning group doing better than families in the LH functioning group. There was a significant main effect of program on CBCL scores with program families having better scores than comparison families. There were significant interaction effects for parenting stress, for the total HOME scale and its external physical environment and language exposure subscales, for the CBCL, and for family conflict. These interactions were largely driven by healthy functioning, with families in the highest functioning group performing better than those in the lower functioning group. In some cases, the highest functioning program families were performing in more positive ways. Additional multivariate and longitudinal analyses will be conducted to identify predictors of family functioning and to investigate direct and indirect effects of program intervention on family functioning and parent, child, and family outcomes.

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New York University

■ Outcomes of Program Participation and Correlates of Children's Cognitive Development at the Educational Alliance's Early Head Start

Mark Spellmann, Catherine Tamis-LeMonda, Lisa Baumwell

In this study, we addressed two research questions:

1. What child and parent outcomes were affected by participation in Early Head Start (EHS)?
2. What child and parent characteristics were associated with children's cognitive development?

Two dimensions of program participation were tested for effects on child and parent outcomes: children's attendance at the EHS child care centers and the degree of parent involvement with EHS social service staff. As for outcomes of program participation on children, these included greater cognitive development at 14, 24, and 36 months, greater social development, and greater language development. We were also interested in exploring correlates of children's cognitive development, as measured by the Bayley Mental Development Index (MDI; Bayley, 1993), which were given when children were 14, 24, and 36 months old.

Parental domains significantly associated with program participation included the quality of parent-child interaction, the quality of parenting, discipline strategies, parenting stress, psychological well-being, and social support. Observational measures showed that the quality of parenting, of parent language use, and of parent-child interaction had substantial associations with cognitive development at 24 and 36 months. Self-rated parenting measures, father involvement, and the quality of the home environment indicated these associations as well.

Social-emotional support and advice that mothers received, both from their own mothers and from their infants' fathers, were associated with child cognitive development and with MDI scores. Symptoms of posttraumatic stress disorder and parenting stress were negatively associated with cognitive development. Harsh, rejecting fathering that mothers received when they were growing up was negatively associated with cognitive development of their children at all three age milestones. As for quality of mothering in mothers' families of origin, this was associated with MDI scores at the 14- and 24-month milestones.

Program engagement variables were associated with child cognitive development as well. Four measures of positive program involvement, (a) Social Support from EHS staff, (b) "What I Got from EHS: Growth as a Parent," (c) "What I Got from EHS: Family-Program Bond," and (d) "What I Got from EHS: Child Development," were positively associated with children's cognitive development at 14 and 36 months.

Other aspects of child development demonstrated significant associations with cognitive development. Social development as measured both by parent ratings of children's social development and by observational measures of child-parent interaction showed a strong correlation with cognitive development. Specifically, mother's ratings of children's distractibility, difficult temperament, and difficult behavior were associated with lower MDI scores at 36 months. Meanwhile, children's health was associated with cognitive development at 36 months as well.

The wide range of factors associated with cognitive development scores of children involved with EHS illustrates that this aspect of child development is embedded in a multi-level system, including the child, family, and program levels. The implication of these findings is that the effectiveness of early intervention programs is linked to the degree to which they are able to address each level of the system.

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University of Arkansas

The Association and Treatment Moderation of the Quality of Adult Relationships on Parenting and Parent Characteristics

Leanne Whiteside-Mansell, Rick Clubb, Robert Bradley, Mark Swanson

The quality of adult relationships is thought to be an influence on parenting (Belsky, 1984), discipline style (Wakschlag, Chase-Lansdale, Brooks-Gunn, 1996), and factors associated with parenting such as depression (Shelly & Jacobvitz, 2002). These parenting-associated and parenting characteristics are thought to be mediators of the impact of interventions such as Early Head Start (EHS). This study examines the associations of self-report and observational measures of the quality of adult relationships with parenting discipline style, parenting efficacy, parent-child interactions, and maternal depression. Then, the degree to which quality of adult relationships moderates the impact of EHS treatment was analyzed by looking at parenting characteristics as they mediate program effects on child development.

The quality of adult relationships was assessed early in this EHS study for all participants (N = 107) using the self-report, 13-item Simpson Adult Attachment Survey (Simpson, Rholes, & Nelligan, 1992) and the family conflict subscale from the Family Environment Scale (Moos, 1974). The Simpson results in three subscales representing secure, avoident, and dependent attachment. The quality of the intergenerational relationship was assessed when children were 14 months of age for a subset of EHS mothers (n = 50) that identified frequent contact with a mother figure. An observational assessment of the interactions between mother and mother figure resulted in four scales: emotional closeness, positive affect, grandmother directness, and mother individuation. In addition, mother figures were asked to rate the level of conflict they had with EHS mothers (on a scale of 1 to 5).

Discipline style was assessed using a survey of control techniques (Greenberger & Goldberg, 1989) in three domains: harsh (13 items), lax (13 items) and firm (13 items) control. Maternal parenting self-efficacy was assessed using a 10-item survey developed using items and item stems proposed by Bandura (1993, 1997). Parenting behaviors were assessed using the semi-structured Home Observation for Measurement of the Environment (HOME; Caldwell, 1984) total, HOME warmth subscale, and the parent-child dysfunctional interaction from the Parenting Stress Index Short Form (PSI/SF; Abidin, 1990). Depression and distress were assessed using the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) and the parental distress scale from the PSI.

Participants were 100 EHS families living in rural Arkansas. Mothers were 22.7 years of age (SD = 5.2) with 50% living with or married to the biological father when the child was 36 months of age. Half of the children were male. Forty-seven percent received EHS services.

A subset of the 100 families (n = 50) were assessed using a videotaped, observational assessment of the mother and mother figure discussion two areas of conflict. Mothers participating in the national evaluation of Early Head Start were asked to identify a grandmother figure with whom they had contact at least every 2 weeks and lived within 60 miles. Mothers in this study were between the ages of 15 and 33 years (mean = 21.5, SD = 4.2). Forty-three percent of mothers (n = 22) had lived with their mother figure for at least 6 months of the previous year. Most of the mothers were married (64%) and White (77%) and most indicated money as the reason for their living arrangement (69%). Most grandmother figures (62%) were the target-mother's mother. The remaining were target-mother's grandmother (n = 5), mother-in-law (n = 6), or stepmother (n = 1).

Results of correlational analyses showed low correlations (r from .20 to .27) between quality of adult relationships and parent discipline style. For example, mother's secure adult attachment was negatively associated with harsh discipline control style (-.27), whereas ratings of avoident adult attachment were positively associated with harsh control (.21). Mother's emotionally close interactions with mother figure were negatively associated with harsh control (-.26) and

positively associated with firm control. Mother-figure ratings of conflict with the EHS mother were positively associated with harsh and lax control (.21). Dependent adult attachment was positively correlated with lax discipline control (.22). Moderation was examined in multivariate analyses of each type of parenting disciple style with main effects of program participation, quality of relationship, and the interaction of the two. All multivariate analyses controlled for maternal age. No interaction terms were significant.

Correlational analyses between quality of adult relationships and maternal parenting efficacy suggested little association. Only the assessment of maternal autonomy (from the observational assessment of the dyad) showed an association ($r = .25$). Maternal warmth (from the HOME) was positively associated with secure adult attachment (.27) and emotional closeness between mother and mother figure; it was negatively associated with self-reports of family conflict (-.30) and mother and mother figure dyad conflict (-.21). Similar, if somewhat stronger associations were found between measures of adult relationships and the HOME total. Parent-child dysfunctional interaction was positively associated with avoident (.24) and dependent (.32) adult attachment and with reports of family conflict (.24). None of the interaction terms between program participation and quality of relationships were significant.

Parental distress was negatively associated with secure adult attachment (-.29) and positively associated with dependent (.21) adult attachment and family conflict (.31). Depression as assessed by the CES-D was positively associated with family conflict (.31). None of the interaction terms between program participation and quality of relationships were significant.

This study found evidence of associations between multiple aspects of adult relationships and factors that are thought to mediate intervention impacts on child outcomes (parenting discipline style, parenting efficacy, parent-child interactions, and maternal depression). However, no evidence was found to suggest that the quality of adult relationships itself moderated the treatment impact.

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University of California at Los Anglees

■ Early Head Start Latino Families in Los Angeles: Immigration Influences

Carollee Howes

Many of our Venice Family Clinic Early Head Start (EHS) families (76%) are part of what is often called a second wave of Latino immigrants. These families immigrate from rural areas of Mexico and Central America and generally have had little formal education or vocational training prior to entering the United States (US). In addition, they tend to have children quite soon after arriving in the country. We looked at the contrasts between these families and Latino EHS families who had entered the country as children or were born in the US.

Across the similar and differing characteristics of these three Latino groups, all the new immigrant families spoke Spanish at home, while somewhat over half of the older immigrant families did so. These three groups of families differed in maternal adult attachment security, patterns of caring for children, and socialization practices. Despite these differences, by 36 months of age most children in all three family groups had constructed secure child-mother attachment relationships.

University of Colorado

■ Difficult Relationship Attitudes and Depression Levels as Moderators of Outcomes in Two Early Head Start Programs

JoAnn Robinson, Robert Emde, Jon Korfmacher, Paul Spicer, Norman Watt, Jeffrey Shears

Two Colorado Early Head Start (EHS) programs, Clayton EHS and Family Star, are considered in respect to salience between the programs' theories of change and specific outcomes relevant to the theories—parenting distress, maternal sensitivity, child language, and child attentiveness/curiosity. Moderators of program outcomes included security of relationship attitudes as measured by the Simpson Adult Relationship Scale (Simpson, Rholes, & Nelligan, 1992) and maternal depression measured by the CESD (Radloff, 1977). Insecure attitudes moderated impacts on parenting distress. Depression moderated impacts on maternal sensitivity, child language, and child attentiveness and curiosity.

At-risk groups made the greatest gains in the EHS programs overall. Consistent with their respective theories of change, the Clayton EHS program showed stronger impacts than Family Star in maternal sensitivity; while Family Star showed stronger impacts than Clayton in child attentiveness.

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University of Kansas

■ Parent-Child Interaction and Program Engagement as Predictors of Outcomes in Project Eagle's Early Head Start Program

Jane Atwater, Judith Carta, Jean Ann Summers, Martha Staker

Project EAGLE, an Early Head Start (EHS) program in Kansas City, Kansas, has identified responsive parent-child interaction as an optimal and essential context for promoting children's development and for fostering families' well-being. The present analyses were designed to support this program focus by examining parent responsiveness (close involvement and verbal response) as a predictor of early development for children in multi-risk families. In addition, for EHS families, we asked whether the level of engagement in home-based services, which were designed to enhance parent-child relationships, would be related to the level of parents' responsiveness with their children and to children's developmental progress. The analysis sample included 74 families randomly assigned to the EHS Program Group and 79 control families. All families in the Program Group were offered home-based EHS services; and, for families with child care needs, the EHS program also provided placement in developmentally appropriate, community-based child care. Families in the Control Group were free to access community services other than those provided by Project Eagle. The following variables were measured: (a) cumulative risk index (e.g., Sameroff & Fiese, 1990) determined at program enrollment, (b) parent responsiveness, and (c) children's communication behavior as recorded in home-based naturalistic observations using the Code for Interactive Recording of Children's Learning Environments (CIRCLE; Atwater, Montagna, Creighton, Williams, & Hou, 1993), and (d) children's cognitive development as assessed on the Bayley Scales of Infant Development (Bayley, 1969) when children were 8, 14, 18, 24, 30 and 36 months. Level of family engagement was ascertained based on EHS program staff ratings of consistency of parent participation over time, active interest during home visits, and follow-through on individual program goals between visits.

Surprisingly, hierarchical linear modeling (HLM) analyses (Raudenbush, Bryk, Cheong, & Congdon, 2000) revealed no relationship between risk status and group assignment and children's cognitive outcomes or verbal communication. However, when measures of responsiveness were examined individually as possible predictors of children's outcomes, we found that the amount of time parents were observed talking to their children, prompting and expanding on what they had said, or engaging in positive/exuberant responses all predicted their children's Bayley outcomes. In addition, the amount of time parents verbally interacted with their children and shared in the children's activities predicted children's cognitive and communication growth between 8 and 36 months. When we examined whether responsive parent behavior would be more frequent among those families who had participated most actively and consistently in EHS services, we found that parents with the highest level of program engagement had higher rates of verbal responsiveness with their children. In other words, those parenting behaviors that were most clearly related to child outcomes occurred more frequently in families who were highly engaged in the EHS program. Engagement in the program was predictive of more positive outcomes in children's cognitive development and verbal communication and of growth over time in verbal communication. These analyses provide empirical support for the EHS program's emphasis on responsive parent-child interactions as a key component of intervention for children and families who experience multiple risks.

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University of Missouri at Columbia

■ The Quality of the Relationship Between Home-Visitors and Parents as a Mediator of Program Outcomes at KCMC's Early Head Start Project

Mark Fine, Jean Ispa, Kathy Thornburg, Gary Stangler

(Summary not available)

University of Pittsburgh

■ Social Support and Self-Efficacy: Stepping Stones to Parenting Success?

Beth L. Green, Carol L. McAllister, Carrie Furrer, Martha Ann Terry

Following the principles of theory-based participatory research (Green & McAllister 1998), our Early Head Start (EHS) research in Pittsburgh, PA was designed to reflect the "theory of change" of the local program. The Pittsburgh model theorizes that child outcomes are best achieved through good parenting which in turn is influenced by (a) providing parents with needed emotional and tangible supports and (b) working to empower parents and develop parents' sense of self-efficacy. Our research questions were the following: Do self-efficacy and social support make a difference in parenting outcomes? Which aspects of self-efficacy and social support are most important to parenting outcomes? How do parents talk about the role of self-efficacy and support in helping them to reach their goals?

Our study used a mixed-methods research design. Structured interviews, which measured specific domains of social support, efficacy, and parenting, were conducted with approximately 120 parents at four time points during the child's early years. Findings reported here are based on the 14- and 36-month interviews. Qualitative research included participant observation of program activities, ethnographic case studies with six program families, and in-depth interviews with 18 families concerning the goals they identified and worked on while in EHS.

Because of our small sample size, we found no statistically significant program vs. control group differences in terms of parenting outcomes. However, regression analysis yielded some interesting findings. No parenting outcomes were predicted by size of a family's support network. But "support satisfaction" and "perceived support" predicted parenting outcomes related to parent-child interactions and parent-child play. In terms of self-efficacy, "empowerment attitudes and skills" predicted all parenting outcomes. "General mastery" predicted parenting outcomes specifically as related to parent-child interactions and parent-child play.

Our qualitative research provided additional insights into these findings. Through case studies, parent narratives, and observations of staff discussions, we came to appreciate that the key to good parenting is not size. Rather, the quality of relationships, including relationships between program staff and parents, is more important. We may be identifying a basic founda-

tional element—the ability to form and sustain healthy relationships, itself stimulated and modeled by program staff—that is more essential to engaged parenting than social support as traditionally conceived.

Our quantitative results imply that having specific skills, along with feeling that one has choices and control, are important predictors of parenting outcomes, and that these effects are strongest when the skills and choice making are closely related to family life. These findings were reflected in the narratives of EHS parents. One of our early hypotheses was that such self-efficacy is developed through opportunities for parent-parent interaction in EHS. While this was very important for some of the parents, especially for those who played leadership roles in parent committees and policy council, our qualitative research revealed that there are several possible paths to strengthened self-efficacy.

These findings support the local program's own evolving theory of change which continues to promote child outcomes through good parenting, emphasizes building healthy relationships, and attempts to provide multiple and individualized paths to confident and competent parenting.

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University of Washington

■ Unraveling Possible Adverse Effects of Early Head Start

Susan Spieker, Kathryn Barnard, Michelle DeKlyen, Dana Nelson, Sandra Jolley

Analyses of the national sample of Early Head Start (EHS) at 24 months suggest that the program may have had negative effects on families with low demographic risk. Within low demographic risk and high psychological resource families at the Seattle EHS site, we found similar evidence for possible negative program effects on child cognitive, language, and behavioral outcomes as well as on attachment. Baseline data on this sample, collected at the time of random assignment, were analyzed for differential attrition between program and comparison groups. Analyses indicated that attrition from data collection was greatest among program mothers with fewer depressive symptoms and comparison mothers with more depressive symptoms at intake. This pattern of attrition was consistent across most assessment points, including the 19-month attachment paradigm. The site-specific analyses presented here further support the national observation of the potentially adverse effects of EHS program participation.

University of Washington, College of Education

■ Parent's Perceptions of Training and Service Activities Regarding their Child's Nurturing and Development: Implementation and Benefits of Early Head Start

Eduardo Armijo, Joseph Stowitschek

Two overriding purposes of the Yakima Valley Early Head Start (EHS) Research Project were to determine whether families participating in EHS (a) experienced and partook of child nurturing and development services that they would not have received otherwise, and (b) perceived themselves and/or their children to have benefited from those services. In reference to service

receipt and participation, we were interested in determining the extent to which these findings were attenuated by home language use and other acculturation variables. Finally, we were interested in tracking selected outcome indicators regarding EHS program benefits to families and children.

Considerable benefit from EHS participation was indicated, but tangible differences in benefit between EHS and comparison group families were moderate and circumscribed. EHS families reported as high as an eightfold advantage in access to, and receipt of training, services, and support pertaining to child care and child nurturing. Children's social development was one of the positive outcome indicators. There was a trend toward greater confidence in child care and child development abilities among EHS families. While a standard index of acculturation showed little change and few group differences, indicators of functional acculturation—family and community participation—suggested bilingual EHS families had enhanced involvement in selected areas

Utah State University

■ Parenting as the Pathway to Child Outcomes in Utah's Early Head Start Program

Lori A. Roggman, Lisa K. Boyce, Andrea D. Hart, Gina A. Cook

As part of our research partnership with a local Early Head Start (EHS) program, Bear River EHS, we studied two groups of infants and toddlers from 200 low-income families in northern Utah and southern Idaho, randomly assigned to either EHS or a comparison group. Bear River EHS provides weekly home visits to families in their homes. The aim of the program is to foster positive parenting and thereby help parents support their children's early development. The focus of our local research was to examine parenting in relation to children's attachment, play, and development.

Children were tested using standardized tests of cognitive and language development. Parents were interviewed using a variety of measures including measures of parenting attitudes and reported parent and child behaviors. Also, parents and children were videotaped playing together. Videotapes were later observed and coded by trained observers to provide measures of parent cognitive stimulation, parent intrusiveness, and other parent and child behaviors. Data collection occurred at multiple age-points including child ages 18, 24, and 36 months. As early as age 2, toddlers in this local program were doing better than expected, both socially and cognitively. Compared to toddlers in the comparison group, the EHS toddlers by age 2 had more secure relationships with their mothers and were doing better on cognitive tests. These effects were likely related to the positive impacts of EHS on the mothers. Mothers in EHS, versus the comparison group, played more responsively (less intrusively) with their toddlers, provided more cognitive stimulation, and had more flexible attitudes toward their children at age 2. They also spanked their children less at age 3.

The parenting impacts of Utah's Bear River EHS program led to better outcomes for children at age 3. EHS mothers' earlier responsiveness in play predicted greater security of attachment, higher cognitive and language test scores, more attentiveness, and more persistence in the children. Decreased spanking by EHS mothers was related to greater security of attachment and higher cognitive test scores as well. One of the mothers in Utah's EHS said that being in the EHS home-visiting program helped her learn more about parenting, "It has been a really big help for me. . . I learned a ton!" What many Bear River EHS mothers learned was to be less intrusive when playing with their children, to stimulate their children's learning, to allow their children to have their own opinions, and to refrain from using physical punishment as a discipline

technique. These impacts of our local EHS on parenting helped parents to support optimal development in their children, which includes not only their cognitive and language skills but the attentiveness, persistence, and security that will help these children in their future learning.

DISCUSSION

Robert N. Emde: Cathie Tamis-LeMonda and I are going to offer some remarks to orient a discussion.

Catherine S. Tamis-LeMonda: I will begin by discussing each of the posters; covering methodology, aims, and goals; what each group has done; their findings; and the implications of the research.

I will begin by talking about the five questions or pieces that comprise the larger framework of our work. One of the first questions or issues that arises is what is in the black box—what exactly is the Early Head Start experience? I think much of the effort in this group of investigators has been to shed light and understanding on what that experience is.

There are posters about who receives the services and what services they receive. There is some indication that, for example, Latinos might be receiving more services in certain sites than are other families at those same sites. What are the factors determining who gets services? Also, there is a great deal of discussion about home visits—what goes on, what comprises a home visit? Who are the participants most likely to receive home visits, and what goes on in those home visits? There were questions about the goals of families in Head Start. How do we identify the goals and establish guidelines as to what families should be receiving?

There are presentations on identifying disabilities. How is Early Head Start doing in identifying disabilities or even issues that face families. How do they identify those challenges, and how do they determine what challenges to work with?

Then there are many questions in that black box about engagement, dosage issues, who is engaged, and why? What are the factors that promote family engagement? The diversity factor in promoting family engagement has been quite telling. I have seen things I would never have even thought of. For example, one of the posters talked about home visitors' stress propensities as an important predictor of how much time families are in home visits? Now who would think about looking at the stress levels of the home visitors as a predictor? We might also look at the stress levels of the families as potentially explaining their engagement. The different ways of thinking about this are only possible when you have many sites tackling this question of what is in the black box, from different perspectives. Summarizing, mothers' personality seems to matter for the question of who is engaged or not. Even the home visitor's perception of the relationship predicts engagement, and does so even more than the mother's perception of her relationship.

What does all this mean? How are we explaining what is going on, why it is going on, and for whom it is going on? That is the first overarching emphasis I saw as I looked at the posters.

The second is the construct of mediators. Mediators is the notion of pathways that we talk about in our theories of change—How does it work? What are the pathways? Our group and everyone in this room have spent years considering pathways. Does Early Head Start work or impact through a parent's sense of efficacy, through bearing on creating healthy relationships in families, through its bearing on healthy relationships between staff and families? Does it affect parenting as a mediator such that it promotes positive parenting, which affects depression in parents? Many of the posters talk about depression as one pathway—that what Early Head Start does is work with the mental health of families—mothers and others included. This working on mental health, in turn, helps promote positive parenting.

These are two mediators—the effect of depression, which in turn affects parenting, which in turn affects the child, so there are many steps to get to that end point of the child.

There was a poster on the relationships between home visitors and parents as mediators. Programs that promote healthy home visitor/parent relationships, in turn promoted relationships that lead to better parenting, better child outcomes, and so forth. There are many different examples of the ways in which pathways explain how it works, that were presented in the posters.

The third emphasis is moderators. That is the question of what works for whom? We have frequently talked about fixed moderators. I learned the difference between fixed moderators and transient changing moderators. Attendance is an important moderator. The impact of Early Head Start seems to matter, according to some posters, for those people who attend more and who receive a greater dosage. It is not always that simple, however, because there are other cases in which we have more attendance being associated with less of an impact, perhaps because families who attend more have more problems or issues they confront, which shows how complex this is.

For what works for whom, some people have shown parent attachment history and adult relationships to be important moderators. We have attitudes about relationships being important moderators. There will be differential effectiveness depending on how parents think about relationships with program staff and their attitudes about relationships with children.

Depression and mental health is another important moderator, as is exposure to violence. These all work to alter the effect sizes of impacts on family and child outcomes.

The fourth emphasis is that of outcomes. The term outcome means what is affected, what is it that we are looking at as the ultimate effect? Being a developmentalist, in my world outcomes are children. That is how I view the world. Possibly outcomes are parenting, I think that is an important outcome, but here, the richness in what outcomes are, is highlighted. There are the traditional child outcomes. Different researchers in the different sites have focused on the CBCL (Child Behavior Checklist) and behavioral functioning of children. Language development is emphasized in some sites, while cognitive development and children's social interactions with parents are emphasized in other sites. Many focus on parenting and child-rearing styles. Focus also extends to mental health outcomes—somatic disorders in parents, depression, and so forth. Whereas one research site might think of mental health as a mediator and another research site thinks of it as a mediator and/or a moderator, a third research site will target mental health as a principal outcome in relation to attendance or other factors.

There are outcomes such as stability in the home, community involvement, and one of the most interesting outcomes, which from my perspective is different and distinct from the way I would think of outcomes, was the likelihood of referrals for services. This was Catholic University emphasizing whether Early Head Start affected the likelihood that parents will engage in early intervention. That is an important outcome if you think of it affecting the sensitivity of parents to what their children might need and what are the best ways to access resources. An interesting outcome is the fact that there is no single outcome. We are tackling this from different lenses and different vantagepoints. It is a way of pulling together what is in the black box and what is working for whom, and via what mechanisms. At the end of this 6-year period, we have probably raised many more questions than we have answered, and I hope that was our mission.

Emde: Thank you for orienting us in that way. I also did a similar scheme, and I will add some additional themes that I picked up. I was struck by the content themes of the posters from the local sites. I found five themes and three of them had to do with relationships.

One set of mediators and moderators had to do with what I would refer to as parenting relationship resources, which includes adult attachment, adult relationship insecurity, characteristics of maternal sense of efficacy, mastery, and so forth. Another set in the relationship category had to do with the parent/child relationship. The parenting relationship resources were typically treated as moderators, that is, as things that you could assess external to the intervention or to

the black box. In this sense, you could assess the moderators and then look at what happens with the intervention subsequent to that—see the outcomes—this is how the moderator influenced the outcomes. The parent/child relationship variables were assessed by many sites, perhaps most sites, and were typically assessed as mediators, but in some instances, as outcomes.

Another theme was the parent–intervener relationship. It is important that we assess varying degrees and varying qualities of the parent–intervener relationship as it mediates outcomes. It would be valuable for all of us to learn from the programs, in particular, and to learn from continuous improvement.

Another theme was health, as was mentioned, and mental health is part of that. Those were seen at all levels. They could be seen as moderators, but typically they are treated as mediators. We also had the early abstracts, which were promissory notes that you had to submit to the meeting before the data were in. That was very interesting—of course things change when you have results. Also expressed were, in addition to the wishes, the expectations of the investigators of what was going to be done. They were not able to accomplish everything they wanted to do. We know that, for example in the health area, from those early abstracts, that many of the sites were going to look at health outcomes. However, we have not been able to look at outcomes as much as we would have liked. Another theme, as Cathie mentioned, has to do with service use, mainly examined by Yakima, DC, and Virginia. That is looked at as an outcome, as well as a mediator of engagement.

I would also mention a few things about mental health that I thought were striking. In our overall results, for the national sample as a whole as well as the local results, in the 36-month report (impacts at age 3), there were no significant effects on the parents' physical and mental health, and family functioning.

There were some effects at 24 months that did not show up as significant at age 3, although the direction of the effects were the same for example, in the subscale of the parenting distress index and the PSI in general. For the Vermont sample, detailed analyses and growth-related analyses, were done. In this instance, the parenting distress subscale is declining over time in both program and comparison groups. However, there is more declination in the program group of parenting distress. It is interesting to look at the way they did that, and the methods that we hope to be using more and more that look at functions over time, either growth or declination of distress indices.

At a few sites, especially fascinating was Seattle, maternal depression showed a interesting interaction with attrition from the program. The analysis comparing program and comparison groups showed that depressed mothers accounted for more of the attrition in the comparison group, and less in the program group.

In Colorado, we found a direct moderating effect across a number of variables of child development as well as interactional parent/child outcomes. A moderating effect of maternal depression assessed prior to random assignment makes it particularly powerful in our view; namely that the programs helped more mothers who were depressed. There are also some indications of this in the national data samples. A number of sites have used the relationship insecurity measure. The Simpson Adult Attachment Survey is an adult measure used at study entry. Using maternal reports, findings in Colorado, at least in some variables, show that those who enter the program with more relationship insecurity were helped more.

There are some intriguing leads that we will be probing, not only in these local data sets, as we integrate them with the national data set, but longitudinally as we get more time points. I point again to the promise of the Vermont data leading the way in the methods for doing that. We can gain power by multiple data points over time, and we gain a depth of understanding, too.

Talking about moderators, mediators, and outcomes is dependent on one's theory because it is a playful enterprise, doing model fitting. One time, when I was introducing a symposium in behavioral genetics, I made a slip and I called it model fiddling. The behavioral geneticists loved

it. I myself was horrified! This playful enterprise works best when done predictably, according to a theory, which is applied ahead of time, and, obviously, one gains more logical power that way. We are trying to do that through theories of change as elaborated by the programs, which would be the most meaningful of all.

We would like to begin the discussion by asking a person from each site to give one take-home message from their poster. Do not summarize the poster, but just articulate one message for us to take home.

Carollee Howes: At UCLA we were looking at the outcome of mother/child relationships and whether there were variations in child and mother engagement in addition to the child-mother outcomes. We found similar levels of security in mother-child attachment across the three cultural groups.

Emde: I already mentioned the Colorado take-home message, which is that for the programs it has been uplifting for them to know that the people hardest to work with are helped the most, with respect to depression and difficulties in relationships.

Comment—Michigan State: Our outcome data showed that families who perceive themselves as functioning at a very high level may be a good mediator for looking at child outcomes. We are pleased to see that our Family Functioning measure holds some promise.

Joseph Stowitschek: At Yakima, we are interested in a parent's perspective of services across both Early Head Start and comparison programs: focusing on the amount of service, frequency, and time. We found that Early Head Start substantially impacts both opportunity and participation, and we also found that time is precious. Due to many circumstances, home visits might occur only once every 6 weeks. That makes it imperative to provide a concentrated intervention and focus on what can do the most for the child's development. As an example, I would teach and encourage parents to get their young child talking a blue streak.

Comment—Harvard University: One of our interests was how the Vermont program affected parenting. We looked at the effects of distressive parenting over time, and found that the program did have a significant effect on reducing parent stress over time. Interestingly, there were a few patterns of reduction of stress. Families with multiple stressors, all of which were affected by the program, had different patterns in the reduction of stress, than those mothers whose parenting stress was not quite as high to begin with, and who did not have other risk factors, particularly depression and violent life events. We are going to continue to look at what happens to these mothers over time.

Comment—D.C./Virginia: An important part of our local research was children with disabilities, and our poster focuses on our qualitative case studies of 32 families. We found a dramatic difference between Early Head Start and the comparison group. Early Head Start had more educated eyes on the child, and through their scaffolding of their work with the parents, the parents took the step of seeking referrals and obtaining services to a much greater extent. The children at the comparison site had more severe disabilities with medical involvement; whereas in the Early Head Start families the children had milder delays and ended up getting served earlier.

Comment—Pittsburgh: We looked at relationships and efficacy. What we found is that helping families to be able to build and maintain healthy relationships was an important pathway to good parenting, which we found was more important than social support as conventionally conceived. The issue of being able to build and maintain healthy relationships, and through those relationships, to begin to realize a sense of efficacy, or "I can do it." Also, the program's

strength-based approach was instrumental in fostering this relationship-building capacity and sense of efficacy in families. Finally, to say that we could not have seen this except for the fact that we strongly based our research on a closer partnership with the program and on the program's theory of change. Another factor was combining qualitative and quantitative methods. Through that process, we were able, ourselves, and help the program understand the theory of change.

Comment—University of Missouri at Columbia: We hypothesized that the home visitor's assessment of the relationship quality between the home visitor and the parent would mediate the link between maternal personality, home visitor personality, and time spent in home visits. What we found was that maternal personality negativity predicted both relationship quality and time spent in home visits, and the home visitor's personality and well-being also predicted time spent in home visits. Then the relationship quality, as assessed by the home visit, predicted time spent in home visits. We did not find a mediational effect, but we surmise that because of our small sample size, we had low statistical power, which compromised our ability to detect significant mediation effects.

Comment: In Utah the main emphasis and theory of change is to impact parenting, which will then affect children. They want to have parents and children interacting and having a good time together, playing well, and then through that experience, parents will promote optimal development. We do see early impacts, as early as between 18 and 24 months, on both parents and children. Interestingly, in these interactions parents were more sensitive in playing with their children, and that those were strong predictors of later outcomes for children, in both cognitive development and attachment security.

Comment—Iowa: We looked at the process of home visits and what happens when the home visitors are there. We also had the same theory of change for the program. Our poster focused on several different families to show that even though they received about the same amount of service, the focus of the service could vary widely, based on the family's goals, but not as widely as we had hoped. There was a great deal of continuity in what the families received, so there was not as much individualization as we had hoped. The program was meeting its goals, but not necessarily the individual goals of the family.

Comment—Seattle: One of the nicest messages has already been mentioned: that possibly the parents with the highest depression may have benefited the most. We tackled the apparent adverse effects that showed up in the national study to try to find out what that was about. The messages I would like to address to researchers here are the following: (a) it is important to do, as this project did, very broad-based outcome measures so that one is looking at costs in the scheme instead of pinpointing one domain and to pay close attention to possible negative effects, and (b) it is very important to look at attrition and its potential causes.

Comment—Kansas: Our program had an explicit focus on parent responsiveness as a pathway to positive outcomes for children. Parent responsiveness did increase over time, in that families who were more responsive, actively involved, and engaged in the program affected children's positive outcomes in cognitive and language development.

Comment—Arkansas: We were interested in looking at the parent's relationships with other adults. We conducted a videotaped assessment of the target mother, with the grandmother or grandmother figure. We also used the Simpson Adult Attachment Survey for the mother's self-report of relationships with other adults. From the national data set, we took the family conflict subscale from the Family Environment Scale. Another local measure was the grandmother's

report of her level of conflict with the mother. In the areas of maternal self-efficacy of their parenting, or parenting discipline practices, we did not find a moderating effect, and therefore did not see a different relationship between the adult relationships and the parenting variables across treatment groups. What we did find, however, was a clear pattern of relationships between the parents' relationships with other adults and the way in which they parent. In this first look at the data, we were hindered by both a small sample size and by the fact that most of the measures we collected to assess adult relationships were not baseline, but were taken when the child was about 14 months old. At that time, the parents had varying levels of treatment. What we want to do now is go back and take a much closer look at the potential impact of treatment on those adult relationships, but also control for the time at which we collect that data.

Tamis-LeMonda: At NYU our findings were very similar to Kansas, in that what we looked at was parent attendance and child attendance at sites. Not surprisingly, we found a significant impact of Early Head Start on parenting and child cognition. We assessed a large range of affective measures, but only for parents who attended either in a fair, good, or very good range. Obviously for those nonattenders we did not have an effect when compared to the control group. We found that dosage was an important moderator.

Questions: Were nonattenders different, systematically, in some way, from attenders?

Tamis-LeMonda: That is a great question, The answer is, I do not know yet. This is one of those dash-to-finish things, code the parents and get done in time! That is an important question for all of us — that they might have had dramatically different starting points.

Emde: In Seattle, are the non-attenders different from the attenders?

Answer—Seattle: We found that the disorganized, detached mothers were less likely to be engaged with the home visitors than were other mothers. I do not honestly have the answer because we have not teased it out beyond that.

Question: You mentioned adverse effects, do you mean there were negative effects of intervention, or that there were no positive results?

Emde: I think we have to be cautious about our words, because the term adverse effect is usually linked to an intervention, like in drug adverse effects. In this instance, as I understand it, we do not know yet whether that was due to the intervention, or due to the nature of the comparison group. I think you might want to consider using a term other than adverse effects.

Tamis-LeMonda: Counter-intuitive would be fine.

Question: Did you shift to qualitative methods to find out how they treat the stresses?

Tamis-LeMonda: Have any of the other sites used qualitative data?

Answer—Michigan: We have not yet put together our qualitative and quantitative data. However, at every parent services interview, we did talk to parents about what their life was like at this time, what were the good events, what were the bad events. We asked them about their family and about the services they were receiving. That data was all transcribed, all coded, and now they just have to be analyzed. If there is something that the family has told us that would help us understand what their answers to the instrument were, we will see it.

Tamis-LeMonda: Then perhaps begin developing indices of risk based on the perspectives of participants themselves

Question: All of you are involved in partnerships with programs in this effort, and in the morning session on Early Head Start, we had some questions about how these partnerships work. I wonder if some of you might comment on program response to feedback. Have there been any programmatic changes?

Lori A. Roggman: A rocky beginning was resolved through both sides being committed to sharing the data and the program getting feedback quickly. We gathered the data that they asked for. We wrote three reports for them, and in every case, we came back and met with them informally to present what we were finding. By the time we had a written document, they had already begun incorporating most of the changes we were suggesting. They were quick to make changes, and Utah is not unique. If we started over today, we would now have programs that are functioning so well that they are more powerful than they were when we began.

Answer: Our program, in talking about theories of change, had a focus on parent responsiveness and parent/child interaction, but much of what they were doing in practice was probably more family support. We had conducted observations within the home, and they wanted information about how parents were interacting with their children. They were not happy with what they were seeing in the data and decided to adopt a more explicit focus on activities to do with parent/child interaction. They used the data to make a significant change in the way they conducted their program. After that change, they have been asking us for more information. They have been very interested in the results of this evaluation.

Answer—Pittsburgh: Our collaboration began immediately, even before we wrote the proposal. We went through a long process. I sat in program meetings where there were long discussions about whether to apply to be a research site because of concerns about the randomization process.

Writing the proposal involved the beginnings of looking at the program's theory of change, though we did not call it that then. At Pittsburgh the feedback has been done in both formal and informal ways. In some ways the informal feedback was probably more significant and important as an ongoing interaction. Part of that was facilitated by the fact that I functioned as an on-site ethnographer and did many participant observations. Where this is clear is the theory of change and its evolution over time. It was a combination of data collection, trying to understand that evolution, but also giving back a sense of what we were finding. There was a similar change in that this program was also strength-based and family support focused at first. We also had real concern of how to be child-focused. How can one be child-focused and family support focused at the same time. It was not so much that we collected data and then went back and reported it, but in an ongoing dialogue, we continued to see what was happening to the theory of change and through discussions at program meetings and then fed back of what we were hearing. In addition, feedback to the programs then becomes further research data, or research understanding and research information, which enlightens us. If a good relationship is built, then when you bring back your findings, people are both interested and able to use them.

Answer—Michigan: Our experience in Michigan, while it was an extremely wonderful collaborative relationship, differs in one fundamental way. We did not start out being a quality improvement facilitator. We were involved in another service that they provided, we collaborated on the outcomes that we wanted, but we were not expecting to be able to have feedback because of the embargoes, and so on. One can develop the relationship and have a collaborative relationship across time in this type of research without having the need to feed the information back.

I believe in the up-front work to develop the partnership, to understand the nature of the study, and to gain the trust of the program staff. Let the staff know that they can trust you to do the job well, and be able, when appropriate, to give them feedback.

Question: As researchers, does it bother you that because of the way in which those 17 projects were launched, without starting time, that you put all this effort into something where it would be a miracle for anything positive to happen? Do you plan to go back and study the program now that you have more time?

Emde: At a previous roundtable, that was one of my two presentation points: the need and design for that and the study of mature programs. ACF and NICHD are in the planning phase to do just that, not so much in order to say whether Early Head Start works or not, it does. It is to take the next step, based on what we have learned, and look at specific, manualized curricula in the areas of social competence and preliteracy. We were all very nervous researchers, but then we were reassured by the pattern of results. You are absolutely right, however, it should be an incentive to go further, particularly longitudinally.

Comment: It occurs to me that it may be helpful to start thinking in terms of adult developmental issues—the transition to parenthood, the renegotiation of roles, and the renegotiation of interpersonal relationships— and the interface between those adult relationships and the relationship development of the infant.

Comment: I had a similar percolating thought related to one piece of data about how families are more stressed when they went back to work. I wondered if that was not necessarily a function of work, or financial issues, but maybe a function of continuous transitions in and out of work. It is these instabilities—"Am I working, am I not working, am I going to have child care, am I not going to have child care"—those are the stressors as opposed to work per se.

Does Head Start Work? Overview and Update on the New Head Start Impact Study

CHAIR: Michael L. Lopez
PRESENTERS: Michael L. Lopez, Ronna Cook, Mike Puma, Richard Gonzales, Gina Adams

Michael L. Lopez: This is a report from the Head Start Impact Study. In the almost 11 years that I have been with the agency, this has been the most complicated, challenging, and anxiety-provoking study to conceptualize, design, and implement. It has also assembled one of the best teams of researchers. Here reporting for the larger team are Ronna Cook from Westat, the Project Director of the study who oversees the consortium of our contractors; the other presenters and their organizations are Mike Puma and Gina Adams from the Urban Institute, Richard Gonzales from American Institute for Research (AIR), and also on the team, but not represented is Decision Information Resources (DIR).

Today we will talk about the background, design, measures, recruitment, and the random assignment process that makes the study different from other studies. The study began in 1998, actually it probably started well before that with the infamous Government Performance and Results Act that basically put most federal agencies on a trajectory for more accountability for how they are spending federal tax dollars. The Government Accounting Office had done a review of the research and had basically concluded that there was not enough empirical research, demonstrating the effectiveness of Head Start. As a result, in 1998, Congress determined, as part of Head Start's reauthorization, that DHHS should conduct a national study to determine the impact of Head Start on the children it serves.

The legislative language included a number of specifications for this study. Included in the Act was a requirement to name an Advisory Committee on Head Start Research and Evaluation comprised of experts in research and practice to help provide a set of recommendations on how to conduct the study.

The study is designed to address two research goals:

1. What difference does Head Start make to key outcomes of development and learning (and in particular, the multiple domains of school readiness) for low-income children?
2. Under what circumstances does Head Start achieve the greatest impact? What works for which children? What Head Start services are most related to impact?

There are some similarities and some differences between the Impact Study and the FACES Study that we will discuss when we talk about the design. The Advisory Committee was helpful in their recommendations on the study design. They said that in addition to the basic requirements that Congress mandated, the study has to be credible and it has to be feasible. It also has to be a study that could be implemented—it could not be one of those hothouse laboratory studies that could not be done anywhere else. The Advisory Committee also touched on the critical issue of the ethics of random assignment and how that could be done in a Head Start context. Since random assignment was built into the law, it had to be built into the study. Congress believed that to do a rigorous study, given the standards of science, it must involve random assignment. Given the requirements, and random assignment being the only way to do a defensible study, the Advisory Committee wanted to make sure that the study be done only in locations where there were already more children than programs could serve. This avoids the ethical dilemma of denying children service.

Mike Puma: There are three guiding principles for the sample design that come from the Congressional Mandate and the Advisory Panel. The first one is that the study sample had to be nationally representative. We want it to cover Head Start in all its variations throughout the entire country, a national sample. The second principle required us to have sufficient variation,

not just in the context in the community, but also in the types of children. Therefore, we needed a large sample of Head Start Grantees and Head Start Agencies in different geographic places to achieve that type of variation. The third principle was the need to have the most rigorous design possible, which meant using a randomized experiment.

To select the grantees and delegate agencies we began with every Head Start Grantee and Delegate Agency in the country, eliminating migrant, tribal, and Early Head Start programs. We then took these programs and created geographic clusters throughout the country.

Lopez: The exclusion of migrant, tribal, and Early Head Start programs was written into the legislative language. For Early Head Start, there is presumptive eligibility so we could not randomly assign Early Head Start graduates because then that would deny some children service and they are required to be served, if they are income eligible.

Puma: We took these geographic clusters and then stratified them along several dimensions: The extent to which the pre-K program operating in the state was similar to Head Start. We included geographic region, race, ethnicity of the children in the Head Start program, and urban location.

We then created 25 strata along those dimensions and then picked one cluster in each of the strata. Within those 25 clusters there were 355 grantees/delegate agencies. We wanted to only do the randomized experiment in places where there were a sufficient number of applicants, more applicants than they had slots to fill. Therefore, we conducted phone interviews and determined that 85 % of those grantees in the clusters were eligible for the study.

We then combined small programs and then stratified the grantees again along several dimensions: urban location, whether they were or were not a school-based program, race, ethnicity, whether they had a full-day program, a part-day program, or both program options, and the ratio of 3-year-olds to 4-year-olds. We created strata and then sampled 90 grantees from these clusters. That represents the sample of grantees/delegate agencies that are in the study.

For the center selection we then sampled Head Start centers within the grantee/delegate agency's programs. For each of the 90 grantees, we collected information on every operating Head Start center, representing 1400 centers. We then tried to determine which of these centers typically had more applicants than they had available slots. At that point, we eliminated those that could not meet our requirements, about 12% of the centers. We did some combining of small centers, did stratification again, and then did a random sample of 471 individual Head Start centers. That is our current study sample. I think this may be the largest multi-site randomized experiment.

The process of random assignments is as follows:

Identify newly-entering children, beginning with all 3- and 4-year-old applicants, excluding returning children. We want to be able to estimate the impact of Head Start for children entering the program with no prior Head Start experience. At each center we collected all of their applications and develop a roster of names; excluding any returning children, except in the case of severe need where an exception can be made. Whatever the reason, this child has to be excluded from the random assignment, and that child is enrolled in the program. Those remaining on the list are the newly entering children to fill the available Head Start slots.

That list was extended to another 11 children for each Head Start center in order to have enough extra children for a comparison group. From that pool, 16 children are enrolled in Head Start and become part of the study and 11 children, who will not be enrolled in Head Start, become the comparison group.

Comment: It seems that you are going to get the children who are the most needy in your experimental group.

Puma: Exactly. We definitely want to make sure that we are picking children in their need order, so that we get the same mix of the children who would otherwise be enrolled in the program.

Question: How do you address the ethics issue of a parent coming in to enroll their child in a program and that child, ending up as a part of the control group, but they could really benefit from Head Start?

Puma: Prior to engaging in this process, we sent letters to all of the parents who are about to apply to the program, letting them know that this was a possibility. Everybody had the same chance to get into the program, but questions are raised about the ethics of doing it this way. When I explain to people the importance of doing this right, and getting the right answer, and getting the program to be better for hundreds of thousands of children, most parents understand it, and the process seems fair because it is a random process and not based on any characteristics.

Lopez: In addition to that, some of the program directors themselves have said that there are other families who are not getting into the program as well and they see it as an equally fair approach for deciding who gets in and who does not get in. There have been very few cases that have not received support from the program directors.

Question: If a child does not get into the program, does that parent have a right to refuse to be a part of the study as a participant in the control group?

Puma: Yes. There is no right to have the child enrolled, but participation in the data collection is certainly voluntary.

Question: Do you have incentives for parents in the control group? We have a difficult time getting parents of comparison group children to complete surveys.

Cook: Yes. The parents receive $20.00 for participating in each interview. The child gets a little present for participating in assessments. When we are actually doing observations with teachers, the teachers and classrooms receive gifts. If parents of the comparison group children help us by letting us know where their child is in day care or child care, those centers are also given an incentive for participating.

Puma: When I have done similar projects, what is surprising is that we really do not find a difference in cooperation between the parents in the treatment and in the control groups. In fact, we did a field test of this study and found no difference in cooperation. The way I look at this is that parents enjoy the opportunity to talk about their children.

Question: My understanding is that usually Head Start centers use a ranking by need and take the neediest children. By changing this you are not taking the neediest children. Could this have an impact on the effectiveness of Head Start? Can this slight change in who you enroll actually change the program that you are actually trying to assess?

Puma: It is a good question. When one looks down the list of children ranked by need criteria, I have to tell you, there is not a whole lot of difference between the ones that are in the eligible pool that would normally enroll and those on the waiting list. There is not a large variation in need. These children are all in need, and they normally do turn away children who belong in the program.

Question: I am with the Canadian Program. In most of our communities, people would not have an option. If they did not get into the Head Start program, the children would be staying at home. They would not be in another program. I am wondering what your expectation is? It sounded as if your expectation is that you are comparing Head Start to another experience in an early childhood program rather than comparing it to a group of children who were not enrolled in any program.

Puma: It is not intended to be a comparison of Head Start to nothing. It is a comparison of Head Start to whatever the parents chose to do with their child and what is available in that community. It varies extensively. In some places there are many programs from which parents can choose as alternative placements for the children.

Question: Are you looking at what the control children and families do during their nonintervention period, which was significant in the CCDP Study. That study found that the children did not stand still and parents ran around finding other resources for them. In the end it showed the CCDP children did not have a much different experience. I wonder if that is a danger here and whether you are looking at that?

Puma: Ronna will talk more in depth about that in her presentation. We are doing completely parallel data collection for both the children in Head Start and ones that are not in Head Start and we are capturing their experience Monday to Friday about 8:00 AM to 6:00 PM, nonsummertime.

Question: In your choosing children based on this rank or need, how did you address children with disabilities? Often programs will give higher ranking to children with disabilities or at risk for disabilities. We they included in the sample, or were they the ones that may be the few exceptions, or how did you deal with that?

Puma: It is our intent to include them in the study sample. There are instances where those may be the children that the center chose to exempt from random assignment, but to the extent possible, we want to include all types of children that Head Start serves.

Richard Gonzales: In fact, the decision was made by the federal government that it would be inappropriate not to include children with disabilities, because they wanted to know the impact Head Start was having on children with disabilities versus children who do not have disabilities. When we were in the early stages of discussing which children would we exempt, the decision was not to exempt any of them. We will look at whoever applies to Head Start. Everyone has an equal chance and then we will compare what those impact differences are across the entire population.

Cook: We are not exempting any category systematically. However, there well may be, in a particular center, a child that somebody feels strongly should not be in the study. Then that is brought back to us to talk about and to talk with the center about, to make a decision about that child.

Puma: The study sample is about 6,000 children. We will follow these children through the end of first grade. This is true for both 3- and 4-year-olds with the 3-year-olds participating in Head Start for 2 years, then kindergarten and first grade.

We conducted a field test of eight grantees and 24 centers with a sample of 430 children. The sites were chosen to represent a wide range of program configurations. Sites were recruited in April and May, 2001, and random assignment was done in the summer of 2001. This field test

gave us the opportunity to iron out any problems. There were high response rates and no major differences between treatment and control groups.

Question: You said that the 3-year-olds would have 2 years in Head Start. Is that an assumption on your part or is that being planned as part of the study? Do you assume that they do not leave Head Start at age 4 for another option that may better meet their needs?

Puma: They enter the program at age 3 and they have the potential to spend up to 2 years in Head Start. What they actually do is up to their parents.

Puma: We are not requiring that they stay for 2 years. However, we intentionally wanted to include both 3s and 4s to find out whether or not there was a difference if a child received 2 years exposure versus 1year exposure.

Question: You said that you are going to follow them through first grade. Wouldn't the quality of the schools that they transition to affect the study?

Puma: Yes, and we plan to focus on the quality of the school that these children move into and the extent to which that has an effect, and if there are long-standing effects from being in Head Start.

Question: If the quality of the school affects that child, then would that child be excluded from the study? Since we are trying to determine if Head Start works, and if there is something that is going to set that child back, would it be best to take that child out of the study or have the child remain in the study but counted in a different category. Then you would not say that Head Start did not work for that child, but that it was the school system that was not ready for that child?

Puma: No, we would not take that child out of the study or be counted in a different category. What we are going to be able to do is estimate the impact of Head Start from the time the child begins the program until the end of either 1 or 2 years of Head Start, after kindergarten, and after first grade. We hope to find out the extent to which those gains may be decreasing over time and the effect the schools may be having.

Cook: For the data collection timing and resources, we begin with children at 3 and 4 years old and follow them through first grade. This means that we will be continuing to collect data all the way through 2005. On every child data will be collected in the fall and in the spring each year. In the fall the focus will be on child assessments, with direct assessment of the child, and parent interviews. We allow some time, especially in the first year, for things to settle down before we go into the classrooms to conduct observations, and begin to collect information from the teachers, directors, and family service workers. In addition to program measures, we also plan to obtain comprehensive service measures. We will talk about that in terms of how to do that comparably between a Head Start program and other programs, or other childcare arrangements.

We have been working on the measures for the 3- and 4-year-olds while they are in preschool. We have not yet finalized what measures we will use for kindergarten and first grade, but we do know that we will be collecting data on these children in the fall of both their kindergarten and first grade years. One question we still have is if we will collect data on these children in the spring as well.

One of our greatest challenges has been choosing the measures we are going to use for the study. There are so many different types of measures available that it is not an easy task to choose the right ones. We started by building upon the FACES measures, which is a very good base of measures that have been successfully used with this population. In addition, we looked

at measures used in other large child care studies and at the literature to determine what we might be missing.

This also has been a very inclusive process where we brought in people from all fields and all disciplines for their input into the best way to conduct the study. I am very process-oriented, but this process has sometimes made me want to be a dictator. Yet, it is an important process to go through in order to choose the best set of measures that we could find.

Six work groups were selected to review measures, identify constructs, and recommend measures. The individual groups reviewed measures in the following categories: (a) language and literacy (child assessments), (b) educational environment, (c) socio-emotional development, (d) parenting skills and activities, (e) comprehensive services, and (f) assessing Spanish-speaking children.

We used the following criteria when looking at measures for possible use in the study:

1. Measure outcomes for children/families that are expected to be impacted by Head Start.
2. Need to have measures to obtain comparable information for children not in Head Start.
3. Capable of measuring growth over time.
4. Use instruments that predict later school achievement.
5. Ensure trained field interviewers can administer them with acceptable reliability.
6. Ensure overall battery is of reasonable length and can maintain interest and performance of young children.
7. Have parallel tests in Spanish and English for core subset of assessment battery.
8. Maintain measures from FACES that showed significant gains against national norms in Head Start.
9. Strengthen oral language component and phonemic awareness components.

Most important is that we will be measuring outcomes for children and families expected to be impacted by Head Start. Therefore, we want to make sure that we carefully define what Head Start is supposed to accomplish. We need to know what we are measuring in order to be able to talk about the impact of Head Start from that perspective.

Although not all of the measures have been chosen, we do know many of them that we will be using when data collection begins in September. Measures for language and literacy are the Woodcock-Johnson III Letter-Work Identification, Woodcock-Johnson III Applied Problems, Woodcock-Johnson III Spelling, Woodcock-Johnson III Oral Comprehension, Developing Skills Checklist Segmenting Sentences Task, Story and Print Concepts, shortened version of PPVT-III, McCarthy Draw-A-Design, Letter Naming, Abbreviated version of Leiter-R AS, and Counting Bear Task.

Hopefully, one of the ways we are going to shorten the battery and stay within the 25 minutes for the 3-year-olds is that are some of our staff back at Westat are working on an adaptive version of the PPVT. We want to shorten the time so that the children will not have to go through the entire test.

Lopez: As Ronna mentioned this is our near-final projected set of measures, but there are still some decisions to be made so that the final version that will be finished in the next couple weeks may look a little different. We continue to discuss some new measures, for example, Chris Lonigan's new phonemic awareness measure. Perhaps that might be one of the answers for the challenge we have had of trying to pick a measure that works for 3-year-olds. Another example is a social/emotional measure that John Fantuzzo has developed.

Question: When you say "center" are you talking about a building, a program, or multiple programs?

Lopez: We have discovered that just about everything has multiple definitions. When looking across all programs, all centers, or all entities, there are so many different variations, giving one a sense of how complicated this is. There can be two centers in the same building, or a one-

classroom center. We did not quite anticipate such wide variations. We have had to try to understand each organization's structure, procedures, policies, and recruitment and enrollment practices.

Puma: What is so difficult about this is trying to maintain the rigor of doing a randomized experiment within various program settings. We have had to think hard about how to tailor our procedures a little bit here and there, maintain the rigor of it, but try to adapt it to local circumstances. A real challenge.

Cook: The data on social/emotional development will be obtained from parents, using the Child Behavior Checklist (CBCL); Social Skills Rating System (SSRS); and the Developing Skills Checklist—Home Inventory. In the spring, input from the teacher or other child care provider also will be obtained using the Child Observation Record (COR); CBCL; SSRS; and the Adjustment Scale for Preschool Intervention (ASPI).

We will be looking at a number of things from the parent and family perspective. Demographic characteristics we will be collecting are the basics: race/ethnicity, health, disabilities, household composition, employment, economic assistance, education, and housing. In addition, we will be looking at parenting styles and rules; the home educational environment; parental stress and depression; family social support; child care arrangements; home health and safety practices; use of social services; home and neighborhood characteristics; and parent literacy.

Even though this is a large study, there has to be a limit on what it can include. We will obtain most of our information from the primary care setting, where the child is between the hours of 9:00 am and 3:00 pm every day. However, we also want to know if there is a secondary setting, and obtain some information from the parent about that setting, and from that be able to figure out dosage. The challenge obviously is going to be answering the question, what is the treatment and for how much time did the child have the treatment, and how do we measure that?

We will then go into programs and services. This is a challenging piece where we have had many friendly battles—actually struggles—particularly from the comprehensive service perspective. Since Head Start is able to do so many things for a family, we question how we are going to measure that for the non-Head Start families. How do you ask those questions and get information that is comparable across both groups? We are definitely trying to get at those comprehensive services and find out who helps families obtain services. We want to know if there is a difference, and what that difference is, between the comprehensiveness of Head Start and what is provided for non-Head Start families. Then, how can one do the observations—children in their own homes, children in day care homes, children in various types of centers—what measures will we use? In a field test we used the ECERS for all center-based programs. We are using the Family Day Care Ratings Scale (FDCRS) for the family day care homes. We also tried using this measure in some of the children's own homes to see if it would work. As yet, we do not have the data to be able to tell you how it works, but the response rate was not as good in the families own homes. We created an environmental scale that took some items from the HOME scale, as well as from Fast Track, and parents were much more willing to let us do this short type of observation in the home rather than trying to do the FDCRS. The reason for that is one would have to make two different appointments to do it the FDCRS other way, whereas the scale we created could be done in one visit. In addition, we used a checklist of teacher-directed activities as well as an assessment profile

Because we think it is important to make sure that we work carefully, we have taken an entire year of recruitment to work hard with all of the grantees and centers. We have taken seriously the issue of how we build communication and have done this in a variety of ways. First of all, we have specific two-person teams that work with specific areas of the country. Each team has been out at least two times, and in some areas many more times. We are working with policy councils, staff, and parents about the study and what it is going to involve.

One of the things I have learned from past studies is that you can go out and talk about it and you go home and nobody remembers what you said because it is not part of the daily routine. There really needs be someone on site who is going to help continue helping people understand the study. To address this issue, we have hired local site coordinators. Each one has three grantees for which they are responsible. They will also be responsible for helping with random assignment, and then will be the supervisors of data collection. As of June 25 we have done at least one round of random assignment in 150 of the 470 centers.

Now Richard Gonzales will tell you about some of those challenges and how we have been dealing with them.

Gonzales: Picture this scene: There is a class of young children and they are sitting down and drawing. There is a substitute teacher who usually teaches sixth grade, so she does not know much about young children. She comes into the room and looks at one of the children's drawings. The teacher asks a little girl what she is drawing. The child answers, "I am drawing a picture of Jonah and the whale. Jonah is being swallowed by the whale." The sixth grade teacher thinks this is a moment to teach something and so she starts to explain to the young girl, "Well, you know, in reality that did not happen because the whale's throat is very small and cannot actually swallow a person. A whale is not able to do that." The child looks at the teacher and says, "No, no, the whale swallowed Jonah," and the teacher tries to insist again, "No, this did not happen." The little girl says, "Yes," and the teacher says, "I'm sorry, but it cannot happen." The little girl thinks a moment and she says, "When I go to Heaven, I am going to ask Jonah," and the teacher says, "What if he is not in Heaven?" The child says, "Then you ask him."

You might not think there is a relationship between that joke and what we are talking about, but I was thinking about the conversation I had yesterday with one of the directors in the study. She said, "Do you realize how much I really hate you," and I thought okay, this is good. One of the challenges is the feelings that this study creates, and while people want to cooperate, and while they understand the importance of the study, they also are challenged on many levels. We talked about the ethical issues and concerns, the sensitivity of families, the fact that we are serving the neediest children, and wonder what this does to the selection process.

Just understanding the variations across Head Start programs is the first challenge. Not only must we understand home-base, the family day care model, and part-day and full-day programs; but we need to understand the differences that exist in the various states and in those communities that have competition versus no competition, enrolled programs and urban programs, and partnerships versus non-partnerships programs, and so on. Add to that integrating random assignment into the existing Head Start program operations. At the same time, we told programs that we want to stay as true to their normal process as we possibly could. Each of the decisions of how to do random assignment, and when to do random assignment, is based on conversation with each individual agency about when it makes sense for them to make these choices.

Another challenge is enrollment, which is not necessarily at a single point in time. Unfortunately, while the idea of an impact study was first discussed many years ago and was put in the legislation in 1998, it was at a time when there were waiting lists in all of our programs. We are now facing the reality that in many of our communities it is a struggle to get funded enrollment or to maintain funded enrollment once it has been achieved. After looking at the funded enrollment and calculate the number of returning children, then you come up with a new number.

Now you need the number of applications to fill all the remaining slots, plus in an ideal world, at least 11 more applications to create a comparison group. In reality, there are some programs that never quite get to a point where they have 11 extra applications and if you wait too long, because of the competition in the community, you could lose those families to other services. That means that you might have to do rounds of selections, in which you take a group of applications that are not quite enough to fill all the slots, but you still are selecting a small number of children not to receive Head Start, even before the program has filled all of its slots.

Then the program is challenged with what might happen if they do not fill all of their slots. We have alerted all of the programs that are participating that they would not be penalized in their review process if, because of the study, they did not have the enrollment numbers they needed.

I want to come back to the issue of program concerns about serving the neediest. It is important to look at how families are selected. As a result of underenrollment issues, more programs are accepting families on a first come, first served basis. If that is true then they are not necessarily ranking the neediest, which makes a random selection process just as valid as first come first served for enrolling children. Except, this is not the same on an emotional level. Family workers still believe that when a family comes in and fills out an application there is an obligation to enroll the child. It would be very difficult for them to tell the family that Head Start cannot accept the child, especially when all of the slots are not filled.

The last point is about how to ensure the staff buy-in for the study. We noticed there were several issues. However, this is where all of our site visits and discussions with directors and administrators were important. We tried to make sure people understood all aspects of the study, and we also were there to try to understand their unique realities. One problem was that these discussions occurred many months prior to the time where we were actually going to do anything.

When we were ready 8 months later, many no longer remembered what we had said and, in addition, we were meeting with staff who may or may not have been informed about the study. Often in this second visit we were starting all over again to make sure people understood all the various aspects of the study and how it would affect them. It is one thing to talk to a director about how the study will affect his/her program. It is another thing to talk to the family service staff about random assignment. Our challenge was to talk to staff, and deal with their feelings, concerns, and questions about the ethics and legality of the study design. Every parent received a letter prior to any decisions about acceptance being made. The letter said: (a) our center has been accepted or selected for a congressionally mandated study, (b) that this year, despite what we may have done in past years as a selection process, we will be using a lottery process for selection, and not all families who apply will be able to be accepted, and (c) at a later time we will be seeking your agreement to allow your child to be in the study as part of a comparison group.

What happened, however, is that when we began the discussion about feelings, ethics, and so on, a major concern from the programs was, "Why not just let us accept all of the children who come first and then whoever is left over can be the comparison group?", or "why not just go to a pre-K center or child care center or home day care and tell them they have been selected to be the comparison group?" The answer to that is we cannot do that because when looking for similarities, the characteristics must be as similar as possible. That includes the characteristic of those who come early to apply to a program. We may not know the reasons that drives certain parents to come 6 months before a program starts, versus the parent who comes when school opens. The families are ranked and the computer does the selection. Selections for both treatment and comparison groups are taken from the very top of the list, from the middle of the list, and from the end of the list. This ensures randomness, making it more likely that children who are comparable are in each group. When this is explained to program staff they do understand intellectually, but they have a difficult time coming to terms with how they will inform a parent that she and her child have not been selected for the program.

It is important to make sure information is shared across the board. It can be a problem if the staff members who actually do the work have not been kept informed. In addition, there is the issue of what is actually understood. There is always the danger of people not sharing the definition of different words. For example, what do we mean when we use the word center, or IEP—there are numerous words and concepts that we had to discuss with great care and clarity.

In terms of serving the neediest, we argued that every person who applies to Head Start is needy. We pointed out that it would be wonderful if all these families could be served, but in the

past families had to be turned away. They were not told where they fell in the ranking. They were just told, "I am sorry but we filled up our slots and we do not have enough room to be able to offer you a place," and were then told about other places to find services. That was true, but unfortunately, staff knew where the families fell in the ranking because they had the roster, while the computer might have picked the first child on the list to not receive Head Start services, or the tenth, or the twenty-seventh.

There were also issues of who actually selects the children. We came across surprising situations with partnership arrangements. For example, in a Head Start pre-K partnership we found out that it was actually the pre-K that was selecting the children and then determining who Head Start would provide support to. In those cases we could not do random assignment unless we could obtain the buy-in of the pre-K or the child care to allow us to randomly select from their rooster.

Another challenge is how carefully programs identify rosters. On the roster they have to indicate every returning child so we know who they are and how many slots are available. You will not be surprised to know that in many cases a comparison child was selected to be comparison and then we find out that child actually had 3 months of Head Start. What do we do with that child? You follow the child for the study, right, but it becomes a violation if a child who has been a comparison actually did have some Head Start experience. What happens in terms of our study with that?

Cook: If the child actually has had Head Start experience, we would not follow that child. That child would be ineligible because we only want newly entering children. However, if it is a comparison child that then enters Head Start we will follow them, but they remain a comparison child even though they are in Head Start.

Gonzales: Now you are thoroughly confused and so am I and I have been working on this for the last year. Basically, once the child has been assigned to one group, the child is followed and the data collected. If you think that is a problem wait until you see the problems with the analysis. In the analysis, there will be comparisons of not only full-day with part-day, home-base with center-base, and rural with urban; but analysis also compares variety of comparison services. In one state, the comparison services look exactly like Head Start, and some states actually follow Head Start Program Performance Standards in non-Head Start programs.

Technically, the rule is that once a child has been identified as a comparison, he or she is not eligible to receive Head Start services at any point in time. However, there is an exception to this rule : (a) after much discussion with programs, we made a decision that a 3-year-old child who was selected to be in the comparison group would not be able to enter Head Start for the rest of that program year, but when that child turned 4, if the family was interested in applying for Head Start, they would have the possibility of entering Head Start. We would be comparing children who were in Head Start 1 year versus children who had 2 years of experience. I would argue that most parents who find another service for their child and are happy with that service are not likely come back to Head Start. However, there are examples that we can think of where they, in fact, do.

Cook: The way to think about it is that children will receive different dosages of the treatment and that is just a reality of life. That is one of the reasons it is important when talking with parents and following children that we are able to understand where the children are at various points in time. The analysis will need to take those things into account. In terms of the fidelity of the study, we need to maintain that a treatment child is always a treatment child and a comparison child is always a comparison child.

Puma: We can do the impact estimate with all the children, including those who get no services, and we can do the calculation of the impact estimate on only those who receive treatment. We can calculate it both ways and that is our plan.

Question: I am really curious about kindergarten and first grade and how you are going to find the children. Right now you do not even know where they will be for kindergarten and first grade. You might have some rough idea that it might be this big city school district, but it might not, and I do not know if that is a question you want to answer now or not?

Lopez: The Transition Project showed the way for some of this. One of the things we realized is that when you have a Head Start center that is in the same community as the school, one cannot assume that the children would go to that school when they left Head Start. We learned that it is difficult to predict, and one cannot make assumptions about where the children will go. Hopefully we will be able to incorporate that into this study.

Question: You said that the children had never previously enrolled in Head Start. Does that mean that it is the parent's first time with the child in Head Start, because you could have a parent 5 years later with a different child?

Lopez: There was a good deal of discussion about where we draw the line; the final decision was made that, because we are primarily going after the effects on the child, we would have to allow for the fact that there may be a variety of parent effects. Everyone would agree that there are effects of the Head Start experience on parents, but that by and large, the greatest effects are going to be on the child. We would have to account for that in the way that we devise, otherwise we would be excluding too many.

Gonzales: We had to address the issue of siblings and finally realized that there are so many siblings in Head Start that if we eliminated siblings we might have no one else to study. Our solution was that if there were two children from the same family—defining family as not just brother and sister, but cousin, and children living in the same household—applied at the same time for the first exposure to Head Start, they would be treated together. They would either both become treatment or both become comparison children. However, if the child was in Head Start the year before and is returning, this is considered a new child applying, and would be subject to random selection and could end up in either grouping. That is just one more challenge.

Question: I am a public management person. I am curious as to how much thought you have given to the indirect effect organizational and program characteristics may be having on the service technology. For example, looking at an organized Head Start Grantee that has been receiving pre-K funding. We have been studying that in New York and that may have some real qualitative impact on the service technology. I am curious about management, overall organizational capacity variables.

Gina Adams: We actually have thought about that. We have not completely defined how we are going to measure that, but, clearly, what the whole field has been working at is integrated services, collaboration, and coordination. This is lovely for children and hard for researchers. The challenge for us is how to collect as much information about that so that we can try to disentangle it. It is a bit limited as to how much you can disentangle, but at least we will be able to have a sense of the inputs and how these issues play out together.

Puma: One of the key questions for this study is how do the impacts vary as a function of local characteristics? Another question is how do the organizational characteristics change or modify those impacts?

Question: Could you tell me why you are redesigning the wheel when there are so many other models? What makes your study different from the other longitudinal studies that have already been done?

Puma: As far as I know, this is the first time anyone has ever tried to do a national randomized experiment with Head Start children.

Question: How were they done before? Maybe I am misunderstanding.

Puma: Many of them have used comparison of Head Start children to national norms on assessments, the way FACES did, or to other types of comparison groups.

Lopez: Actually, FACES is the only other nationally representative study of Head Start and in the first two cohorts looked only at Head Start children. Based on a review of the FACES methodology, the GAO acknowledged that it was a good effort. However, they said it was not good enough to get a rigorous, scientifically defensible, credible answer to the question that they want to have answered.

Larry Schweinhart: A while ago you were talking about what might be termed assignment crossovers. It seems to me that assignment crossovers have the potential, if there are enough of them, to distort the meaning of the study. I wonder, with the pilot study, if you have gone far enough to come up with an estimate of assignment crossovers?

Cook: I do not have a percentage for you. However, there are always some assignment crossovers and we are doing everything possible to be able to capture them when they happen. The first step is knowing they are occurring. We actually had a small number in the field test—perhaps 5 out of 200 children.

Puma: The most challenging aspect of this is in places like New York City, where there are many Head Start programs and a child can walk down the street literally and enroll in another program. Trying to prevent that becomes an enormous challenge for us.

Lopez: In an earlier study we learned that crossover is just one of many different possibilities in which the study could experience difficulties. There is differential attrition, and so many other issues. That is one of the main reasons we built in an additional year of relationship building, negotiating, and so on. We told Congress in the design of the study that we felt that it was so critical to build in that year for understanding programs intimately and build relationships if we were going to have any chance of implementing the study and minimizing the number of issues that are likely to come up.

Puma: I also want to add that the programs themselves realize that it is important to minimize the assignment crossovers because they now understand the implication of that; how it would make Head Start look worse. Therefore, they are doing their best to minimize the crossovers.

Question: I come from a multicultural, multiethnic community with Head Start classes that look like United Nations. These children and families speak many different languages beyond Spanish and English. Are parents whose primary language is not Spanish or English excluded from the study?

Cook: For the parent interviews we hope to have the capacity have to translators in whatever language the parent speaks. We are not translating the instrument itself into every language, but

we will have translators available for the various languages. With the assessments it is more difficult because most of them have been normed only in Spanish and English. For that reason, we have included some nonverbal assessments. The other possibility is that for some of them, the instructions can be given in another language.

Gonzales: We explain to programs that whatever is done for children in the treatment group will be done in the comparison group, so that the experience of the assessment will be similar.

Puma: If a child cannot be assessed in English or Spanish when they are 3 or 4, we may be able to be assessed by the time they are in kindergarten or first grade. We actually have an outcome measure if they are assessed later on in the study.

In response to an earlier comment about measures and the requirement to develop a national reporting system to aggregate all this information it was clear that in the early childhood research community, the state of measurement is abysmal. What we have is the best of many really bad measures. What measures are available are often not appropriate for 3 or 4-year-olds. Many measures had been extended downward. Norms on some of them are weak when one looks at the actual psychometric data. We have gone through an extensive, obsessive-compulsive, and labor intensive process to look at every single measure.

We had to figure out how to design this study and other large studies with that in mind because programs are struggling with local assessment systems and decision making. Therefore, trying to make it possible for them to coexist as peacefully as possible and not be in conflict, but yet still accomplish the two mandated sets of goals is important

Comment/Question: I cross both the worlds of research and practice, and one of the problems that I see with the measures that you mentioned is that they would be difficult to implement in a comparison group where the agency was not doing this systematically for all their children. I also have two questions. When we used the Social Skills Rating Scale on the Transition Study, we found that the use of middle class language, such as, "does your child attend to speakers?" was definitely a challenge. Parents interpreted "attend" to mean going to church regularly. One of the challenges was translating words like "attend," that only psychologists use, into words that parents understand. I wondered if you were struggling with that? However, the real question I had was about the informed consent process. Are the percentage of parents who give informed similar in the demonstration and comparison groups? I wondered if you were able to see if your refusal rate is different among the different levels of needs that Head Start serves. Do you have any information that would tell you, for example, that the highest need families are the most likely to refuse to participate in the study?

Cook: There was no difference quantitatively. However, some of the anecdotes from our interviewers were that it was almost more difficult to get a family that did not show up for Head Start, but was in the treatment group, to participate than it was to get a control family. That was really more from a perspective of finding them rather than anything else.

Puma: It was not a lack of cooperation; it was a matter of locating them. That was the difficult part.

Gonzales: We do know that the approval rate was somewhere in the 80th percentile for both groups.

Question: I am in the 4th year of a 5-year study that is somewhat similar to what you are doing, although it did not involve a randomized sample. I am looking at two groups of Head Start children, one group who were in Head Start prior to their conversion to a Montessori curricu-

lum and another group of 54 children who were the Montessori children. I am also interested in a question earlier about what will you do at kindergarten and first grade in terms of teacher cooperation and objectivity? I continually find, that despite assuring teachers that this is not a reflection of them, some children inevitably turn up with perfect scores.

Gonzales: For one thing, the assessment of children is actually going to be done by outside assessors and not the teachers. Head Start will actually send in assessors at the points of time for assessment.

Cook: The process of getting cooperation is labor-intensive. It varies from state to state on what one has to do with a particular school district to get into a public school. We have had success in previous studies in getting into the schools.

Puma: In terms of teacher objectivity, that is why we have the multiple informants approach. We are going to observe children in classrooms. We have the teachers' perspective and the parents' perspective, which will collectively give us an idea of how the children are behaving.

Gonzales: Going back to the issue of kindergarten and first grade—this is not a guarantee, but what we have found, at least in some places, is that when the parent says, "I have given approval for my child to be assessed," it often assists the school in being more cooperative.

Lopez: Much of the information presented is available on our web site at www.acf.dhhs.gov/programs/core.

Question: When are we going to see the report?

Lopez: There are a number of reports, the final reports will not be out until 2006. A report to Congress is required by 2003. This will only be a status update. Reporting on the data will not occur for a while. Our first real report on findings will not be out until 2004, at the earliest.

Question: How do you plan on identifying and selecting the outside assessors and the site coordinators? Will these be people from the community with some familiarity with the community? I guess the question really relates to the implications of assessing young children outside the context of the learning environment and the implication of that.

Cook: The answer is yes. We have 26 Site Coordinators who have all been hired and have been on since January, 2002. The Site Coordinators were hired directly from the community. Many of them had past experience with other studies. For others we have advertised locally to find the appropriate people for those jobs. The Site Coordinators helped hire the other people we need. We have a large pool of assessors and interviewers that have been used by Westat in the past. It is important that the assessors and the interviewers are reflective of the communities' makeup and we are being careful about that.

Question: I am a Head Start Director in Minnesota and my question is on this whole conference; the burning issue for me is what would people do if Head Start goes to the Department of Education? Does the study go on; do we all roll our tents up and go home?

Lopez: I was thinking of going into cabinet making myself. This is an anxiety provoking question for many people—people in the agency, people in Head Start programs, many different people—and there is no answer. There is a great deal of speculation, and I think that the only thing that we can say is that we will have to wait and see what happens with the reauthorization

discussions and whether or not there is enough interest to move Head Start. There are many people debating both sides of the issue.

Question: Would it be possible for you to document on the web site some of the things that have come up for those facilitating research in local communities. For example, even just an inventory of the instruments that you have looked at and which ones you think are good and which are not. One of the things I believe people might want to do is to try to parallel the work that is being done in the study, even if we only look at limited variables. If you do that it would help people in local communities.

Lopez: That is a great point. What we did for the FACES Study was something similar to that. We took all the measures and listed them on our web site with detailed information about which version we chose, and we anticipate doing that for this study. The other piece you mentioned was measures that were under consideration and were not used. That is a critical point because there are so many measures to choose from. We are probably not going to post all of the measures we considered and discarded. There have been some discussions about whether or not a compendium would be helpful that would list some of the issues around psychometrics and measures and, in fact, we did a first round of that. Child trends helped us pull together some of the information for an interagency meeting where we did just that—looked at psychometrics and all the different measures that people are using, and did an expanded version of the results one could expect to get.

Question: I am still not clear about whether you will analyze or take out or somehow attempt to mitigate in your data those children who go from Head Start and are labeled Head Start to your control group and vice versa. I did not hear you address whether your analysis will remove the that influence, which really could muddy the waters. I have a second very short question, of the 85 centers, how many are Head Start Grantees?

Cook: There are 90 grantees and 475 centers.

Puma: In answer to your first question, our plan is to calculate and present in a final report the impact estimates calculated in different ways, with the entire treatment and control group and then backing out the ones who cross over the original assignment. People can judge the results themselves at that point.

Lopez: We have tried to take all of these issues into account and our web site has a log of more detailed technical information. We will be posting much more information on the web as it becomes available.

Other Federal Presentations

New Research-Based Federal Initiatives

CHAIR: Louisa B. Tarullo
PRESENTERS: Beth Ann Bryan, Susan B. Neuman, Grover J. Whitehurst, Robert H. Pasternack

Louisa B. Tarullo: We have a distinguished panel of representatives from the United States Department of Education. We will hear brief remarks from our panel and then have a discussion among the panelists and respond to questions from the audience.

Our first speaker is Beth Ann Bryan, Senior Advisor to the United States Secretary of Education, Rod Paige. Ms. Bryan started early in her career as a kindergarten teacher and since that time has gone on to distinguished service in the field of education. She was Director of Education Policy for then Texas Governor George W. Bush during the first year of his administration in 1995. After that she served as an advisor to the Texas Governor's Business Council and was a key leader in the Governor's reading initiative. She also served as Program Director for the First Lady's Family Literacy Initiative for Texas, and has been a psychological associate for 12 years in private practice involved with educational evaluation and therapy for children. Ms. Bryan earned her Bachelor's degree in elementary education and English from Houston Baptist University and holds a Master's in education, guidance, and counseling from the University of Houston.

Beth Ann Bryan: I would like to briefly go through Good Start Grow Smart, which is the policy document on early childhood for the administration. This document can also be viewed on our website.

A main emphasis of the policy will be on identifying ways to strengthen all early childhood programs to make them more effective, and particularly to help children be more prepared to succeed in kindergarten and first grade.

The second objective is to work with states and make sure they are working with their various agencies to communicate and coordinate services. One thing we have tried to do at a federal level is to model this. If we cannot do it at a federal level, it is difficult to ask the states to do it. The DOE is communicating with the DHHS on a regular basis. Susan Neuman met just a few days ago with Shannon Christian who is in charge of child care at the ACF. We also communicate with Windy Hill and Joan Ohl at the Head Start Bureau, ACYF.

There are so many agencies that have funds related to early childhood. I was fascinated when we started looking at the funding stream. There is money in Agriculture, in Labor, in the Justice Department. There is early childhood funding in just about every department in the United States government, yet we do not know what each of these departments is doing.

Part of what we are trying to do at the federal level, and trying to have states also do, is institute coordination efforts. We want them to look at their funding streams and make sure that they are making the best use of these for a clear, single purpose that everyone is focused on.

We also hope that the people who are working in early childhood are communicating, on a regular basis, with state departments of education, knowing what is expected of the children

when they enter the K-12 system. There also should be constant discussion between that system and the early childhood systems in order for everyone to know what is needed at both ends. The result will be that we do a better job of helping children be prepared to transition to school.

The third objective is providing information to teachers, parents, and caregivers. We have realized how critical it is to let anyone who deals with a child from birth through age 5 know the critical components of childhood development. We find that children are in a variety of settings. They may be with grandmother 3 days a week, with their parents some of the time, in a child-care setting part of the time, or they may be in separate child-care settings. It behooves us to disseminate information in the same way we have made sure that everybody knows the seven warning signs of cancer. Do we all know the seven important things we should be doing with very young children to help them develop well?

We have focused on the big bang for the buck that we get with improved cognitive development. However, we also care about social and emotional development. We are very interested in that and we know there has been a keen focus on these domains for a long time. We are trying to identify prereading and language development to help children function better in school.

We are looking toward strengthening Head Start, and continuing high quality teacher training and professional development is going to be critical in that effort. We want to help workers make early childhood education their career. We want to help them find ways to learn to be more professional, to feel more professional, and to be more excited about pursuing higher education.

We have many objectives. For example, we hope that the Child Care and Development Fund (CCDF) money can be more closely connected to making sure there are state guidelines in place for programs. With some guidance in the plans submitted, they may get increased matching money. We hope this will be an incentive.

There are materials that were prepared as a result of the DHHS and DOE task force. *Teaching Our Youngest*, for example, is for child-care workers, Head Start teachers, pre-k teachers, and parents. It includes specific activities that can be done with young children to enhance cognitive development. Another tool is called "7 Super Things Parents and Caregivers Can Do." They are: (a) talk often with your children from the day they are born, (b) hug them, hold them, and respond to their needs and interests, (c) listen carefully as your children communicate with you, (d) read aloud to your children every day, even when they are babies, play and sing with them often, (e) say "yes" and "I love you" as much as you say "no" and "don't,"(f) ensure a safe, orderly, and predictable environment wherever they are, and (g) set limits on their behavior and discipline them calmly, not harshly.

If everyone in the United States knew and practiced these, we would be in great shape.

Also available are the *Healthy Start Grow Smart* booklets that are being prepared for every parent of a newborn. Parents will receive these booklets every month for the first 12 months of their child's life. These booklets are being prepared now and are edited by Craig Ramey and Susan Landry. There will eventually be 13 of them, in Spanish and English.

I hope all of this information will be of help to you in your local work.

Tarullo: Now we will hear from Assistant Secretary for Elementary and Secondary Education, Susan B. Neuman. Dr. Neuman comes to the Department of Education most recently from the University of Michigan. There she was a professor of education and Director of the Center for Improvement of Early Reading Achievement. Prior to that Dr. Neuman taught at Temple University where she was the coordinator for the Reading and Language Arts Graduate Program. Her areas of focus include beginning reading, writing, family literacy, and parent involvement. She has been the coeditor of *The Journal of Literacy Research*. Her most recent books include *Handbook of Early Literacy Research* (2001) and *Learning to Read and Write: Developmentally Appropriate Practices* (2000). *Access for All: Closing the Book Gap for Children in Early Childhood* is a recent study that uncovered the disparity in books for high- and low-income children.

Susan B. Neuman: I will give you an overview of No Child Left Behind and then highlight some of the programs in elementary and secondary education and some of the foci across our various programs.

January 8, 2002 was a landmark date. It was the date that the legislation for No Child Left Behind was signed. We believe this is the most dramatic reform that we have ever seen in education. Secretary Paige says that we had an audacious goal when we signed No Child Left Behind, which was that all children should succeed. We should not triage our children, some receiving the highest quality instruction and others receiving mediocre instruction. All of our children deserve the best education. They deserve to be able to read by the end of third grade.

No Child Left Behind has four essential pillars:

1. Accountability is the central element for fundamental change across all of our programs. We cannot proceed in education until we know whether children are currently achieving or not. As we disaggregate the data, a step which is essential to accountability, we begin to recognize the disparities in the quality of instruction that our children have received. We want one system of accountability for all children. In many states there are dual systems of accountability; we assume that Title I children should have one set of goals and achievements, and all other children should have another set of goals. No Child Left Behind says there should be a single system and that all children deserve the best education. The third through eighth grade assessments are essential to accountability. Ongoing assessments help us to know, on a regular basis, how well children are achieving. Another essential element of accountability is public reporting. We need to provide evidence to our parents so that they know whether their children are achieving. Public reporting allows the states to report what is happening in a comprehensible manner, so that parents will have the necessary information to make choices.
2. The second pillar is choice. No child should be trapped in a failing school. With No Child Left Behind there is voluntary public school choice. A child who is trapped in a failing school has the option of going to a school that is succeeding for all of its children.
3. The third pillar is flexibility. This means the states now have more flexibility to use various funding streams to target their needs. In other words, if a state has specific needs in the area of professional development, it can use different funding streams to buttress and extend what it wants to do. This is critical because it require states to consider their needs, and to consider how they can use the monies available to target those needs, in order for children to achieve.
4. The fourth and final pillar is a focus on what works. In the field of reading in early childhood, there is a great deal of research and we know what should be done. However, so often when we go to classrooms, we do not see instructional practices based on high quality research. It is imperative that we begin to use the research to improve practices. To do this most efficiently and effectively, we must ensure that we apply the research in classrooms.

Our largest initiative is in Reading First, a K-3 hybrid grant program that is designed to bring research-based practice and state formula funding to local educational agencies, for children in schools of greatest need. Again, it is designed to bring proven strategies into the classroom to improve comprehensive reading instruction, and to make sure that high quality instruction is provided in those schools.

This program is funded at $900 million this year, with an increase to $1 billion over 6 years. It is a dramatic and major reform. Three states have recently passed this rigorous review and will receive their monies as of July 1st.

Our office has many early childhood programs for children, ages 0-3 and 3-5, such as Early Start, Title I Pre-k, Migrant Even Start, and Early Reading First. There are five essential elements in these programs:

1. Regardless of funding streams, and regardless of where children are, they should receive the same high quality program.

2. There will be an emphasis on professional development. We believe it is critical that we "professionalize" early childhood care. Early childhood care providers are not just providers; they are the teachers of our children, and some of us think they are the most critical and important teachers. We need to address our providers as teachers and regard them in a professional manner. We need new ways to provide professional development and to best addresses caregivers' needs. One way is through mentorship programs: going into the setting, working with the teachers, and treating them like professionals in those settings. Recent NICHD research found that teachers are more likely to stay in the profession when they feel that they are considered as professionals.
3. We need to increase quality across all early childhood settings. Often, the quality indicators that we use do not measure quality in a way that is useful. What do I mean by that? Sometimes we focus on quality as structural variables that look at environment and the quality of the environment. However, there are other more important issues to consider when measuring quality, such as language. We need to see rich language interactions in our early childhood environments, since we know that this is significant in determining eventual success or failure for children. Bruner once said that in his studies of early childhood environments, children were language impoverished and they did not have a rich, interactional language base. We need to find or develop quality indicators to examine the critical variables that are precursors to school success.
4. We have targeted and focused on cognitive development. This is not to say that social/emotional development is not important. However, cognitive development has often been underrecognized or underutilized. When I visit early childhood settings, I often see cut-and-paste curricula. I see Crayola curricula. I do not see children's minds being activated and I know that in these early years stimulation is absolutely critical to success. Therefore, one of our foci is ensuring that children receive the rich curricula, ideas, and practices they deserve.
5. Last is a focus on accountability. We need to develop a results orientation. In early childhood, we often focus on how children learn, on hands-on activities; but we don't ask about what children learn or how they are learning. We have often dichotomized the two, which is unfortunate because they need to be hand-in-hand. We need to focus on the process, but we also need to focus on the outcome.

Tarullo: Our next speaker is Grover J. Whitehurst, Assistant Secretary for the Office of Educational Research and Improvement. Dr. Whitehurst advises the Secretary on research issues in education and directs OERI, which includes the National Center for Education Statistics, five national research institutes, the National Library of Education, the Office of Reform Assistance and Dissemination, and a number of interagency research initiatives. Prior to coming to the government, Dr. Whitehurst was a professor of psychology and pediatrics and Chairman of the Department of Psychology at the State University of New York at Stony Brook. He has been editor-in-chief of two leading journals in his field and has published numerous research studies on children's development of language and prereading skills, including work with children in Head Start.

Grover J. Whitehurst: This is the Sixth Head Start National Research Conference, and it is the sixth one that I have attended, so I have been involved in this for quite a while.

My responsibility in the Department of Education is encapsulated in the Secretary's strategic plan for the department, and particularly in goal number four of that strategic plan, which is to make the field of education evidence-based. In general, that is now not the case. The goal, within a relatively short period of time, is to enable people who make decisions about education—whether they are school administrators, Head Start personnel, or parents—to think about what evidence exists that might influence their decisions. We want these people to use that evidence in their decision making.

We know that there are fields in which this routinely happens. There is no farmer, no matter how small his or her farm, who does not turn to research when making decisions about seeds, fertilizers, or soil. The farmer is not necessarily looking up studies in agricultural journals, but he or she is turning to sources of information that are presumed to be reliable and vetted. He or she utilizes that information to make farming decisions. We need to get to a similar point in education.

We need to utilize research in preschool programs. We need research that is of high quality. First, high quality must be defined; using the right tool for the task is one aspect of high quality. Given a question that has to be answered or a claim that has to be presented, we need to find the most rigorous and the strongest tool—both statistically and logically—that can be brought to bear with respect to that question or problem. Thus far, we have not done that often in the field of education. For example, I recently read findings from a study that stated, "research indicates that testing is bad for children." Looking into the study further, I found that this was a narrative report from someone who spent some time in one school in Arizona, talked to some teachers, and concluded that testing was bad for children. Testing may be bad for children, but a narrative report based on interviews with teachers in one school is certainly not the strongest possible evidence that could be brought to bear with respect to that conclusion.

We need research that is relevant for people who are making important educational decisions. That research will not always be of high value to academic peers, but we need that research, and we need it now.

Finally, we must focus on utilization of research. It does us no good to do high quality research that is relevant to important issues if no one is going to use it. One aspect of No Child Left Behind is that there must be incentives for programs to utilize research. The accountability provisions in No Child Left Behind have had effects in that area that surprised me.

We had an historic meeting, at Mount Vernon with the chief state school officers. This was the first time that the U.S. Department of Education met with this group at one time. At the meeting, I was deluged with questions about what research shows about professional development—about what tutoring programs work best and why, and so forth. The reason for these questions is that making the wrong decision results in significant consequences. Making the wrong decision could mean a school being labeled as "in need of improvement." This would lead to children being bused to other schools and result in an increase in the state's busing expenses. The school officials now know that they have to make the right decision, choose the right curriculum, the right tutoring program, and the right professional development program, to avoid funding consequences. We need these incentives, and we have to provide information in an understandable way. We are trying to do that at the Office of Educational Research and Improvement.

Most relevant to the concerns of this audience is a research competition that we launched this year in preschool curriculum evaluation research. The competition for this year is completed and there are seven grantees, and one national contractor. The purpose of this competition is to address certain questions. Which of the curricula available for purchase actually work? For which children do they work? What are the outcomes? Each of the grantees will do randomized trials, each evaluating a different curriculum, and there will be a national contractor who will develop and utilize the same pretest and posttest measures across the various sites. All of the sites will follow the children into first grade.

That competition will be repeated next year with a substantial increase in funding. We invested $5 million this year and there will be an additional $10 million for a new round of competition next year. For the first competition we received 65 applications. We would like to receive at least 200 in the next round. We will announce the rules and the timing for the competition shortly after we have confirmation of our 2003 budget, hopefully by late fall of this year.

The National Center for Early Development and Learning at Chapel Hill is supported by OERI and that contract will continue for the next few years. In addition, field-initiated projects

in early childhood are supported by funds of about $2 million a year. We are planning a new and expanded round of field-initiated competitions next year. These are open to all those who want to apply, and certainly open to those who are interested in early childhood research. We also have launched a new initiative on cognition and learning in the classroom. This focuses on basic research and is attempting to understand how children learn specific subject matter.

We also have an investment, through the National Center for Education Statistics, in the Early Childhood Longitudinal Study-Kindergarten cohort. These children are now in second grade and are being evaluated annually. You will find information about this study on the National Center for Education Statistics website. They have very interesting information on the correlation between the skills with which children enter kindergarten and their progress in academic achievement through their early school years. Another one of our initiatives is in the evaluations of Early Reading First and Even Start, the latter being the U.S. Department of Education's major investment in early childhood.

In the years to come we are going to need the cooperation and involvement of both the research and practitioner communities. From researchers, we need high quality research that is relevant, that is produced in a usable way. From practitioners we need an indication of what the problems are, and what questions need to be answered.

Virtually all of the issues that educators deal with on a day-to-day basis turn out to be empirical questions. They are problems that require solutions, and often the best solutions can be identified by research. Researchers need to be made aware of those questions and issues.

Tarullo: Some of the initiatives mentioned are good examples of interagency partnerships that are already in progress. It is better to be able to pool our resources for these large-scale studies and have NIH, ACF, and so on, add their particular interests to them. Another good example is the preschool curriculum education research endeavor previously mentioned. That is a study similar to Head Start's Quality Research Centers and uses measures similar to the Head Start FACES Study, and we should all have a great deal of information we can pool. The lessons we learn about children in Head Start and other pre-k settings will help the field as a whole. We find that this kind of collaboration and partnership, working in research across departments, is important.

Our next panelist Robert H. Pasternack, Assistant Secretary for Special Education and Rehabilitative Services in the Department of Education. In this role, he is the principle advisor to the Secretary on all matters related to special education and rehabilitative services. Dr. Pasternack has served as State Director of Special Education for the New Mexico State Department of Education where, for more than 25 years, he worked with students with disabilities and their families, increasing parental involvement in all aspects of education, particularly special education. He led the development and implementation of state regulations for special education, and created a variety of statewide initiatives designed to improve results for students with disabilities. In addition, Dr. Pasternack led the effort to develop the New Mexico Reading Initiative and led its replication in a number of other states. He received a Ph.D. in special education with a minor in neuropsychology from the University of New Mexico.

Robert H. Pasternack: I am going to talk briefly about issues concerning young children with disabilities. Yesterday I had the privilege of chairing the Federal Interagency Coordinating Council, which is one of the many responsibilities I have in my current position. The Federal Interagency Coordinating Council provides guidance to nine Cabinet secretaries on issues affecting young children with disabilities. This year, for the first time, we are making sure that the efforts of the Federal Interagency Coordinating Council are focused, and have assigned ourselves two priorities; the first one is child care.

One of the major issues affecting families of children with disabilities, particularly young children with disabilities, is the lack of access to quality child care. It is time for this country to provide quality child care to children with disabilities and their families.

The second issue is providing technical assistance, when requested, to programs in the area of young children with behavior problems. Therefore, we have added the issue of mental health in very young children to our agenda.

President Bush has created the first Commission on Excellence in Special Education. This Commission will be releasing its report to the President on Monday. The report is the result of 6 months of hearing testimony from experts and getting the public's input.

In 1975, when we began providing federal support to children with disabilities, the issue was that 1 million children did not have access to education. We won that battle and now children with disabilities have access to a free and appropriate public education in the least restrictive environment. The challenge given to us by the President is to make sure that the services provide an excellent education to these children.

In addition, the President has created, for the first time, a Commission on Mental Health. In the New Freedom Initiative, he discusses the statistics on adults with disabilities: there is a 70% unemployment rate for adults with disabilities, less than 10% of adults with disabilities own a home, adults with disabilities do not have access to transportation, and they do not have access to assistive technology. The last issue he mentions is the fragmentation in mental health service delivery across the federal government.

Families with preschoolers with disabilities want a safe and supportive preschool environment where their children can learn, grow, and develop; preschools should be accessible—not only architecturally, but programmatically—so that we may continue to include children with disabilities in growing numbers.

I want to applaud Head Start because the program requires a minimum of 10% of children enrolled be children with disabilities. Data suggests that Head Start has exceeded that minimum requirement, and that in the national aggregate it is at 13%.

Next is a need for a simplified educational service system. In the view of Secretary Paige, it is too complicated, too regulatory, too compliance-driven, and too process-oriented. We have taken the focus away from instruction and driven it towards compliance with process. We need to focus more on accountability and results. Lastly, parents tell us that they want to know how to effectively help their children learn and develop.

What do we want to see in terms of outcomes for children with disabilities in Head Start? First, we would like to see planned intervention to promote social skills and peer engagement. If we are going to continue to transform society's attitude towards people with disabilities, we must start early. We have taken one step, by integrating very young children with disabilities into the programs, so that young children get the message that disability does not mean inability. This sends the message that people with disabilities can make a wonderful contribution to the rich fabric of American life if we give them the opportunity they deserve, and that we clearly leave no child behind. Second, we would like to see comprehensive child-, family-, and community-focused interventions. Third, we want to continue to include children with disabilities in all the research activities in Head Start. Yesterday I met with some people who are doing the Early Head Start research. They want to make sure that they continue their efforts to look at issues affecting young children with disabilities in their research. Fourth, and last, we want to expand the research agenda to include the impact of Head Start on children with disabilities and their families. In order to do that, we will have to work aggressively with our federal partners, which we have begun through the Federal Interagency Coordinating Council, and through a cross-agency initiative on early childhood.

We know that, particularly for children with disabilities, early intervention works. The earlier we can identify children with problems, the earlier we can begin to deliver high quality interventions to them. When well-trained personnel deliver services, there is a higher probability of successfully changing children's life trajectories from risk to resiliency. With your help and with our continued work together, we hope to make that a reality.

Question: How do we obtain funding for research?

Whitehurst: Through OERI's field initiated grants program, there is an opportunity for individual researchers with focused questions to compete for funds.

Pasternack: We have field-initiated research projects as well. Look on our website at www.ed.gov and you will be able to find both OERI and our Office of Special Education and Rehabilitative Services.

Question: How can we obtain information about available research findings—information about interventions that work?

Whitehurst: We will be releasing a new contract in the next couple of weeks called The What Works Clearinghouse. Once it is available it will also be on the web. It will be a place to which practitioners and others can go, to determine what evidence exists with respect to particular products, materials, or approaches. They also will be able to find out what the quality of that evidence is, what effects are suggested, and the degree to which the results, if any, have been generalized across different settings, ages, and stages. We hope this will be the principal tool used for making decisions.

Looking to medicine for a model, we do not expect the family physician to turn to a journal to determine what medication to prescribe for a particular malady. However, that physician does have sources to turn to, which indicate what medicines he or she should prescribe. Those places utilize high, consistent, and transparent standards to make judgments and form those consensus presentations, and we need to do that.

We also anticipate funding to conduct research on how best to get educators to utilize research in their decision making. There is an empirical question as to whether it is a good idea to include an education research extension agent in large school districts. It would be their responsibility to make people aware of what the research suggests, with respect to particular problems, and what might aid them in decision making. They would encourage educators to utilize research. A number of other approaches come to mind as well. Unless there is high quality and valid research to begin with, there is no sense in having tools or extension agents available. There are significant gaps in education research. In some areas there is either little research, or a lack of high quality research with which to generate reasonable decisions.

Neuman: I want to mention two important grant programs. One is Early Reading First, a $75 million initiative designed to bring research into practice, focusing specifically on early literacy. The second is Early Childhood Professional Development, a $15 million initiative. This initiative is designed to bring research into practice settings, getting researchers to work with practitioners. This program focuses not only on early language, literacy, and social–emotional development, but targets those children who might have behavioral problems or special education needs. These competitions are coming out now, so I encourage you to look at the website.

Pasternack: We have a research-to-practice division at the Office of Special Education Programs that addresses the issue of how to get good research into practice, how to bridge the gap between knowledge production and knowledge utilization. One example is our Positive Behavioral Supports Initiative at the University of Oregon, which has developed school-wide models to decrease referrals for disciplinary problems by building a culture that focuses on positive behavior and supporting children when they exhibit positive behaviors. Through that center, the model we initially developed is now in practice in over 700 schools around the country. This is one of the best examples of doing good research and, once there are findings, making the information

available to the people who need it. Our research-to-practice division is aggressively trying to produce findings where we need them, and then making sure that those findings are utilized.

Sue Bredekamp: We are in an absurd predicament. We know what the needs are in the areas of curriculum development and professional development, but funding to develop strategies is not available; there are only funds for implementing proven strategies.

Neuman: That is not true in our grant program. We are not requiring researched-based professional development, because I am convinced that professional development for this population requires a different approach than we have used in the past. With Early Reading First, we are trying to create centers of excellence across the country that combine professional development, good practice, and developmentally appropriate curricula. We do not presume that we have a rich research base in professional development because, especially for early child-care workers, we do not.

Question: Where can one find information about the competitions mentioned?

Whitehurst: The information regarding the preschool curriculum evaluation is on the DOE website. That competition is closed for this year but will be coming up again next year. To respond to the previous question, I do not think there is a predicament at all, at least not at OERI. We have a large upcoming investment in reading comprehension. Rather than evaluating reading comprehension approaches, we are engaging in a long-term process to build a knowledge base about how reading comprehension is represented, and how best to teach it. Presumably from that we will develop the knowledge that will allow people to construct and assess actual curriculum interventions. I believe one needs to focus on what works, but one also needs the funding streams under which people can develop the bits and pieces, if you will, from which interventions are eventually constructed.

Pasternack: Yesterday, at the Federal Interagency Coordinating Council, one of the entities represented was Maternal and Child Health Care, and they were talking about a large-scale study that they are doing on the prevalence and incidence of disabling conditions among children around the country. The Part C program of the Individuals with Disabilities Education Act is the system of services provided to infants and toddlers with disabilities, children from birth through 2 years of age. Section 619 of Part B provides services to 3- and 4-year-old children. However, the reality is that in Part C, we have historically served 2% of what we estimate states should be serving. When I came to Washington, I wanted to know where that 2% came from. I found that there is no solid research base to suggest that 2% is a figure that states should be serving in Part C. In their study, Maternal and Child Health estimated that about 17 to 18% of children need services. They specifically mentioned children with asthma, as an example, and children with other special health needs. We fund and work with a national organization called Family Voices that focuses on the special health care needs of children with disabilities.

We are also concerned about what will happen in Head Start in the area of professional development. We would be excited to work with HHS and Head Start to make sure that professional development training focuses on all children, particularly children with disabilities and children with health issues.

Question: What are the implications of proposed changes regarding accountability and testing? What will accountability look like?

Bryan: There are some changes going on right now. First, there is a much stronger emphasis on the professional development of the teachers, helping them learn some of the intentional activities they can do with young children that will help them do better when they get to school.

The second initiative is going to be on accountability mechanisms. The Standards obviously exist, and they are not going away. In fact, they will probably be significantly increased. If what is happening in K through 12 is any evidence of the changes we might expect I believe that we will constantly see standards elevated, in terms of expectations of what children know and do. The accountability system in Head Start that is being designed will address many of these issues in the same way that accountability in K through 12 has addressed these issues. People pay attention to the standards that one is expected to achieve, and people pay attention to what will be measured. When that accountability system is determined and in place, everyone will have a better idea of what the expectations are and what the focus is going to be. Until then, there is no definitive answer. There will probably be an increased focus on cognitive development issues, and this will include ideas for improving prereading and language skills. Among other things, we want good research that determines what kinds of programs best prepare children for the K through 12 system, as well as research on children in the K through 12 system.

Whitehurst: We have a hypothesis that we have not yet tested in this country: A seamless system that begins when a child is 3-years-old, and takes a child through elementary school, would be best. By seamless system I mean a shared understanding, at least at a state level and perhaps at a federal level, for what children can be reasonably expected to learn and do at specific points in time. There should be a sequence of steps to go through, and there is a general understanding of what the skill hierarchy should be. Since we currently do not have that system, there is often no relationship between the skills and abilities learned in Head Start, or other good preschool programs, and what is expected or taught in the elementary schools. Without that continuity and seamlessness, we are likely to continue with what we have now: discontinuities in growth and development, and a nonoptimal series of outcomes for children.

Tarullo: Are you also thinking of a seamless system that would include children from birth to age 3?

Neuman: I would like to respond to that question in another way. I want to highlight another one of our initiatives, the Early Childhood Academies. Our goal there is to create a seamlessness across different contexts. We did a study called *Access for All: Closing the Book Gap*, which looked at guidelines across various states and found that child care guidelines were in the child care office of DHHS in the state. There were sometimes other guidelines in the Department of Education, and sometimes not. Neither of these offices at the state level talked to each other, and as a result children were receiving discontinuous instruction. The problem was that what was being done in good programs such as Even Start or Head Start was suddenly dropped, instead of being continued. One of our goals is to help states create voluntary guidelines that will help bring these offices together, and allow them to talk to one another. This ensures that when children enter elementary school, the standards or guidelines for instruction are appropriate to that age level. The other critical point is that we begin to merge social, emotional, and cognitive development together and move away from dichotomies.

Question: Why are representatives from the Department of Education presenting at this conference, and what is their involvement with Head Start?

Pasternack: Our presence here today is indicative of how much interest we have in early childhood, and how much we value high quality early childhood programs and rigorous research in early childhood. This same panel, with the addition of Reid Lyon from NICHD,

presented a similar roundtable at the NAEYC conference. They told me it was the first time in their 25-year history that the Assistant Secretary for Special Education had come to that conference. This is my first time at a Head Start conference, so it is probably the first time there has been this level of involvement. It is not just rhetoric on our part. Our presence here should be evidence that we are interested in early childhood, are very concerned about it, and understand its importance.

Question: What are the regulations and guidance for Title I pre-Ks, and how does that affect Head Start?

Neuman: The Title I pre-Ks are required to use Head Start guidelines, which can be augmented. Head Start, Even Start, and Title I pre-K are all successful programs and we do not want to take pieces from each program. We want to base our work on what research tells us is critical for children to learn. We want to develop guidance based on what the research tells us is best for children's development, in terms of cognition and social-emotional development.

Whitehurst: The President said, in a speech on preschool issues and policy, that he intends to provide incentives for states to coordinate preschool services. This means that the standards that apply to Head Start would apply to other state-funded preschool programs so that a parent should not be concerned about who is writing the check when making decisions about child care.

Some states have done this in an impressive way. For example, in Massachusetts there is a consistent set of standards applied to all preschool settings. The federal government or the Department of Education cannot dictate to the states what those standards should be. However, we encourage states to develop a set of standards, in order to assess what their preschool providers are doing, and to encourage all providers in the state to contribute to that coordinated plan.

Question: The Early Childhood Academies was mentioned earlier. Can you tell us more about that?

Neuman: The Early Childhood Academies is an initiative designed to focus on how to collaborate across contexts. Our focus is on how to bring the people in state offices together—people from DHHS, child care licensee bureaus, Research and Evaluation Departments, as well as departments of education, Title I Pre-K, and Even Start—and focus on the guidelines. Guidelines are important because they help the profession focus on what should be taught, what are considered good instructional activities for children, how to build a knowledge base for children, and how to focus on skills. The critical issues we will focus on are: guidelines, instruction, professional development, and assessment.

Question: What would happen to parent involvement if Head Start is moved to DOE?

Neuman: I am at the Department of Education and my programs are Even Start, Migrant Even Start, Title I pre-K, Early Reading First, and Early Childhood Professional Development—not Head Start—but I would like to address the issue of parent involvement. We believe that we can do much more in the early childhood setting, and that the setting has been underrecognized. We believe that we can do a great deal more than just enriching the environment, for example, by providing professional development to teachers so they are prepared to change children's lives. We also believe that with high quality teaching, children from diverse settings can improve and succeed in life. We have evidence of this.

I want to tell you about a wonderful program called Bright Beginnings. Prior to Bright Beginnings a school district's scores were continually increasing and then after a certain period of time they reached a plateau. The district tried to understand why these scores were plateauing.

By disaggregating the data, they recognized that some, but not all, children were achieving. The African American and Hispanic children were not achieving, while the White children were doing fine. They took 80% of the district's Title I funds, placed them in Pre-K, and designed Bright Beginnings, a program that combines much of what we know is good early childhood practice with a focus on cognitive development. My point is that when we create settings where we combine what we know about child development, cognitive development, and social and emotional development, we can make a tremendous difference in children's lives, and that is what we are trying to do in the Department of Education.

Pasternack: I am going to answer the question differently. One of the principle premises of the Individuals with Disabilities Education Act (IDEA) is the importance of parental involvement in decision making. One of our tenets is that parents are the true experts and know more about their children than anybody else. We must create partnerships and effectively involve parents in decision making. We fund a system of parent training and information centers through the United States. In addition, we have community-planned resource centers that are targeted specifically toward people of color, and culturally and linguistically diverse populations, because of their unique needs. By statute, the Federal Interagency Coordinating Council includes parents of children with disabilities, and Head Start has a seat on the council as well. We are actively engaged in promoting initiatives to involve parents more effectively.

Bryan: We are trying very hard to provide incentives for states to include, and to communicate with every single agency that deals with very young children.

Question: Tell us how you plan to look at children holistically like Head Start does.

Whitehurst: Let me point out that my role in the Department of Education is not to contribute to a national policy regarding which department Head Start should be in. My role is to address important issues about which policy decisions will be made, and to provide, through our funding decisions, the best possible information to aid people in making those decisions. I am concerned with how best to construct an early childhood education program, and what is the most appropriate role of parental involvement. These are issues that I think we should examine, and I think we should find out what the added value is of these various components. The Head Start community assumes that this is the best way to do things, and it may well be, but we need to find out.

Neuman: I can respond in terms of Even Start. When I first came to the department, there was an evaluation of Even Start that had just come out, and the response was not good: there were no effects of Even Start, which was quite discouraging. This was a comprehensive evaluation and we did not see a great effect. We decided that we needed to examine the critical components underlying the Even Start model, including parent involvement. In Even Start parent involvement is called *parent interaction* or *parent education*. From that examination, we are trying to ensure that the adult education portion of Even Start is of the highest quality. How can we begin to say what is critical about parent education, or any other component of Even Start? Looking at the evaluation allows us to strengthen each particular part and bring them together to make a stronger program.

Comment: I wanted to acknowledge the panel for being here, and I also wanted to acknowledge that we are in a wonderful time for early childhood, a time where there is funding for research, and particularly funding for professional development. Two things have been substantiated, study after study: the level of education of the teacher, and the salary of the teacher strongly predict outcomes for children. We need training, but we also need to find ways of keeping good people on the job.

Children's Early Learning and Educational Experiences: The Early Childhood Longitudinal Studies

CHAIR: Rachel Cohen
PRESENTERS: Elvira Germino Hausken, Lizabeth Reaney, Jerry West, Christine Nord, Kathleen Wallner-Allen

Rachel Cohen: The focus of this session is the Early Childhood Longitudinal Studies (ECLS) program at the National Center for Education Statistics (NCES), U.S. Department of Education. Two studies comprise the Early Childhood Longitudinal Studies program: the Early Childhood Longitudinal Study-Kindergarten Class of 1998-99 (ECLS-K) and the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B).

The ECLS program is comprehensive in its approach to gathering information about young children's lives. It takes a perspective of looking at the multiple influences on children's growth and development across numerous settings. Information about the different environments in which children live and learn, and the outcomes of these experiences, is collected from parents, other caregivers, teachers, and from the children themselves. Both studies use a multimethod approach to data collection. There are self-administered questionnaires, interviews, observations, and direct child assessments.

The data that will come from this study are quite rich, and many questions can be asked of the data, including policy questions about child care and early education, as well as basic development questions about impacts or factors that affect developmental trajectories of children over time. As the presentations are given, I encourage everyone in the audience to think about other research questions that they might explore using the data from these studies.

The first two presenters will provide an overview of the two studies. Elvira Germino Hausken is an educational statistician with the Early Childhood Studies Program at the NCES, and is Project Officer for the Kindergarten Cohort study. Lizabeth Reaney is a research analyst at the Education Statistic Services Institute, and she is working with NCES on the Birth Cohort study.

Jerry West will then highlight some of the early findings from the ECLS-K. He is Director of the Early Childhood and Household Studies Program at NCES, and his program includes the Early Childhood Longitudinal Studies and the National Household Education Surveys. Christine Nord from Westat will follow him. She works on both the ECLS-B and the ECLS-K projects, and she will talk about the father component of the ECLS-B. Our final speaker will be Kathleen Wallner Allen, who is also at Westat, and she will discuss the child-care study component of the ECLS-B.

Elvira Germino Hausken: In the late 1980s and early 1990s, there were few large-scale, national studies of the development and educational progress of very young children. The existing studies were either focused on specific outcomes, limited to children with certain characteristics, or designed to study children's educational outcomes through later elementary or middle school grades. There was no national data on how children were doing in school prior to fourth grade, and no data that could be used to study children's progress from the start of school through the primary grades. Similarly, there was no study that followed a broad, nationally representative sample of children from birth to school. NCES decided that information about young children, and how they progress before school and through school, was needed at the national level to help inform policies regarding the care and education of children in the U.S. The ECLS program was launched to respond to this need.

The basic role of the Early Childhood Longitudinal Studies program is to provide national data on children's development during the early childhood period, from birth to school entry and through the early school years. The two studies are designed to follow children longitudi-

nally as they transition from one environment to another. The studies will provide descriptive data on the children's status at certain points in time and across time, and their transitions from one environment to another, like from the home to early child care, to early education programs, and to school. The data from these studies will also enable researchers to study the effects of these different variables or factors, in terms of how they affect children's development and academic achievement.

The design of the two studies was guided by a research framework that recognizes the relationships among and between children's environments, between the child and family, and between the family and school. It is especially interested in the roles of parents and families in helping children prepare for and adjust to critical transitions, and how schools and early childhood programs respond to needs of these children. Unlike earlier national education longitudinal studies, the ECLS is not limited to the study of children's school achievement, but includes a broader focus on physical, social, emotional, and cognitive development, as well as health outcomes. It looks at how each of these factors are affected by characteristics of children's homes and early care and education programs.

The ECLS–K is a study of kindergartners, specifically children who were enrolled in kindergarten during the school years 1998 and 1999. It is the first large-scale, federally-sponsored study of kindergartners and kindergarten programs. The study is a collaborative effort involving NCES and other offices in the U.S. Department of Education, and the Administration of Children, Youth, and Families. Each agency participating in the study provides both substantive and financial support.

A number of research questions can be explored with the data from the ECLS–K: Do the gaps in achievement we see at school entry widen or narrow across the school years? How do the school experiences of children from disadvantaged backgrounds and homes compare to the school experiences of other children? What is the impact of retention on children's achievement across the early years of school? What are the benefits of full-day versus part-day kindergarten programs? What are the benefits of various class sizes? How do early home activities influence children's scholastic success and socioemotional development? The answers the ECLS-K will provide to these and other questions may assist parents, educators, and policymakers to make informed decisions about our nation's schools and education programs.

The ECLS-K began with a nationally representative sample of kindergartners attending both public and private schools. It includes children with disabilities, English language learners, first-time kindergartners, and kindergartners who are repeating kindergarten. Data are collected at multiple points in time, twice during the kindergarten year (fall and spring), and again in the fall and spring of first grade. After that, two additional waves of data are collected in the spring of third and fifth grades. We have just finished collecting the third grade data.

As Cohen said in her introductory remarks, the ECLS-K is a multisource, multicomponent study. There are four types of data collected. We collect directly from the child, the child's parent, teacher, and school. From the child we collect information about their skills and abilities in reading, mathematics, general knowledge (kindergarten and first grade only), psychomotor skills (fall kindergarten only), as well as their height and weight. The ECLS-K direct child assessment battery is administered in English, although there is a Spanish version of the mathematics assessment. Children from language minority homes are administered a short assessment to determine whether or not they have the English skills required by the core assessment battery. In third grade, we change some of the subject areas in the assessment battery. Instead of assessing children's general knowledge, we assess them in science. In third grade, children's perception of themselves is assessed through the Self-Description Questionnaire (SDQ).

The subject matter domains are assessed using a two-stage, adaptive, computer-assisted assessment instrument that was developed specifically for use in the ECLS-K. Children are first administered a set of items that range in difficulty from very easy to very difficult. Based on their performance on what is called the Routing Test, they go to a level test where we collect more

information about their skills within a specific range of ability. Parents in the ECLS-K are interviewed using computer-assisted telephone interviewing. Children's classroom teachers and special education teachers respond to self-administered paper-and-pencil questionnaires, as do their schools.

In the kindergarten year, the ECLS-K attempted to verify children's Head Start attendance. From prior studies, we know that parents and schools often misreport Head Start attendance. Thus, for any child in the sample who was identified by their parent or school as having attended Head Start the year before kindergarten, the child's attendance was verified through administrative records and contacts with the Head Start program. The outcomes of this process are included on the ECLS-K first grade data file and the kindergarten and first grade longitudinal data file.

To date, the ECLS-K contractor, Westat, has conducted some 60,000 one-on-one child assessments, and completed over 50,000 parent interviews. Children's teachers have completed about the same number of ratings of the children's academic skills and social skills. We have received over 10,000 questionnaires from teachers providing information about their backgrounds, teaching styles, and instructional practices.

The data are currently available for the base year and first grade. The third grade data are expected to be available in the fall of 2003. Lizabeth Reaney will now describe the companion study of the ECLS-K, the ECLS Birth Cohort Study.

Lizabeth Reaney: When one thinks about the younger years of development, one looks toward the years leading up to kindergarten. The birth to 3-years-old period and the preschool years are of particular importance for understanding preparation for school and early school performance. The Early Childhood Longitudinal Study-Birth Cohort (ECLS-B) begins with a nationally representative sample of children born in the year 2001 and follows these children from birth through their first 2 years of school, kindergarten and first grade.

Similar to the ECLS–K, the ECLS–B is a collaboration of many federal agencies. It is sponsored by the National Center for Education Statistics, along with various institutes within the National Institutes of Health (for example, the National Institute for Child Health and Human Development), the U.S. Department of Agriculture, the Administration of Children, Youth, and Families, the National Center for Health Statistics, and other health, human services, and education agencies.

The ECLS–B can answer a number of questions: What is the prevalence and incidence of childhood diseases and health conditions for different groups of children? What are most children in the United States able to do in the domains of motor, cognitive, socioemotional, and language development at 9 months of age and beyond? At what ages do children first enter child care, and does this vary by characteristics of children and their families? How are fathers involved in their children's lives, and how does this change over time?

The ECLS–B begins with a nationally representative sample of over 13,500 children born in the year 2001. It includes oversamples of Asian and Pacific Islander, Chinese, and American Indian births. It oversamples children who are moderately low birth weight and very low birth weight. Twins are also oversampled in the study.

Data are collected at five points in time: when the children are 9 months old, 24 months old, 4 years old, when they begin kindergarten, and when they begin first grade. Similar to ECLS–K, at various times over the life of the study, data are collected from the children, their families (both their mothers and their fathers), their child care providers, schools, and teachers.

The ECLS–B is a multisource study, where trained assessors go into the child's home. In the home, children are assessed and their mothers interviewed. Fathers are asked to complete self-administered questionnaires about themselves and their role as fathers. At 24 months and again at 4 years of age, the design includes interviews with children's child-care providers, and when they reach school age, questionnaires are completed by schools and teachers. The child assess-

ment covers all the major domains of physical development, cognitive development, and socioemotional development. From parents, we obtain information about themselves, their families, home life, neighborhoods, and communities.

When child-care providers are interviewed, we learn about the settings where children receive care, as well as about the providers themselves. More information about the content of the different instruments used can be found on the study website. The parent interview for the 9-month data collection, as well as the father instrument, can be downloaded from the website.

The ECLS-B design is complex, and the field staff is asked to do many things while in the child's home. In a relatively short 90-minute home visit, the field staff administers a 50-minute parent interview and a direct child assessment. For the direct child assessments, we use the Bayley Short Form-Research Edition, which is an adaptation of the Bayley Scales of Infant Development. This instrument was developed specifically for use in the ECLS-B. We are also collecting physical measurements such as the child's length, weight, and middle/upper arm circumference. For very low birth weight children, we measure their head circumference. We also observe parent/child interaction. We have the parent and the child perform a task together, videotape it, and then code that information for analysis. The Nursing Child Assessment Teaching Scale (NCATS) is used for this purpose.

At 9 months, we also have father self-administered questionnaires, which Christine Nord will describe. At 24 months, the same components are repeated with the addition of a child-care component, in which we interview children's child-care providers. For a subsample, we do observations. Allen will elaborate on this design feature at the end of this session.

For the ECLS–B, we are in the midst of a 9-month data collection. The first data from the study's 9-month collection should be released in the fall of 2003, and the 24-month data released in the fall of 2004. For more information on both the ECLS–B and the ECLS–K, please visit our website at http://nces.ed.gov/ecls. Now Jerry West will present some of the early findings from the ECLS–K.

Jerry West: The ECLS is an ambitious program. Between the two studies, we are always in design, always in data collection, always processing and analyzing the data; there is a continuous stream of work associated with both studies. I would like to take this opportunity to thank all the people who are presenting today, because they have done a lot of hard work on these two studies in order to get them off the ground and make the data and findings available to the research and policy communities.

I want to share some of the early findings from the kindergarten study. I will concentrate on findings pertaining to one of the many populations of children represented in our sample—children in poverty. As Hausken mentioned, the ECLS–K can be used to address numerous questions. The data can be used to examine children's academic achievement and experiences, and this can be done for different groups of children. One can do the typical group comparisons, looking at children in poverty versus other children, comparing group means, or looking at the output from various regression analyses. But one of the most valuable aspects of this database, because of the size of the sample, is that it offers detail on particular subgroups. It allows the researcher to study the variation within the population of children in poverty as opposed to just comparing these children to other children. Thus, it can be used to help answer the question of why some poor children are doing better than others.

In terms of the study, our sample is nationally representative; roughly 20% of our children live in households that are below the poverty threshold. When one looks at the distribution of children who live in households that are below the poverty threshold versus others, we see a good deal of variation. This is something we know but sometimes forget. For example, looking at the race and ethnic distribution, and the distribution for mother's education, we are reminded that not every child who is poor is a racial or ethnic minority, and not every child who is poor has a mother who is a high school dropout. While the distribution of these characteristics for

disadvantaged children is clearly different than the distribution for all children, there is some variability within the population of poor children.

With the ECLS-K data, one can study the relationships of some of these variables, including characteristics of children and of families, focusing just on poor children. What patterns do we see when we look at children who are in poverty as a single population?

As Hausken said, the ECLS-K assesses children's reading, mathematics, and general knowledge. Information from the ECLS–K reveals that all children are learning quite a lot during their first 2 years of schooling. Within the population of children in poverty, differences in children's reading and mathematics achievement by race or ethnicity were not detected. However, when we look at these same children's reading knowledge and skills by their mother's education, we see a pattern that, in many ways, looks like what one sees for the population as a whole. Children whose mothers have more education demonstrate higher levels of reading achievement at each data collection point (fall and spring kindergarten, and spring first grade) than children whose mothers have less education. The gap between these groups increases over time and is wider at the end of first grade than it was when children first came to school in the fall of kindergarten.

One can also look at the growth that occurs in these different skill sets for children who begin school at different skill levels. Again, not all children who are poor have poor skills at the beginning of kindergarten and not every child who is advantaged has high skills; there is variability in both groups. Thus, ECLS-K kindergarten and first grade data can be used to see where a child began his or her educational career and how much growth (learning) occurred over the first 2 years of school. Do children who start school with higher skills learn more over the early school years than children who begin school behind?

There are several different ways to approach this question using the variables available in the ECLS-K data. By placing children into three groups based on their beginning reading skills, we find that children who start school with a higher level of reading skills continue to maintain that advantage, and widen their advantage. The gap is around 12 points between the highest and the lowest groups at the beginning of kindergarten, and increases to about a 19-point advantage at the end of first grade.

One could also use the data to see what is going on in the lives of these different groups of children that may account for the increasing gap in achievement. Is there something about their family life, their education, the types of schools and classrooms they are in that may be facilitating the widening of the achievement gap?

We can also examine the relationships between the specific skills and resources children have when they begin kindergarten and their subsequent achievement. For the population as a whole, we find what one might expect—early factors such as early literacy (e.g., being read to, knowing letters and numbers), early approaches to learning, and children's general health relate to subsequent achievement. However, children who are below the poverty threshold come to school less likely to know letters, less likely to be read to, and are less likely to know their numbers and shapes. These children are also less likely than their more advantaged peers to be able to identify or understand the concept of relative size (e.g., how does this object compare to this object in non-standard units?). Children in poverty are less likely to be identified by their teachers as having a positive approach to learning, and are more likely to be in poorer health than children above the poverty threshold.

The findings of our analysis of children in poverty suggests that having these beginning skills and resources is important for later academic achievement. Children who are proficient in letters in the fall of kindergarten are much more likely to move on to higher skill sets during the kindergarten year and are more likely to have higher skills at the end of first grade. These patterns hold when one controls for race or ethnicity and mother's education.

Some of the nonacademic skills are also important. Poor children who come to school with a positive approach to learning, such as persisting at tasks and being attentive, do better academically at the end of kindergarten and first grade than children who do not have these skills.

In addition to looking at achievement and the achievement gap, one can also use the ECLS–K data to look at other issues, once again focusing on children in poverty. One of the things we have looked at is parent involvement in children's education. In the ECLS–K, parent involvement can be defined in numerous ways. Parental involvement data in the study ranges from informal home activities to involvement with schools and other formal organizations. Here, we are only considering their involvement with their children's schools. Again, just like children living below the poverty threshold, the more time an activity takes, the less likely parents are to do it. For things that do not require a lot of time, like going to a parent-teacher conference or a PTA meeting, there is a fairly high level of participation. But when it comes to things that require more time, such as volunteering or serving on an advisory group or panel, there is a much lower level of involvement. This same kind of pattern exists for the population as a whole.

Again, one can look at this by characteristics of children's families, or in this case, by children's parents' education. The common pattern we see in the national data for children as a whole is that as education increases, so does involvement. This same pattern is found among the population of children in poverty.

In addition to asking whether one or more parents participate in these kinds of activities, the ECLS-K asks about who participates: is it the mother, is it the father, or is it both? Our findings suggest that mothers are more involved than fathers, and that the least involved person in the two-parent family is the father. We see this repeatedly in these data and also in the data from the National Household Education Survey and other sources.

In summary, the ECLS–K can be used to study many different questions about children, their families, and their schools, as they begin their education careers. I have offered some brief glimpses at the potential of the database. I hope that you will delve into these data more comprehensively and run more sophisticated models.

Christine Nord: Over the last several years, there has been an increased interest in the role that fathers play in the lives of their children. We know that fathers play an important role, but they have not always been included in studies of child development and education. Fathers have not been asked how they feel about being a father, what they think fathering involves, or how they go about the tasks associated with being a father. Recognizing these shortcomings, studies conducted by the federal government and others have looked for ways of incorporating fathers into their study designs. The ECLS-B represents one such effort. In the brief time I have for this presentation, I would like to provide a broad overview of the father component of the ECLS-B.

The father component of the ECLS-B is intended to help answer several types of questions: Does father involvement change as children grow? What are fathers' perceptions of themselves as fathers, and do these perceptions change as children age? Is father involvement affected by children's health and limitations? Is it related to how well children make the transition to school and to their school success? Does the relationship between children's parents influence children's readiness for school?

The ECLS–B father component has two parts. First, we identify and attempt to collect data from fathers who are living in the child's home (resident father), and we define this person as the spouse or partner of the primary respondent, who is usually the child's mother. At the 9-month collection, resident fathers are for the most part biological fathers, but there are already some stepfathers and adoptive parents at 9 months. Second, we attempt to identify and collect data from biological fathers who are not living with their children (nonresident fathers). We have heard about the difficulties studies have had trying to identify, locate, and get responses from these men, and about how these efforts can consume study resources. Therefore, we added the criteria that nonresident fathers had to have contact in the last three months with either the mother or the child to be eligible for the ECLS-B. It did not have to be physical contact; it could be telephone or mail, but they had to be in touch with the mother or child in some form. In this way, we hoped to limit the size of the nonresident father sample and to be able to find and gain the cooperation of this group of men.

In the ECLS-B, like most other studies, we rely on the mother for information about the nonresident father and only attempt to contact fathers with the mother's permission. There are two reasons for this. First, we sample from birth certificates, so we do not necessarily have any information on the father, and we need the mother to give us the information. Second, after a divorce or separation, we do not know the circumstances surrounding the couple's decision to split up, and we do not want to get into the middle of situations with high levels of conflict.

Collecting data about nonresident fathers has many challenges. First, the mother must be willing to identify the father and give her permission for the father to be contacted. Second, she must be willing and able to provide the information that is needed to locate and contact the father. Sometimes, this information is not accurate. And then, of course, we have to get the father to agree to participate and answer questions about his role as the father of the sampled child.

There are two ECLS–B father questionnaires, one for resident and one for nonresident fathers. The two questionnaires contain some questions that are asked of both resident and nonresident fathers and some questions that are only asked of resident fathers or only of nonresident fathers. For all fathers, we ask about their feelings on being a father, whether they were involved during the pregnancy of the child, and about their current relationship with the child's mother. We also collect information on the father's employment, education, and background.

Resident fathers, because they are living with the child, are asked about their expectations for child development—what they think children of different ages are capable of doing. We ask about the types of activities they do with their child, and we ask if they have been separated from their child for a week or more. The resident father questionnaire at 9 months consists of about 80 questions, so it can take 15 or 20 minutes to complete. Of nonresident fathers, we ask the more typical questions that one sees in the research literature: the amount of contact they have with their children, whether they are expected to pay child support, and if so, how much, and about their current living arrangements.

The father questionnaires in the ECLS-B include several questions that are also in the Early Head Start Father Study questionnaires and in the father questionnaire being used by the Fragile Families Study. Through the DADS (Developing a Daddy Survey) group, the three studies have tried to work together to provide an integrated view of father involvement.

The samples of these three different studies are quite different. The ECLS-B is the largest (13,500), is drawn from birth certificates, and is representative of children born in the U.S in 2001. The Early Head Start study is focusing on 17 Head Start sites, and there are about 3,000 children involved. The Fragile Families Study sample is comprised of 4,700 families, primarily unmarried couples who were sampled from hospitals in 20 cities. The hope is that the ECLS–B will provide the broad context for which these other studies can compare their populations and have a point of reference.

In developing the questionnaires, we drew on Michael Lamb's model of father involvement. Three types of involvement were tapped: (a) *interaction*, how actively engaged the father was with the child; (b) *accessibility*, whether he was present and available should the child need him or want to seek him out; and (c) *responsibility*, the ways in which he was taking the requisite actions needed to foster the health, growth, and development of the child, even if just maintaining a job or taking the child to the doctor.

To measure each of these three types of father involvement, various ECLS-B questions are asked. For interaction, there are questions on activities like playing peek-a-boo, holding the child, reading books to the child, telling stories, singing songs, or taking them on outings. Accessibility includes the separation questions, as well as the number of hours the father works per week, and whether they work shift work. For resident fathers, accessibility also includes questions about how often they provide child care for the child. Responsibility questions center around issues like actively taking care of the child, changing diapers, and giving them bottles; but it also includes broader questions, like providing hospital insurance and benefits through work.

The nonresident father questions includes questions about the father's contact with the child and his involvement at the child's birth, such as how soon after the child's birth he held the child. At 9 months, we had a rather short questionnaire for nonresident fathers—it was only 10 minutes long—so we did not collect information on the activities they did with the child. At 24 months, we will collect information on activities.

The accessibility questions for nonresident fathers include questions about contact with the child and his or her mother, and how much time he spends with the child. There are questions about provision of responsibilities and taking responsibility for the child. There are questions about formal child support and the types of informal support they provide for the child (e.g., buying clothes and diapers, giving the mother extra money to help out, paying for child's health care and expenses, helping with repairs, and making rent/mortgage payments for child's household).

Questions for resident fathers about fatherhood include how they think about themselves as fathers and what they think are the important things that fathers should do. Similar questions are asked of nonresident fathers, and we ask these men whether they want to be involved in raising the child in the coming years.

As mentioned earlier, the resident father questionnaire has about 88 questions, and the nonresident father questionnaire is a lot shorter, with 38 questions. The shorter questionnaire was developed to help raise the response rates for nonresident fathers. In the first ECLS-B field test, conducted in the fall of 1999, the response rates for resident and nonresident fathers were 72% and 55%, respectively.

The nonresident father questionnaire was shortened as part of a major redesign effort. The use of the shorter questionnaire, together with other data collection changes (e.g., paying fathers for participating up front and following up immediately for nonresponse), improved the response rates in a field test conducted in the fall of 2000. In this second field test, the resident father response rate was 85%, and the nonresident father questionnaire response rate was 67%.

Kathleen Wallner-Allen: The ECLS–B recognizes the important role that child care plays in children's lives and has made child care an integral part of this study. The key goals of the child care component are to determine the quality of the care children receive, and to ascertain the characteristics of children's nonparental care settings, both formal and informal.

The ECLS-B collects data about children's child care and early education settings in three ways: During the primary caregiver interview, mothers are asked about any child care their child is currently receiving; a telephone interview is conducted with the child's primary child-care provider; and the child's primary child-care setting is observed. The data that are collected about child care contributes to, and complements, the data that are collected through the child assessments, the parent interviews, and later, the children's teachers and schools.

The data from the child-care component will be used to answer a variety of questions about children's early care and education. One of the important research questions that this study will be able to address may be of particular interest to the participants at this conference: What are the early child-care experiences of children living in poor families who may be eligible for Head Start? Because we collect data about these children before they enter Head Start, we will be able to learn about the types of child-care experiences these children have before Head Start, and about the experiences they bring with them to Head Start. Another research question has to do with child outcomes: How do aspects of, or differences in, children's child-care environments influence the child's development and later school achievement?

Because we will collect information about the child-care setting using different instruments—a caregiver report and direct observations—we will be able to make comparisons between these different sources. This is a third research question: How different is the information collected during the child-care provider telephone interview from information obtained through observation of the child-care settings? Answers to this question are of both substantive and methodological interest.

A parent interview will be conducted at each wave of the study, and at each of these visits, parents will be asked, among other things, about the study child's nonparental child care arrangements. If a child has a regular nonparental care arrangement, a telephone interview with the child's primary caregiver will be conducted at 24 and 48 months of age. If the child is in center-based care, there will be two parts to this interview. First, a short interview will be conducted with the center director. Then, the child's teacher will be interviewed by telephone.

A child-care observation study will be conducted when the children are 24-months-old, and again at 4 years of age. If the child is in a center-based arrangement, the center director will also be asked to complete a short questionnaire. The presentation today will focus on the child-care components at 24 months of age; however, it is anticipated that the child-care components at 4-years-old will closely parallel those at 24-months-old.

All child care arrangements will be initially classified into three basic types. We have center-based care and two types of home-based care. Center-based care is care that does not occur in a private home. It typically takes place in a school, community center, or its own building and includes preschools, nursery schools, and other types of child care centers.

Home-based care is provided in a private home, either the child's or another person's. It may be provided by a relative or by a nonrelative. Relative care includes care provided by a relative other than the child's parents, such as siblings, grandparents, aunts, and cousins. Nonrelative care is care the child receives from someone who is not related to him or her. Examples of this type of care arrangement are nannies, the neighborhood sitter, or a family child-care provider.

During the parent interview, we will obtain information about participation in child care. A child is considered to be in child care if the child receives care, on a regular basis, from someone other than the child's parents. This includes any care that is received on a regular basis, whether or not a fee is charged, but does not include occasional babysitting.

To be eligible for the child-care provider study, the arrangement must be with someone other than the child's parents or guardians, and the child must be in the arrangement 10 or more hours per week. If a child is in more than one arrangement, the provider with whom the child spends the most time is selected.

The child-care provider telephone interview is an interview that lasts approximately 30 to 45 minutes. It is usually 45 minutes for centers, and has two separate parts for the director and caregiver/teacher, and 30 to 40 minutes for home-based child care. During this interview, information is obtained about a variety of different aspects of the child-care setting and child-care environment. Information is collected about the structure, organization, staffing, services provided, the care of the study child and other children in the setting, the temperament of the study child, the caregiver-child relationship, parental involvement, caregiver beliefs and attitudes, the learning environment, and the caregiver's background, health, and income.

While a telephone interview is suitable for collecting certain types of data, it is limited in its ability to obtain certain information about children's child-care settings. Characteristics such as the nature of the caregiver-child interaction, the caregiver's warmth and sensitivity, the availability and adequacy of learning materials, and other characteristics of quality that are directly experienced by the child, are best obtained through observation. The primary care setting will be visited by trained observers for a sample of 1,720 children in the study.

A child-care observation will be conducted with both home- and center-based providers who complete the telephone interview. The child-care observation sample is supported by the Administration for Children, Youth, and Families (ACYF) and will include both a low-income group and a non-low-income group. AYCF is interested in the low-income group of children who will potentially be eligible for Head Start when they get older. ACYF is interested in learning about the types of early experiences these young children have prior to entering Head Start. A major purpose of the child-care observation is to enhance the information about the types and quality of child care received by children who are essentially Head Start eligible, and to then link differences in the quality of care to children's later health, development, and academic achievement.

The child-care observation will take about 3 hours to complete. Child-care observers will go into the settings and record the number of children and adults in the study child's classroom so that the staff-to-child ratio and group size can be calculated. The observation instruments will include the Infant/Toddler Environment Rating Scale (ITERS), the Family Day Care Rating Scale (FDCRS), and the Arnett Scale. Both the ITERS and FDCRS are ratings of child-care quality that are based on features of the classroom and the caregiver's interaction with the children. The ITERS and the FDCRS are ratings of the quality of the setting, and the Arnett scale is a rating of the quality of the caregiver, at the caregiver level.

The End of Visit ratings are global ratings that are made by the ECLS-B child-care observer at the end of the child-care observation. The observer is asked to rate the overall positive relationship of the caregiver with the study child, and with all of the children. They are also asked to rate the child-centeredness of the care setting, and whether the focus is on the child's needs or the adult's needs. Finally, they are asked to give their overall impression of the child-care setting on a scale of 1 to 5.

For some of the care settings, like the center-based care, there is a short, 10-minute, self-administered questionnaire that is completed by the center director. It builds upon the data collected in the telephone interview, and the purpose of the questionnaire is to collect additional in-depth information about the center, including program operations, and collaborations with other agencies such as Head Start and Early Head Start recruitment staff. It also asks for information about the background of the center director.

A field test of the observational study and child-care provider telephone interview was conducted from May to December 2001. The field test findings are not yet available, but I want to talk about the field test experience and the challenges that we face with the study. In the field test, 249 cases were fielded for the child-care provider telephone interview, and of those, we completed 87%, or 217 cases. For the observation study, 117 cases were fielded among all low-income children in care and half of the other children, and 95 cases were completed (81%). Of the 117 observations, 46 were relative care, 35 were nonrelative care settings, and 36 were center-based care. Response rates varied by the type of care setting. Centers were the most likely to be completed (89%), and nonrelative care settings were the least likely to be completed (71%). The relative care completion rate was around 82%.

One of the challenges for any child-care study is that children's child-care arrangements change. There is a high provider turnover rate in the child-care field. Therefore, one of our goals was to complete both the telephone interview and the observation as quickly as possible following the parent interview, so that we limited the number of changes in arrangements between the time the arrangement was identified and the observation completed. Ideally, we would like all the information in the parent interview to match the telephone provider interview and the observation.

On average, it took about 4 weeks to complete the child-care provider telephone interview following the initial parent interview, when the arrangement was a center. Relative care and nonrelative care each took about 17 days. Centers took longer because there were two contacts, one with the center director and one with the child's primary caregiver/teacher. It took another 3 weeks, on average, to complete the child-care observation once the telephone interview was completed. Observations of center-based settings were completed within about 22 days, while those of relative care took about 25 days and nonrelative care took 17 days.

Overall, it took between 5 and 7 weeks to complete the child-care provider telephone interview and observation. It took the least amount of time to complete the nonrelative care settings, with 34 days on average. It took the longest to complete center-based care settings, with 51 days on average, which was not surprising given the multiple contacts at the center. Relative care settings took about 42 days.

I would like to conclude with some of the challenges that we face with this particular component of the ECLS-B. Many of the challenges are common to all child-care studies, but some are a

particular problem for ECLS–B. We can think about these challenges in terms of the child-care providers and the child-care observers, starting first with the providers. First, we have to secure the mother's permission to contact the caregiver, and this happens during our parent in-home interview. Once a parent tells us that their child is receiving care on a regular basis from someone other than his or her parents, we ask the parent to give us permission to contact the provider. We also need the parent to give us the information that is required to contact the caregiver. At this point, it is important that the field staff member has established a good rapport with the parent so that she will let us talk to the child-care provider, and in some cases visit and observe the child's care setting.

Parents are asked to sign a permission form that gives us permission to contact the provider. This permission form is sent along to the provider, so they can see that we have the permission of the parent to contact them. In the field test, we also ask parents to contact the provider to tell them to expect our call. An introductory letter and a packet of information about the study are also sent to the provider. In the national study, we are going to provide a more complete packet to the parent to give to the provider, so that they can get the information more quickly. One of the problems that we have with locating providers is that mothers know where they take their children, but they do not necessarily know the address or the last names of the providers. So by giving them a packet in advance, we hope to correct what we experienced in the field test; we were running into situations where we had called and sent the letter, but the provider had not received the letter because of incorrect address information provided by the parent. Then they wanted to see the letter before agreeing to participate, which slowed us down.

That brings us to the second challenge, which is convincing caregivers to participate. Like many other studies before us, we had to respond to provider concerns and suspicions about who we were and why we were asking these questions. In some cases, we had to assure providers of our intentions and that we were not representing a licensing agency, checking up on them, or doing anything that could potentially harm them. Another challenge was scheduling. Child care providers are busy people, especially the better ones, and they want to be with the children all day long. They are taking care of children, which is their first responsibility. It is sometimes difficult to get in touch with these people and schedule a time when they can do a 30- to 40-minute interview.

In some cases, particularly in some of the center-based settings, we ran into situations where they were interested in participating but wanted to check first with the corporate office. In other cases, they wanted to check with other officials or organizations that were providing them research monies or operating funds, to ask if their participation would be acceptable. One last challenge, as I mentioned earlier, is changes in the child-care arrangements. Children stop arrangements and providers leave, so we need to get to them as quickly as possible before all these changes occur.

Now for the challenges associated with the child-care observers. There are many benefits associated with the ECLS-B being a nationally representative study of children. However, this feature of the design presents some challenges to training and to maintaining the skills and reliability of the child-care observers. Many child-care studies are located at a limited number of sites. Observers have a local home base and other people that they interact with, and from whom they can learn. The child-care observers in the ECLS-B, like the cases they will work, are not highly clustered. Thus, in the absence of the types of supports just mentioned, much care and attention must be given to keeping their skills sharp and their motivation high over a long field period.

The size of the ECLS-B study and the dispersion of cases across the country makes it more difficult to find the right balance between a workload for a given area that keeps travel costs down, and one that provides enough work to keep each staff member active and productive. No one wants to work just 3 hours each month. They want more hours and a consistent amount of work and income. There are also limits to the travel budget.

One final challenge pertains to the language of the child-care providers. In the field test, we had bilingual child-care observers and bilingual telephone interviewers to conduct interviews and observations in both English and Spanish. The demands for these types of resources will be even greater in the national study. The oversample of Asian and Chinese children requires other resources.

We have a difficult task ahead of us, but we are cautiously optimistic and look forward to the start of the 24-month data collection in January of 2003 with the first child-care provider interviews and observations.

Cohen: I would like to thank the presenters and the audience for their interest in the study and for coming to hear the speakers and their presentations.

West: If anyone wants more information about the ECLS-K and the ECLS-B, please email us at ecls@ed.gov or visit our website at http://nces.ed.gov/ecls.

Child Development

The First 3 Years of Life: What Is Known and Where Is Research Needed?

CHAIR: Lonnie Sherrod
PRESENTERS: Marc Bornstein, Robert N. Emde, Judith Jerald, Deborah Phillips

Lonnie Sherrod: This will be a combination of a symposium and a conversation hour in that we have four panelists who will discuss what is known and where research is needed. Then we are going to open it up to questions and audience participation. We are quite privileged to have four eminent panelists who have been involved in research on the early years of life throughout their professional careers. We have an ideal panel, from both the perspective of their own past research as well as from a science policy perspective, for addressing this kind of research agenda in the first years.

Our first panelist is Deborah Phillips, Professor and Chair of the Psychology Department at Georgetown University. She was Study Director of the National Academy and Institute of Medicine Commission that produced the report *From Neurons to Neighborhoods,* and has been active throughout her career in promoting the research agenda on the early years of life from a science policy perspective.

Deborah Phillips: I am going to share with you today the research recommendations from the *Neurons to Neighborhoods* report. It is important to recognize that the report's advisory committee is not one that just offers advice to a group of people who then run off and write a report. This is a consensus document. Every individual on the committee signed onto the review of the science and the recommendations that came out of this report. After there was consensus from the committee, it went out to a series of reviewers. In this case, 12 reviewers combed through the report. We responded to every single comment from every single reviewer, revised the report, and then sent it back to the committee for a final sign-off.

It was an extremely rigorous process. The reviewers, as well as the committee members, were asked to review the report for its scientific integrity. At the point that one leaps from reviewing the scientific literature to making recommendations for either policy or research, there is a rigorous test to see that one does not depart very far from the research reviewed. That is part of what lends tremendous credibility to reports from the National Academy of Sciences.

The report arose at a moment when "science" was being applied to early childhood practice in ways that were making many individuals in the scientific community nervous. When scientists get nervous, they tend to come to the National Academy of Sciences and say, "Sort through the science and tell us what it says, and, just as importantly, what it does not say." Fundamentally, much of what we were dealing with is the nature/nurture debate, and our first conclusion in this report is that portraying this debate as nature versus nurture, and partitioning the variances, is overly simplistic and scientifically obsolete. The conclusion was that looking at 0 to 3 is too late, because the prenatal period is crucial,and there are still important developments

occurring after age 3. There is nothing magical that happens on a child's third birthday where growth somehow stop, as if environmental mental influences do not matter anymore.

We also dealt with another debate at the time: parents do not matter at all versus parents determine who we are. For the committee, it is a matter of reflecting the science. The science is of course at neither one of these extremes; it is a very intricate, fascinating middle ground. That is what we were trying to portray. One of the most important things these reports do is try to distinguish the boundaries.

We discussed three broad directions. The first was to integrate research on child development, social development, cognitive development, neuroscience, and molecular genetics. It is at that intersection that we were going to learn about how to increase the odds of both favorable birth outcomes and adaptive development over the early years of life. We need to understand how the biogenetic and environmental factors interact in a reciprocal fashion to influence developmental pathways. That is the broad theme of the program of research going on at the National Institutes of Health (NIH).

Second, the committee stated that there is a pressing need to integrate basic research, which is aimed at understanding developmental processes, with intervention research, which assesses efforts to affect those processes and thereby affect developmental outcomes. Evidence from the basic sciences on factors that shift developmental trajectories toward adaptive or maladaptive outcomes is, at best, haphazardly translated into the design and evaluation of initiatives aimed at changing the course of development.

Similarly, those who study interventions lack systematic opportunities to feed back what they are learning into the basic science enterprise. There is a big gulf here. This conference is one of the few to deliberately bridge that gulf, and it is quite remarkable in that sense. Finally, the committee was hard on the early childhood enterprise and called for a major overhaul of how we go about evaluating early childhood interventions.

In terms of the first goal, integrating child development research, neuroscience, and molecular genetics, there is actually little research on early environments and experiences that are incorporated into the developing nervous system. Moreover, only a handful of investigators actually have the necessary skills to assess the effects of early interventions on various indicators of neurological functioning. However, this area of intervention is essential to tease apart the threshold below which development is compromised, and above which development is probably on a good track. It is a thorny question, since development is likely to vary for different children.

Second, there is growing agreement among scientists and clinicians that the underlying roots of attention problems, learning difficulties, and conduct disorders are actually found in the interactions between biological vulnerabilities and environmental demands. Further research in this area is likely to affect both the development of interventions aimed at children with impairments and the development trajectories of children who are relatively free of problems. The growing appreciation of individual differences and similarities to environmental risks has galvanized both the behavior scientist and geneticists, yet researchers trained in these two impressible traditions rarely work collaboratively. That is only beginning to change now.

Collaborative endeavors between these two groups could more fruitfully explore important concerns such as differential birth outcomes associated with exposure to seemingly similar prenatal hazards—such as malnutrition, infection, and drug exposure—and the emergence of adverse outcomes ranging from conduct disorders to pathology. The increasingly sophisticated tools of molecular genetics and neurobiology, combined with our growing capacity to assess developmental outcomes in young children, offer the potential for important insights into the processes that lead to a range of developmental vulnerabilities and diagnosed disabilities.

I will try to pull together the basic science of human development and intervention sciences on early childhood programs. Research on early childhood pathways toward psychopathology,

which bring together those who study social/emotional development from a variety of disciplines and those involved in the design and implementation of both preventive and therapeutic interventions, hold the potential to accomplish at least three things that are highlighted in *From Neurons to Neighborhoods*:

1. Elucidate the pathways toward psychopathology, and identify the factors that leave some children, over time, at continuing risk and that steer other children toward more adaptive outcomes;
2. Distinguish early clinical patterns that are indicative of serious emerging disorders as compared to those that are more targeted and that, in some ways, we do not have to worry as much about; and
3. Support the efforts from such evidence into initially small-scale interventions designed to go from understanding to trying to affect development.

Toward this end, we call attention to the importance of thinking about interventions, geared toward preschool classrooms, that offer a promising avenue for advancing the detection and identification of problems that often emerge when children are first thrust into a peer group— a situation where they have to comply with less individually tailored adult demands.

Research that focuses on how early biological insults, such as iron deficiency anemia, lead ingestion, and adverse environmental conditions, interfere with healthy prenatal and postnatal development, combined with efforts to design both preventive and emulative interventions for women and children exposed to such stress, could address significant issues. The issues include trying to understand the timing and duration of exposures, and how those exposures affect the timing and duration of their consequences. What can be learned about the capacity for recovery, and individual difference in the capacity to recover from exposure to these threats? What does it take to produce improved outcomes for children who are exposed to different timing, different dosages, and different qualities of risk factors? What are the factors that contribute to individual differences and outcomes?

The committee reached strong agreement that there is little scientific merit in research that simply reconfirms that poverty is bad for children. We know that poverty is bad for children; we do not need to show it repeatedly. What we need at this point is to understand the mechanics that account for that link. We have an entire chapter in the report devoted to the world culture in early development. This is an area in great need of additional high quality research, blending quantitative and qualitative methods. While there has been much discussion about it as a critical need, we still have not seen the kind of research effort mounted that our social trends demand.

For example, we have basically concluded that we do not need yet another study showing that higher quality care is better for children than lower quality care. The people who believe the evidence do not need another study to show it to them again. The people who do not believe that evidence, and there are many, are not going to be convinced by another correlation study that quality matters for child development.

Hence we suggest pushing the child care research field more toward the early intervention research field. Looking at quality as a complete continuum, from the best early intervention program to the worst child care program, is a false dichotomy although we think that the distributions of quality align themselves that way, based on prior evidence. Perhaps using experimental designs to study child care quality would finally convince people that it is a continuum, and it does matter.

One of the thorniest dilemmas from the report is that parents matter a great deal. It is difficult to change parenting. On the one hand, basic science says to intervene with parents. On the other hand, intervention science says it is hard to (a) change parenting, and (b) change it enough to actually affect the child. This is another area where we need to put these two research literatures together and do a better job of understanding what it takes to influence parenting enough to influence children.

We were hard on the early evaluation enterprise. We call for several things in this area. First, we give much greater attention to studying program implementation as a first step in evaluation signs, and as an ongoing part of looking at whether a program works. It is absolutely critical to being able to interpret the results of a "does it work" type of design, and to understand the processes underlying positive or negative program results. This has been put forth repeatedly, and it still has not been taken seriously. In Early Head Start, we plunged right into "Did it work?" because of political pressures. At least for that program, we are trying to get the implementation data at the same time.

Second, we feel that much of the evaluation research in this field is not providing credible answers to the questions that need answering, especially the questions about whether it works. One should use the most strident design possible. It would be good to use a randomized trial, or as close to it as possible, because that is the only way to get a credible answer to questions. It cannot be found in other ways. We also call for the need to synthesize evidence across studies repeatedly. We have seen this with Early Head Start. A particular finding from a particular report on a particular program is highlighted but is rarely embedded in a broader synthesis about that domain of activity. We actually charge NIH with doing that type of activity through a variety of consensus conference mechanisms it has in place. They are very credible. They tend to be used for medical research, and we think they should also be used for social science research.

Our final recommendation is to make sure that child developmental outcomes are included in interventions that are often not thought of as childhood interventions. That is actually now happening. Examples we give in the report are welfare reform initiatives, and we are conducting a huge amount of scientific work which looks at the developmental consequences of welfare reform. The other example we use is housing interventions. There are some exciting interventions going on with housing, and the Moving to Opportunity program is including child outcome data in their evaluations.

Sherrod: Our second panelist is Marc Bornstein, who is Head of Child and Family Research at the National Institute of Child Health and Human Development (NICHD). For the past 6 years, Bornstein has been Editor of Society for Research in Child Development's (SRCD) preeminent journal *Child Development*, and he has just started a new journal entitled *Parenting*.

Marc Bornstein: The second half of the 20th century, roughly 1950 to 2000, witnessed the success of 0 to 3 infancy studies in terms of our understanding the capacities and competencies, as well as the limitations, of young infants. Michael Lamb and I just published a fourth edition of *Development in Infancy*, which reviews what we think is validly known about infancy studies.

However, I would like to turn to the task of raising three burning issues in infancy studies. They represent rather simplistic versions of the incredibly rich text that Phillips has just rendered for us. The three issues are (a) specificity, (b) parenting, and (c) ethnic and cross-cultural variability associated with the first years of life.

On the issue of specificity, early in development of infancy studies, one looked at the general phenomenon either on the input side, experience, or on the infant development output side. Sometimes there were predicted results; sometimes there were not. One of the reasons there was a degree of haphazardness to the literature resulting from infancy studies was the failure to specify what domains of competence one would be looking for in the infant; and what environments or experiences one would be looking for.

Rather than these universal experiences, there may be related developments in infancy, and more specific linkages. We needed to define how responsiveness in the language domain was related to specific language developments as opposed to general responsiveness for the Bayley, which was the outcome of interest at the time.

In looking at the relative importance of 0 to 3 years of age for later development, one needs to have in the back of one's mind the issue of specificity. That normally concerns what the

independent and dependent variables are, as well as the types of models one is adopting to detect these phenomena. Is one looking at the role of early experience for later development? Is one looking for the role of contemporary experience in later development? Is one looking at the role of continuing experience for later development? When one is looking at the role of contemporary experience, is one taking into account and factoring out the role of early experience? When one is looking at early experience, is one factoring out the role of contemporary experience in order to pen the phenomenon down to early experience? That type of model is not used much in the development of literature, and it merits more attention.

Moreover, those influences of early experience, whether it is parenting or structure of the environment, need to be separated from the role of the child and what the child is bringing to his or her own development. One must look at early experience, factoring out later experience. There are techniques, from regression to structure equation modeling, that allow us to do such things. We need to look at the actual experiences and outcomes in a much more specific way, and then look at the temporal domains in which those experiences are operating. That will tell us more about specific pathways of development in terms of understanding whether there is a significant importance in the 0 to 3 range.

This does not mean that later development is unimportant; we all know that it is. However, a concern of 0 to 3 interests is whether there is something special about that period. There has historically been an intellectual strain of thinking that has put special emphasis on infancy. There is still a debate in the literature that rears its head periodically with the publication of books such as *Altering Fate,* by Michael Lewis, and *Three Seductive Ideas,* by Jerry Kagan, which asks whether there is something special about infancy. Although one may criticize that position, the question in many cases is still open, because the nature of the parities approaching it have not yet reached the crescendo they need to.

If we want to look at pathways and longitudinal studies, as well as the aggregation of early experiences, we want to look at how early experiences through, for example, some butterfly effect, have unanticipated long term outcome effects. One needs to submit them to experimental parities such as I have just described.

The second issue I want to discuss is the issue of parenting. A book such as *The Nurture Assumption* by Judith Rich Harris gets a lot of press and takes people's minds in a direction that asks whether parents matter. Many people can see that parents matter in terms of their genetic contribution to the child, but do the experiences which parents provide matter? Again, we are talking about the 0 to 3 range. The question is, which parent-provided experiences, of whatever genetic contribution there may be, matter to which infant competencies?

Even after all this time, there is an incredible amount of work to do in understanding the mechanisms of action and pinning down which domains of child development are affected by which aspects of parenting. When do they have their effect? Are those effects transitory or long-term? We are in the 0 to 3 year range when the preponderance of children's experiences, both social and environmental—that is, in the structure of the local physical environment—is within the purview of parental responsibility. How do those decisions on the part of parents, conscious or unconscious, influence their children's development? We still have a number of specific questions to answer about parenting effects.

Third is the issue of ethnic and cross-cultural perspectives. From the point of view of infancy studies, there are some universals, in terms of the developmental tasks, which infants are challenged by, and need to address and achieve. There are some universal tasks of parenting which, in interaction with those developmental tasks of infants, foster optimal development, or at least survival into adulthood and reproduction. We also are aware from cross-cultural, cross-ethnic, cross-race, and culture studies that there is tremendous variability both in the quantitative and qualitative approaches that different people take to these developmental tasks of parenting.

Further specification of that ethnic or cultured variability is necessary to understand more

fully the scope of experience in the first several years of life and how we as adults come to be unique individuals. Imagine what I would be saying and what this would be like if this meeting were being held in Uganda or Japan. Would we be talking about the same things? Would the burning issues be mostly the same? Some of them would be. Would some of them be different? By all means. The cultural, ethnic, and racial kinds of variability in understanding the first 3 years of life, and how we become who we are, are a third burning issue.

Sherrod: Our next panelist is Robert Emde, who is Professor in the Program for Early Developmental Studies in the Department of Psychology at the University of Colorado, and is also currently a visiting professor at University College in London. Emde was also a leader for one of the first MacArthur Foundation networks on the transition from infancy to toddlerhood. These groups have a very important influence on research during the early years.

Robert Emde: I am going to talk about two things. First, I am going to discuss Early Head Start, whether it works, and, if so, how. The second topic regards a diagnosis: Does the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC: 0-3), our new diagnostic system, work? How? These are areas of needed research.

We now have the results of our national randomized trial. Many of us were concerned about the premature application of an experimental design to a brand new program, but Early Head Start works. The results of impacts at 24 and 36 months show that Early Head Start works for 17 sites. There were enhancements at 2 and 3 years in these areas. I am not going to review the findings; there is an Executive Summary, which documents the impacts of cognitive development, language development, and social/emotional development with multiple measures. There are direct assessments of cognitive development with the Bayley, language development with the Peabody, and social/emotional development with the MacArthur Communicative Development Inventories (CDI). The data collectors and researchers who collected the information showed advances in the child's engagement of the parent, and also in attentiveness on objects in a semistructured play task. Additionally, observations were made as part of the home instrument during a home visit.

There were enhancements in aspects of parenting. Parents were shown to be more emotionally supportive in observed play on those videotapes, and supportive of language learning observed in the home on the home instrument. There was progress towards self-sufficiency, as one would hope. To make all these results more meaningful, the programs were able to demonstrate these findings as compared with usual community comparison control groups, using random assignment. There was also less negative behavior in fathers.

The impacts were significant, and they occurred across domains, which impressed our conservative researchers. However, the effect sizes were what we call modest. They were in the range of 10–20% of the standard deviation. Although the impacts occurred across demographic groups and program approaches, there was considerable variation. All of these were new programs, and they were responding to different community needs, as they are supposed to do. There was much variation. The standards, even as they were evolving for Early Head Start, only came online after the programs, the research, and evaluation at these 17 Early Way sites were underway.

There was much evolution, and, although the evidence suggested that the degree of program implementation, which was independently evaluated in our research design, made a difference for impacts, that is, for those programs that were implemented in accordance with the standards as they evolved. The Head Start standards had more of an effect across these domains. That was also reassuring and contributed to the pattern of belief for these impacts. My impression in talking with different program directors, and experiencing the two programs in which we were immersed in Colorado, is that the programs did not feel that they were underway in any full sense. It took a couple of years, and we took advantage of the variability to show the findings were related to the impact of program.

What is the needed research in this area? First, we need research on mature programs, not only to get more of a gauge on effect sizes, but also because now that we know early intervention programs work, we need to how they work. We desperately need another phase of the research to understand mature programs that are up and running, what works under what circumstances, and for whom. What we need for mature programs is targeted or value-added interventions with different curricula, to see what will provide enhancements and move us forward, as well as research that is targeted for particular subgroups of individuals with particular needs and resources.

I would like to talk briefly about value-added interventions. We could talk about the logical two domains of Early Head Start, one having to do with the readiness to learn issue, preliteracy curricula. This involves cognitive language and fundamentally interactive components, because all of the learning takes place through interactions with parents and other caregivers in the caregiving settings. The other domain would be the social competence curricula which are equally important in Early Head Start. Many of us think they are equally important to the preliteracy curricula, and they are only separable conceptually here. These would be the social competence curricula which involve social skills, emotional regulation, and conduct and morale skills, such as turn taking, empathy, sensitivity, and children's adherence to rules, and internalizing them and feeling distress if they are not carried out. These are all intertwined, of course, but there are different curricula that emphasize different aspects of these features. I am pleased to say that there is an initiative underway by the Administration for Children and Families (ACF) and The National Institute of Child Health and Human Development (NICHD) planning to do just this type of thing.

We also need to look at knowledge about individuals with particular needs. We need to look at what works for children with identified disabilities. We are learning more and more about the genetic and child features of the disabilities everyday, about which we can be specific. Regarding parental depression, we have some evidence from the early trial that this group was helped in particular across our 17 sites in the randomized trial. In Colorado, we had very specific information of larger impacts. For teenage parents, we have some evidence that it may help, in particular from our randomized national trial.

Parents identified at the outset with psychological needs of different types are particularly helped by the interventions. We would like to know more about how that happens in parents with low mastery. Kevin Everhart has designed a program to specifically look at that and see what ways we can help those particular parents, as well as with other identified cognitive problems. There are two areas that have not yet been addressed, but which are highlighted in *Neurons to Neighborhoods* as areas of major mental health problems: family substance abuse and family violence. They are major mental health problems in the early years, and we need to look at those as particular targets.

Finally, we need to look at individuals with particular resources and strengths. It is unclear to what extent we help people with more resources coming into Early Head Start. We need to know more about that and not just how we are helping them, but also making use of their strengths for helping with the interventions with others as well as themselves. The strengths include not only skills and attitudes, but also connections to community and cultural resources as Bornstein illustrated. For those designs, we need specified interventions and curricula. We need assessment in baseline characteristics of participants, if we are going to use random assignment designs.

Prior to random assignment, we need implementation study at the individual level. In our first wave randomized trial, we had evidence at the program level. Programs that are implemented closer to the standards have all done better and had greater impact. We need it at the individual level, and we need specified outcomes in advance. Documentation of context is very important, because the cultural and community context varies greatly. It is going to have much to do with curricula and what should be done as they evolve.

We need longitudinal studies, particularly in schools. We know school readiness has to do with interaction of the school and the child, so the child needs to be followed into school. One

cannot talk about school readiness until there are data of the child in the school. We also need multiple cohorts. It is expensive and hard to do, but times change. Welfare reform started just after we started our randomized trial, and we are trying to understand how that happened. We have some leads, but things change with time.

Briefly, I just wanted to review the new DC: 0-3. The new DC: 0-3 diagnostic classification system for assessing mental health in this age group came into being because there was not coverage from the Diagnostic and Statistical Manual of Mental Disorders (DSM) system of what clinicians were dealing with everyday. As a result, a group of clinicians got together and composed a system. What is it? Does it work? What evidence do we have? First, one has to think about the diagnosis. It is an ongoing process with two aspects: (a) the assessment of individuals, and (b) the classification of disorders.

It is important to appreciate that. The purpose of diagnostic classification is to communicate among professionals and to link with knowledge and services. It is a guide for clinical formulation, and we have lost track of that in the DSM and, to some extent, in the DC: 0-3. Out of that recognition, both of these systems have a mixture of the multiaxis systems that have evolved, or classification of disorder in which one is linking to a map of knowledge of categories. One is not classifying individuals; one is classifying disorders. It is a mixture of the first three axes, and assessments of individuals, which are the axes four and five. I am going to propose a sixth for research.

We have added a relationship disorder classification. There is a medical condition, which is similar to DSM, but we have added developmental and psychosocial stress areas and competence that are also reflected in the DC: 0-3, as they are in axes four and five. We have added functional/developmental level to it. In our coverage, we include traumatic stress disorder, disorders of affect, adjustment disorder, and regulatory disorders, which are so important in our 0 to 3 work. We separate out sleep and eating behavior disorders. There are also regulatory disorders, but they separated out for practical reasons, and disorders of relating and communicating.

What do we know? Key features of evaluating a diagnostic system involve coverage, usefulness, reliability, and validity. We do not have much information, and I am encouraging more clinical trials. This is the most recent information from 0 to 3 from the manual. It is used in 26 different countries and is used widely in the different regions of the United States. There are recent trials of DC: 0-3, two of which have been published. Trials from Paris, Lisbon, and Topeka, Kansas as well as an update of the Tel Aviv trial are in press and will be published in the *Infant Mental Health Journal.*

The relationship disorder is the new axis. People are using it and find it extremely useful. Two centers had reliability estimates where they showed that they could judge it reliably. These are the different sites, and one can see that the regulatory disorders are quite preeminent, as are the affect disorders. Adjustment disorders are a small part—these depend highly on referral sources and so they are not epidemiological in any sense.

What are the research needs? We desperately need more trials of the DC 0 to 3 systems, especially in the United States, where there is only one of these five trials. We need more reliability specifications. We need much more information on validity links to other assessments, such as Carter's Infant Toddler Social-Emotional Assessment (ITSEA) and other features of assessment instruments that are underway. We need longitudinal data to find out the links to the DSM later age disorders, which is a question we are always asked. Research is needed for Axis Six, dealing with the family. It is logically important and totally necessary in DC: 0-3 and in DSM. There are research needs pertaining to the family, particularly in light of newer genetic information. We need to know the history of mental disorder in the family. We need to know what family supports are available because we are going to make use of that in our interventions. Regarding cultural factors, we have a cultural formulation guide for DSM. We are proposing one for DC: 0-3, and it could be under this axis.

Finally, we have been involved for over a decade in research on social referencing, which is a form of emotional signaling. This is important in infancy around 9 months of age, where in conditions of uncertainty, we seek out emotional signals of others in order to resolve the uncertainty and to guide behavior.

Sherrod: Our final panelist is Judith Jerald, who is the Early Head Start National Coordinator at the Head Start Bureau. She was on the design team that created Head Start. In fact, most of our panelists were involved in either writing the guidelines for Early Head Start, or they have been involved in the evaluation of our national effort in the Head Start area.

Judith Jerald: Can I get away with just saying "ditto?" As I sit here and listen, I get excited about what it means, certainly for us at the Head Start Bureau in terms of the knowledge that we need in order to set policy. What does it mean for the programs? That is the perspective I will be speaking from today. Most importantly, what does it means for children?

Briefly, I would like to discuss, from the program perspective, what we already know from research and what we in Early Head Start have taken to heart. Future research may teach us differently, but we have accepted certain things in terms of how we have developed this program. Research tells us that one of the characteristics of an effective program is to begin prenatally, and that has already been discussed here. We also believe strongly, despite the questions about the effect parents have on children, in a two generation focus. We also focus in a family-centered way, not just on the parent-child relationship—although that is one of our major foci— but also on parent education, social services, and so forth. Those types of things seem to be important in terms of parental development, which also impact the child. Quality child development is what Early Head Start is all about.

We also believe, based on research, that a continuity of services over time is important. That is why Early Head Start started out focused on the prenatal period and continued for 3 years. What is enough? What should the dosage be? We still need to learn more about that. Research has also taught us the importance of a continuity of caregivers. This is a huge challenge for Early Head Start given the salaries people receive.

The intensity of services is also important. In addition, one must consider the importance of the community within the whole program and within the services. That is important when we think about children transitioning into other programs, and so forth. What I have seen in some of the Early Head Start studies is that the community is indeed an important part of what happens here, and there is research to back that up.

I want to mention just two things from the Early Head Start National Study. First, the fact that quality makes a difference is important news for us at the Head Start Bureau. Implementation also makes a difference. The effort that we put into the performance standards and into monitoring the programs is important, and can change the types of services that children in Early Head Start receive. The other thing that is near and dear to my heart, in terms of the study, has to do with different approaches, mixed models. Flexibility in a program also seems to have a difference in the outcomes.

Are we meeting the needs of the families with the programs that we are providing—home-based, center-based, or a mixture of those programs? When are the services available? How does this relate to welfare reform? What more do we need to know? I would like to know more about management, leadership, and the role that it plays. We know it plays an important role, but I would like us to take a closer look at comprehensiveness. These are some sophisticated programs. What do the leaders know, and what makes a difference in terms of what they know? I hope we can learn more about program options, dosage, impacting more communities, and impact at the management and community level.

Regarding staffing, what kinds of qualifications make a difference? Should we send in someone with a Master of Social Work (MSW) degree? We already know that is not necessarily

the case. What types of staffing, staff development, and training make a difference for children? We are struggling in the field of mental health for children and parents. It is from the programs that we are getting the questions: What is infant/toddler mental health? How do we know it when we see it? What about prevention, promotion, and intervention? We need to know more about all of these things and about maternal mental health. Depression was mentioned. I also want to include anger as another subset we should look at.

Regarding infant/toddler assessments, we do not have enough of them. We are in this outcome-based world, and yet for infants and toddlers, we are not there in terms of assessments—not just assessments of the child, but also of the parent/child relationship, health, nutrition, family functioning, and the management of programs. How do we even assess those areas? More needs to be learned about hard-to-engage families. What is that all about? Can we make a difference? How long should we be holding onto those families? Are they ready to be in a program? Should they receive a different type of service? What about teenagers? They are a very special population needing special kinds of services. What do we know about that? Fathers are an important issue for this current administration. Can we study more about fathers?

Cultural groups were already mentioned. Phillips mentioned that we do not need another study about quality child care versus nonquality child care, and she is absolutely right. However, what are those ingredients that make for that quality child care? That is what we still need more of.

I would like to end by talking about the process of gathering and using information. I am speaking from what was an absolutely wonderful experience working with Early Head Start, both the National and Local Research Teams. When the study began, I was a Program Director of one of these programs, and the partnership process of those 5 years was one of the most wonderful things that could happen for programs. When we are doing studies, some of the things that are the most important are involving programs in the design and involving them in the implementation. There was much training and technical assistance from our local partners, who could come and work with staff on various topics.

I would like to see us go even further. This is a challenge. I have always had a dream of having the parents sit up here, telling us about their own research about themselves. That is another direction that we can follow. In my program, we did quite a few case studies in which parents, over time, could look at where they have come from and where they have gone. I know others have done this as well. The next step is having them actually talk about it.

Sherrod: Jerald ideally set the stage for the next phase of our session, which is audience participation. What should be on the agenda for the next phase of research on early development?

Marilyn Arons: I have a question regarding a Mathematica study. When looking at the results, specifically the Part C recommendations, given the fact that at least 10% of Early Head Start children are disabled, per statute, how did the researchers factor out the services they were getting through Part C with Early Head Start, measuring Early Head Start and not Part C?

Comment: The design of the study, in terms of it being an impact study where you have a community comparison group, helps with the question of that potential contact. In other words, participants agreed to be in the study, and then they were randomly assigned. They either had a 50% chance of getting in a program or being gauged in the usual community services. There were an equal number of children who were identified for Part C in the comparison group as in the program group.

Arons: That is my problem with the study. When I read the report, it seemed that data was collected from 17 sites, but when the Executive Summary was released, it only contained information on the parents who were interviewed as to Part C, and there was no information

about the actual sites themselves. I was curious why this shift from reporting the direct information of Part C from the sites did not appear in the final publication of the report. I am trying to inquire what happened to the data on Part C that was published in 2000, where there were percentages in the three volumes that the program went by.

Rachel Cohen: Are you referring to the implementation study data, where we went into each program and described the services that they were providing? That was a separate path of research. We did the implementation study first, then the impact study. Down the road, we will bring some of the strings together more specifically of the different characteristics of specific programs and specific outcomes. We had certain deadlines to meet and could not include everything in the report. We also cannot do everything within the experimental design of the program control comparison, so we are going to need to do different kinds of analyses. The report will come out later this summer focusing on health, including disabilities issues.

Question: In a session yesterday, I heard a researcher say we do not know if Head Start families are disorganized, or the people making home visits cannot discern their organization. As a person who grew up in a family that needed Head Start before there was any, I can answer that question. Many people among us, and many people in our programs, have been Head Start children and Head Start parents. They can answer many of the questions that we have about what life is like in those families. It is time to start asking them to tell us what some of these things mean.

Bornstein: There are some developments along that way. I happen to be a member of a group called the Parenting Network, in which Bob Bradley is also a member. It is associated with a group called the Center for Child Well-being, which is a break off of the Centers for Disease Control and Prevention (CDC). We are developing a curriculum which would be Early Head Start-based, but it is in its initial stages and taking a bottom up approach like you are describing. We will go around to different sites around the country and involve parents, who are otherwise eligible or in Early Head Start, in interviews and focus groups. We will ask how they interpret their stresses and how they see their problems. What is the lingo that they use? What are the barriers they see to overcoming any issues in parenting they may have? How do they solicit social supports? What social supports are lacking? We will do this in order to develop a program that comes from the bottom up and that is culturally appropriate, in the way that you are describing.

Comment: Also ask those adults working in Head Start who grew up in Head Start not to answer your questions, but to tell you what they know.

Karen Piper: I have been evaluating a program in California. It is called the Prenatal to Three Program, and is not affiliated with Head Start or Early Head Start. We know that there are some children that cross over, and we have been collecting data for the last 4 years on the planning and the implementation. We offered this program and what I am finding, even though I have a wealth of data, is that most of the funding that I am looking for is categorical. It says funding is available to research a specific piece, as opposed to looking at the whole picture. The panel is saying that we need to look at the whole picture from the prenatal period through school age to try to see what differences these things make. I am collecting data on what that process looks like. I have no funding for that project. I am just doing it because the county is interested and willing to support the project. Funding sources are still very categorical. Will the Requests for Proposals (RFP) process change?

Comment: It is happening, and we will see how it affects the RFP process, but inherent in many of the recommendations that the committee made is the need for the programmatic agencies, which are categorically or programmatically organized, to get together and jointly write RFPs. That probably has happened. It means getting the research agencies and the program agencies together, thinking creatively about that integrated bridge between them. It is "programmatically driven science," looking more broadly at the issues that one is undertaking. It is a hard bridge to build.

Comment: I have worked closely with teachers and home visitors. It seems that the tremendous amount of stress that workers go through comes from the community and from not being compensated at a credible level. Issues of staff turnover and compensation need to be studied.

Comment: That is an important area to study, and it is not just about compensation. It is also about building a workforce. We do not have an infant/toddler workforce out there, and it is a "catch-22." How can we build it, when we are not going to pay them, if we are not going to value them? Some current projects are trying to get universities to have more infant/toddler curricula. They have fiscal problems as well, and they do not want to add curricula that nobody is going to take, because it will not pay them enough, and so forth. It is not just something to study—it is also a huge advocacy issue that we must address.

Comment: Part of the advocacy issue relates to the session yesterday morning that focused on human capital. Anne Peterson, a researcher of adolescent development, went to the National Science Foundation in an attempt to build the concept of human capital into the national priorities, the way that the environment or space travel are national priorities. In a capitalist economy like ours, people are paid who generate revenue. Making the point that one gets to economic growth by building human capital is the only way one is going to create the value for early child care workers and make them valued and paid the way they should be. That is a hard argument, but that is where we have to go.

Question: The need for new assessments on infant/toddlers and parenting was described. What work is being done to modify the way we measure parenting? Is there work being done to look at typical or traditional parenting methods?

Bornstein: Not much has actually been done, but we are at the beginning of revisiting that issue. We know, from various components of the literature, that there is interest in different kinds of critical beliefs in terms of knowledge of childhood development, attributions, views of success and failures in parenting, attitudes toward children and parenting, and so forth. We know that there is literature that has looked at actual behaviors, and they show variable results. There is a dearth of studies linking the two. No one has worked through, from the social/psychological literature to the parenting literature, how attitudes or beliefs link up to actions and behaviors. There are, of course, frontiers with respect to problem solving abilities that are not necessarily within the beliefs or behavioral domains, but certainly are issues of thought process, emotional self-regulation, and parenting.

Up until the last couple of years, no research about parenting was being published. There was basic research on child development, but nothing focused on parenting. There has been, however, an attempt to isolate and then raise parenting as a field. There are more books now about parenting, and there is also a parenting journal. Once something like that happens, the critical mass begins to develop so that intelligent minds apply themselves to the problems, the questions, and the issues of parenting themselves. This may begin in local groups, but will quickly spread to the cultural variability that you are talking about. Then we begin to understand parenting as a phenomenon in and of itself, how it is affected by various factors, and how it affects various outcomes in children and in society at large.

We have not been thinking about parenting in that way. The focus has been, as it is here, on the child. However, the way the child gets to be who he is, or the way the adolescent gets to be who she is, has some dependence on who makes the decisions in rearing them. More attention has to be paid to that topic.

Bob Bradley: I would like to follow up on that and return to a somewhat hopeful move in a productive direction. We are seeing far more bottom-up approaches. In fact, researchers and people at the program site level begin to get together where they have common interests and common concerns. We need to go back out into the field, such as we have done with Early Head Start where we are directly engaging parents. They are helping to reformulate some of our ideas about what parents' needs are. Some of these new developments in research are going to emerge out of this type of effort to have parents help us reformulate some of the issues and concerns. I see that actually beginning to emerge. Part of it is stimulated by some of these reports, but also by the national efforts like Early Head Start.

Caroline Kaufman: My training is in anthropology, not in the field of child development. In terms of three broad directions for research, one thing that was mentioned was integrating psychosocial and biological lines of research. What about the sociological, economic, political, and program contexts? What about the cultural context? We need to be careful not to collapse culture into just ethnicity. Culture is a web of meaning. How do people see the world? How do parents see the world? How are children beginning to see the world? We need to have more conscious understandings and agendas that incorporate other perspectives.

Phillips: I agree with that. In fact, we need something on the order of a National Academy Commission to address that issue, because we are dangerously close in the field to culture and ethnicity. We have tried to address this issue indirectly in *From Neurons to Neighborhoods*. We did try to span that spectrum.

Comment: Did any of you see the piece on spanking in the *Washington Post* earlier this week? The article described a study finding that spanking was not bad for African Americans; just for White people. Harsh parenting does not predicate trajectories towards problematic behavior for African American families. It is that kind of evidence, in the kind of work we are discussing, that people are finding where the field is now. Now we have to backtrack and think about the cultural and context specificity.

Comment: It is the context of our measures. Now, where do we go with it?

Sherrod: Phillips mentioned that in the evaluations of programs such as Early Head Start, we need randomized clinical trials. Almost all the research summarized in the report is not experimental but is in fact quasi-experimental. Children are not randomly assigned to good and bad parents, yet we think we know something about what makes for effective parenting. Randomized drug trials work very well if one has full control over what participants are getting. The interventions we want to evaluate are much more complicated. How did we get into this rut where we have to have an experiment using a scientific technique to assign causality? Why is it that we need an experimental design to understand how an intervention works, but we can understand parenting with quasi-experimental studies?

Comment: We had a rigorous set of debates about that issue among the *Neurons to Neighborhoods* group. I started out strongly objecting to the so-called gold standard. I was part of the methods subgroup, and we wrote a chapter on causal inference in which we try to separate some of these issues, that is to be clear about what the experimental design is useful for.

Comment: And what it is not.

Comment: It is used for causal inference. Then we devised a phase guideline for when randomized trials are used. By the way, our Early Head Start design did not conform to that guideline. It was forced upon us and was mandated by congressional pressures. Most of us involved were quite skeptical as to whether we were going to get results of any kind. With mature programs, we should have even stronger effects, and we need to learn all we can about that. We were lucky because there were a whole set of guidelines about when experimental designs are used.

You are right—it is very expensive. It is an experiment in which one is isolating things, eliminating a lot of complexity. So, we had a mixed model for Early Head Start because we kept much of the complexity and still used the randomized design.

Comment: The issue of meaning comes up. However, if one can show that participation in the program explains as much variance as the other aspects of the children's environment that is much more powerful.

Phillips: There is a misunderstanding and fear of randomized trials, and people are worried that perhaps their programs do not work. However, I remember saying, "Let them do it. Let them do the randomized experiment on Head Start." I believe these programs work. There is a political piece to it as well, because this is what decision makers will pay attention to. Why do we have performance standards on Head Start? If one mentions regulation of child care on Capitol Hill, one gets laughed out of the room. We do have good studies in child care regulation that are high quality in terms of methods. Is it what they will believe? That is not an inconsequential matter when one is trying to make sure we are providing the right kinds of interventions for young children and sustaining them over time.

Sherrod: That gets to another question. What will they believe? The pendulum swings back and forth between viewing early development as a first step versus early development as determining one's future life course. Up until the 1970s, we had a much more deterministic view. Then the life span/life course orientation came in that talked about plasticity and change throughout all adulthood as well as adolescence. Then it swung back, and now with the new research on brain development, it has swung back a little bit more toward early development being all-determining. The answer to that is that one has to pay attention to specific domains. For example, I am increasingly interested in children's development in citizenship. One would not expect the first 3 or 5 years to be especially important in that domain although early prosocial development could be relevant to that.

Question: What domains of development are most important to look at in early development?

Comment: The whole area of conduct and early morale development has been neglected in our theories. Recently, we have learned that there is much that goes on that we have overlooked.

Comment: In a structured, regular environment, children learn to internalize rules and expectations. If they become violated, even in 0 to 3, they become distressed and want to set things right, so they internalize standards.

Emde: Empathy develops in toddlerhood, and there is variation according to experience in that area as well. At 3 or 4 months of age, children are turn taking in terms of very complex interchanges of focalization and games behavior. Turn taking is a major feature of moral standards.

Comment: We need much more of that kind of thinking, which is that one looks at the abilities or competency that one wants older children or adults to have and questions what could be the early developmental precursors. Everything mentioned there is relevant to the micro interest in citizenship.

Comment: Intergroup attitudes is another area. Years ago, there was a study in which children were given dolls. One set of dolls had suspenders and the others did not. The point was the children put the dolls who looked alike together and the ones who looked different, they put in separate groups indicating this early tendency to categorize the world based on appearance, which has its upside and its downside.

Comment: Those of us who are in class see that every day.

Comment: The issue becomes, for both research on early development and for programs like Head Start, how does one take that tendency and turn it into something that grows in a healthy direction rather than an unhealthy direction?

Comment: Jerald had a key insight, and it was an important modification to what I said about quality of care and what the ingredients are. Some of my colleagues and I on the NICHD study of early child care are beginning to ponder whether our assessments of quality child care are capturing the facets of caregiving that foster exactly these capacities. In a way, we think we are doing a rather inadequate job.

Comment: However, they have not been designed with those outcomes in mind.

Sherrod: Those issues, to some extent, get to our national values because those speak into occupations' career success. One of the reasons I have become interested in citizenship is because that is something as a nation one can create some concern about. One wants people to vote. One wants them to participate in our democracy, so that then provides justification for becoming interested in things such as prosocial development and cognition.

Innovations in the Study of Self-Regulation: New Methods, Ecologically Valid Contexts, and Diverse Populations

CHAIR: Lisa A. McCabe
DISCUSSANT: JoAnn L. Robinson
PRESENTERS: Lisa A. McCabe, Laura D. Pittman, Christine P. Li-Grining

The study of self-regulatory abilities has a long tradition in the field of developmental psychology. Researchers have found that challenges in early self-regulation predict externalizing symptoms in middle childhood (Bates, Pettit, Dodge, & Ridge, 1998), adolescence (Hart, Hofmann, Edelstein, & Keller, 1997), and young adulthood (Newman, Caspi, Moffitt, & Silva, 1997). Self-regulatory capacities have also been implicated in the development of a variety of constructs, including conscience, aggression, academic achievement, and substance abuse (Kochanska, Murray, Jacques, Koenig, & Vandegeest, 1996; Block, Block, & Keyes, 1988; Shoda, Mischel, & Peake, 1990).

While theoretical and analytical approaches to the study of self-regulation have evolved in sophistication and breadth, the methodologies used to assess self-regulatory capacities have remained relatively consistent. Typically, children are brought into a university lab where they perform a task that requires the inhibition of a dominant response, delaying their waiting time for an M&M candy or sorting a deck of cards, for example. Historically, most of these studies have been conducted with middle-class White children (Mischel & Patterson, 1979; Shoda, Mischel, & Peake, 1990).

Recently, however, several studies have begun to examine self-regulation among more diverse groups of children (both in terms of socioeconomic status and race/ethnicity) in more ecologically valid settings, such as homes and classrooms. Two of these studies are presented here. The first presents data from the Welfare, Children and Families: A Three-City Study. Working with a sample of poor, primarily African American and Latino children, these researchers determined that traditional laboratory assessments could be validly used in home settings. In addition, results suggest that self-regulatory abilities tend to be associated with child characteristics and ecological contexts.

The second paper presents data from the Games As Measurement for Early Self-Control (GAMES) study, a project which also focuses on adapting and developing self-regulation assessments for a diverse sample of 3- to 5-year-old children. In this project, not only were children assessed individually, but they also participated in measures adapted for use with groups of familiar peers. Thus, this project represents one of the first attempts to examine children's self-regulatory capacities in the presence of peers (a context that better matches children's typical experience in early childhood programs, such as Head Start). Results from this project indicate that laboratory self-regulation tasks can also be successfully implemented in the more ecologically valid setting of the classroom. Further, these assessments can be adapted for use with small groups of preschoolers in order to explore how group influences may affect self-regulatory behaviors.

Each of these papers presents information critical to the early childhood field. Not only might the work presented be of interest to researchers exploring the development of children's self-regulation, but it could also potentially benefit practitioners in the field of early childhood education. Simple and valid assessments of children's self-regulatory capacities could be used as assessment or screening tools in order to identify children in need of special services, as well as to track normative development over time.

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■ Self-Regulation Tasks for Preschool Children: Addressing Issues to Valid Assessment in Less "Regulated" Environments

Lisa A. McCabe, Jeanne Brooks-Gunn

Extensive research has shown the importance of self-regulatory capacities for future social and cognitive development (Eisenberg et. al., 2000; Mischel, Shoda, & Peake, 1988). It is important to note, however, that most of our knowledge comes from studies using individual assessments in laboratory or clinical settings. Yet, the environment and presence of others can have significant effects on individual performance (Bond & Titus, 1983; Bronfenbrenner, 1986). In this study, therefore, we examine the feasibility of administering laboratory, clinical, and newly developed self-regulation measures in group and individual contexts in diverse settings.

Data were drawn from the Games as Measurement for Early Self -Control (GAMES) study. A total of 116 3- to 5-year-old (M = 51 months) children (47% boys), primarily from low-income families, participated in a battery of one-on-one assessments in homes or classrooms. A subset (n = 44) also participated in group classroom assessments. English- and Spanish-speaking participants came from a variety of racial and ethnic backgrounds. This paper focuses on four tasks that are administered both individually and in a group: Gift Wrap and Snack Delay (two measures of delay of gratification adapted from Kochanska, Murray, Jacques, Koenig, & Vendegeest, 1996), Walk-a-Line (an assessment of motor control adapted from Maccoby, Dowley, Hagen, & Degerman, 1965), and Head and Feet (a newly developed measure of cognitive control).

Each of the piloted measures worked well in homes and classrooms in terms of portability, adaptability, and ease of administration. Preliminary analyses of the new Head and Feet task, however, raised some questions about its validity as a measure of cognitive control. A significant percentage of children, 44% and 64% in individual and group assessments, respectively, did not pass practice trials. Either this game is too difficult for young children, or cognitive control is a sophisticated skill that may not be fully developed in young preschoolers. In future work, we plan to investigate this issue in more detail.

Findings also revealed that, across measures, more children were able to demonstrate

regulatory behavior in one-on-one situations than in a group. This was especially true for older, 4- and 5-year-old, preschoolers. In general, 3-year-olds seemed to have difficulty regulating, regardless of context.

Preliminary findings of peer influence on self-regulation did not reveal any clear patterns. Self-regulation was not related to whether or not children initiated their own, or imitated their peer's self-regulation strategies (i.e., behaviors such as distraction, to help delay gratification). Similarly, those who followed rule-breaking behaviors (i.e., they imitated their friends who did not delay gratification) were not more or less likely to violate rules when assessed on their own. Finally, no significant relationship was found between giving rule reminders (e.g., peers reminding each other to follow the rules of the game) and regulatory behaviors. Future development of peer influence codes and studies involving larger samples will further tease apart the complex nature of self-regulatory behaviors in a group context.

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■ Self-Regulation of Economically Disadvantaged Children: The Challenges and Triumphs of Measurement in the Home

Laura D. Pittman, Christine P. Li-Grining, P. Lindsay Chase-Lansdale

Self-regulation in young children has been identified as an important element in the development of socialization skills, school-readiness, and positive behavioral outcomes (Kochanska, Murray, Jacques, Koenig, & Vandegeest, 1996; Kochanska, Murray, & Harlan, 2000; National Research Council and Institute of Medicine, 2000). However, much of the research on children's self-regulation has been focused on a white, middle-class population, with data collected in the laboratory setting. This paper reports on a study in which laboratory self-regulation tasks were adapted for use in the home, with low-income, primarily African American and Latino children. Methodological issues related to in-home instrument administration, and associations found between self-regulation and contextual factors are discussed.

Data were collected as part of the Welfare, Children and Families: A Three-City Study. In this study, a random sample of 2402 poor and near-poor families living in low-income, urban neighborhoods participated. An in-home, two-hour interview was administered to collect information about families' backgrounds and economic conditions, as well as perceptions of home environment, parenting, and children's characteristics. All families in this larger sample who had a child 2 to 4 years old were asked to participate in the Embedded Developmental Study (EDS), which included a second interview and videotaped administration of 3

self-regulation assessment tasks (Snack Delay, Whisper, and Gift Wrap; Kochanska, Murray, Jacques, Koenig, & Vandegeest, 1996; $N = 562$).

Seven trained coders scored children's behaviors on the self-regulation tasks. Preliminary analysis found that children had not responded to the Whisper Task in expected ways, but that scores on the other two tasks were promising. Approximately 25% of the videotapes were double-coded, with an average kappa of 0.69 and 0.62 for the behavior codes of Snack Delay and Gift Wrap, respectively. The average intra-class correlation coefficient on latency scores ranged between 0.80 and 0.99 for these two tasks. Given the anticipated problems with home administrations, coders systematically noted when things within the home environment might have interfered with children's performances (e.g., coaching by a sibling). A comparison between cases, both with and without such administration issues, determined that the measurement of children was not unduly influenced by in-home test administration. Associations between our measures of self-regulation and children's characteristics also provided support for the validity of our measurement. Children who were more self-regulated tended to be older, female, and more persistent. In addition, self-regulation seemed to be specific in its association with temperament and had a significant correlation with impulsivity, but not emotionality or sociability.

Further analyses were done to explore whether the ecological contexts of these low-income children would influence self-regulation. Neither economic status of the family, nor race of child was associated with self-regulation. After controlling for children's age and gender, some small but significant associations were found between children's self-regulation and mothers' observed and reported parenting practices, as well as the level of cognitive stimulation in the home. Overall, this study supports the extension of the study of self-regulation to more diverse populations through the use of in-home assessments.

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Bringing the Study of Emotion to the Head Start Classroom: Methodological Approaches, Clinical Applications, and Research Partnerships

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DISCUSSANT: Alice S. Carter
PRESENTERS: Kathleen Kiely Gouley, Alison L. Miller

Social and emotional competence is critical for child development. Emotions function to regulate social behavior within different relationships and across different social settings. Therefore, it is vital to understand children's emotional development in the context of important social relationships (e.g., parents, teachers, peers). In addition, it is important to understand how emotional competence (e.g., regulating emotions, understanding emotions in self and others) helps children successfully negotiate salient developmental tasks during the preschool period (e.g., transition to school). The study of emotional competence among children living in poverty is particularly essential because the multiple environmental risks these children face pose a challenge to healthy emotional functioning.

This symposium highlights a collaboration between university-based researchers and Head Start, and is designed to integrate clinical consultation, program evaluation, and research. This work is guided by a systems-focused, culturally sensitive, developmental psychopathology model of child development and adaptive functioning, with a particular focus on emotional development and mental health. Research efforts both inform and are informed by clinical consultation and program evaluation, creating a system that links basic behavioral research, applied research, and service delivery.

Given our interest in emotion regulation and emotional competence in high-risk children, this symposium presents the results of two studies that use different methodological approaches and multiple informants to study Head Start children's emotional competence. The first presentation describes results from four years of an ongoing study of children's emotional competence, focusing on interview-derived measures of social-cognitive ability, teacher ratings of emotion regulation, and child adjustment. The student-teacher relationship is highlighted as serving an essential regulatory function for children and as a target of intervention. Offering a different perspective on children's emotional competence, the second presentation reports findings from a study using unique observational methodology to examine emotional competence in the context of peer interaction and to measure affective displays and social engagement. Specifically, data are presented on the real-time coding of children's observed behavior with peers in the preschool classroom. Results are discussed with regard to measuring emotional and social competence in an ecologically valid, innovative manner within the Head Start context.

Common themes include: (a) developmental psychopathology theoretical orientation, (b) focus on methodology, (c) assessment of the different contexts and relationships in which children develop, specifically with peers and teachers, and (d) collaborative partnerships with Head Start families and staff that are necessary for conducting research. Presenters will discuss results in light of their relevance for clinical consultation and program evaluation within Head Start. Results suggest that the teacher-child relationship may be an important focus of clinical consultation and that the emotional quality of peer interaction may be a target for intervention and a marker of competence in program evaluation. Furthermore, discussion will include the relevance of this work for policy. For example, literacy and school readiness are important goals for Head Start that may be enhanced by understanding the social and emotional precursors to academic achievement among low-income children.

■ Emotional Development of Preschoolers at Risk: Social-Cognitive Abilities, Student-Teacher Relationships, and Classroom Adjustment

Kathleen K. Gouley, Ann Shields, Alison L. Miller, Carolyn Brennan, Susan Dickstein, Ronald Seifer, Karin Dodge-Magee

Preschool is an important time for emotional development. During this period, children are increasingly able to identify emotions, read emotional cues, and identify situational causes and consequences of emotions. These skills foster children's ability to regulate emotions and behavior and are critical during the transition to school (Saarni, 1999). Children who fail to demonstrate emotionally competent behavior are at risk for negative outcomes including disruptive behaviors, impaired social functioning, and poor school adjustment. The study of emotions may help to explain the difficulties impoverished children have functioning adaptively in academic settings (McLoyd, 1998).

This project is an extension of the work of Shields et al. (2001). Participants were 159 Head Start children. Our goals were to describe how emotional competence is related to school adjustment in children at risk and to examine the influence of the teacher relationship on child emotional competence.

Emotional competence was measured by using interview-derived emotion understanding (recognition, affective perspective taking, social reasoning; Denham, 1986; Garner, Jones, & Miner, 1994) and teacher-rated regulation, lability, and dysregulation techniques from the Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997). Teachers also completed the Student-Teacher Relationship Scale (STRS; Pianta, 1988) and School Adjustment Questionnaire (Shields et al., 2001).

Age and verbal abilities were positively correlated with teacher-rated regulation, all emotion understanding skills, and school adjustment. Age was negatively correlated with teacher-rated lability. One sex difference was observed: Boys were rated higher on teacher-rated dysregulation. After controlling for age and verbal abilities, school adjustment was significantly related to teacher ratings of emotion regulation, lability, and dysregulation, and to interview-derived affective perspective taking and social reasoning. Children rated by teachers as "more well regulated," "less labile," or "dysregulated" were rated as well adjusted to the classroom. Those who were more competent at understanding the emotions of others and the situational determinants of emotions were more likely to show adaptive behaviors at school. After controlling for age and verbal abilities, children rated as sharing a close relationship with their teacher were more likely to be rated as well regulated, less labile, and less dysregulated. There were strong associations between conflict in the relationship and a higher likelihood of the child being rated as less regulated, more labile, and more dysregulated. Also, dependence was correlated with higher ratings of lability. Lastly, closeness in the student-teacher relationship was positively correlated with interview-derived social reasoning skills.

Studying the emotional development of at-risk preschoolers is an important endeavor. Emotional competencies are important skills for children at this age as they enable an adaptive transition to the preschool setting and signal adaptive self-regulation, a critical factor for success in several domains. As a factor related to classroom adjustment, the acquisition of social-cognitive skills (e.g., affective perspective taking and social reasoning) may be a potential goal of preventive interventions. Associations between aspects of the student-teacher relationship and emotional competence suggest other potential points of intervention to enhance the emotional development of impoverished children.

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■ Children's Emotional and Social Competence in Head Start Classrooms: Observational Methods

Alison L. Miller, Kathleen K. Gouley, Ann Shields, Ronald Seifer, Susan Dickstein, Christina Fox, Heather Radke

Emotional and social competence with peers is crucial for early school adjustment (Denham, 1998). Although low-income children are at risk for early school difficulties, we lack rich descriptive information about their emotional and social competence in school settings. Classroom rules typically require that preschool children control emotions in order to engage in productive peer social interactions and academic activities. Naturalistic observations were used to assess the ways in which emotional and social competence in the classroom relates to child outcomes important for early school adjustment.

The project's goals were: (a) determine the feasibility of using handheld technology to conduct classroom observations at Head Start, (b) describe emotional and social competence in classroom settings, and (c) examine associations among observed behavior, emotion understanding, and teacher-rated social and emotional competence. Participants were 31 Head Start children (42% Caucasian, 19% African American, 19% Latino, 19% mixed race/ethnicity). Children were observed in their classrooms for 30 minutes (3 different days). Two time-based behavior states (emotion expression/regulation, social engagement) and three events (aggression, mild antagonism, pro-sociality) were coded live, using handheld computers (intraclass correlations $\geq$ 0.80 for each code; data reduction yielded mean proportion scores).

Child emotion understanding (recognition, situation knowledge, perspective taking) was assessed via interview (Denham, 1986; Garner et al., 1994). Teachers completed questionnaires about emotion regulation (Shields & Cicchetti, 1997), social skills (Gresham & Elliott, 1990), and behavior problems (Behar & Stringfield, 1974). We successfully used handheld computers to document child behavior in real time, avoiding the intrusion of videotaping class activities. This efficient, unobtrusive means of collecting data allowed assessment of dynamic behavioral processes not possible through other live observation methods (e.g., interval behavior sampling).

Children displayed mostly neutral (89% of the time) or positive (8%) affect, spending an average of only 3% of each 10-minute period displaying negative affect or hyperactive dysregulation. They spent time predominantly involved with solitary constructive (31%), social attentive (29%), or interactive (28%) play, and little time engaged in conflict, collaboration, or nonplay. Although rare, negative affect was associated with more conflict and aggression; hyperactive dysregulation with more mild antagonism, nonplay and interactive play, and less-solitary constructive play.

The project noted certain associations across observed behaviors, emotion understanding, and competence, as rated by teachers. Emotion recognition skills were associated with less conflict, and situation knowledge with less social attention and more interactive play. Meanwhile, teacher-rated emotion regulation skills were negatively related to conflict and negative affect; social skills ratings (assertion, self-control) were related to more collaborative play and less negative affect; and problem behavior ratings (anxiety, hyperactivity) were related to more conflict and interactive play.

Our unique methodological approach allowed observation of low-income preschoolers' emotional and social behaviors in an ecologically valid setting. Using multiple methods and informants revealed how different aspects of emotional and social competence were interrelated. For example, although children spent little time in negative emotional states or conflict, these behaviors were related to emotion understanding and teacher-rated competence, underscoring their salience in the classroom setting. Reviewing such findings with Head Start teachers may encourage them to use common emotion-laden classroom interactions as didactic opportunities for enhancing children's social and emotional competence.

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The Beginnings of Prosocial Behavior

CHAIR: Lonnie Sherrod
DISCUSSANT: Veronica Klujsza
PRESENTERS: Susanne Denham, Carroll Izard, C. Cybele Raver

■ Emotion Knowledge and Prosocial Behavior
Caroll Izard

■ Dealing With Feelings: Road to Social Success for Preschoolers
Susanne Denham

■ Emotions Matter: Recent Lessons Learned From Early Childhood Interventions
C. Cybele Raver

Lonnie Sherrod: This is the session titled, "The Beginnings of Prosocial Behavior." I am pleased to have a distinguished panel of presenters. I have been delighted throughout this meeting that early prosocial behavior, emotional development, and the development of emotional regulation has been a consistent theme. I will introduce all four speakers in the order of their presentations.

Susanne Denham is a professor of psychology at George Mason University. She received her Ph.D. from the University of Maryland at Baltimore after working as a school psychologist for 11 years. Her programmatic research is on social/emotional development particularly in young children with funding from the William T. Grant Foundation. She is following a longitudinal sample that she has had contact with since age 3 and examining their emotional competence, its socialization, and its contribution to social competence. She also has funding from the John Templeton Foundation on a little studied aspect of children's development, forgiveness.

The second presenter is Carroll Izard, who is trustees professor in the department of psychology at the University of Delaware. He studies emotions, emotional development, and the translation of emotional theory in research into preventive interventions. Currently, he is focusing on the development of emotional knowledge and emotional regulation in Head Start children. He is also interested in ways of utilizing emotions to enhance individual and social functioning and prevent mental health problems.

Next we have Cybele Raver, who is associate professor at the Harris School of Public Policy at the University of Chicago and she is Director of the University Center for Human Potential and Public Policy. She is also a William T. Grant Scholar, an honor given to distinguished junior investigators.

The discussant is Veronica Klujsza, who is a Head Start director in Brooklyn, New York. There are 210 children at her center. They have a partnership with the public school, connecting with universal pre-kindergarten, and they also work with a program on relationships for growth as a mental health initiative. Veronica will bring her hands-on experience with children in Head Start to address the research presentations.

Susanne Denham: Our project at George Mason examines the emotional competence of preschoolers. We define emotional competence as a child's substantial ability to express their emotions, to understand their emotions, and how they regulate their emotions.

I believe that emotions are central to children's growth and development especially in the first 5 years, regarding how children will develop social competence. During preschool emotions are ubiquitous. They are being expressed often and what children learn, both about themselves

and about other people, vis-à-vis emotions, is important. When an individual exhibits an emotion there is much information.

Emotions can grease the cogs of social interactions or sometimes stop up the cogs. A focus on emotion is crucial because another aspect of emotional competence is the understanding of emotion and that is a hallmark of the usefulness of emotional competence to social competence. Being able to understand one's own and other's emotions as they are displayed helps one to be effective in social interaction. And last, but not least, being able to regulate those emotions that you experience and then express is important.

These are the aspects of emotional competence that will be discussed today. What about emotional expressiveness? By preschool age children are capable of expressing and experiencing the basic emotions such as happiness, sadness, anger, fear, and interest. The child has been in more complex social interactions that result in complicated emotions. At the same time, during the preschool period there is evidence of an outward expression of some of the more social emotions, such as guilt or shame. Stability of emotional styles also starts to coalesce more during the preschool period. Children start to be capable of voluntary management of their expression of emotions. These are complex developments of expressiveness.

In early studies of emotion, researchers asked children of this age to tell stories and describe how they felt. There is nothing wrong with that but anybody who has worked with a preschooler knows they are not always going to be capable of telling you verbally. I decided that the study of children's emotions should be more contexualized. There should be more fun and cues to help children show us what they understand.

When I was school psychologist with the Zero to Five Program, I developed a puppet measure and there has been success with it. We have the children tell us (in our one verbal piece of it) the four different phases of basic emotions—happy, sad, angry, and scared. Then, we talk to them about certain situations of emotion where everyone would feel the same way. We have a puppet enacting the emotions so we show behavioral, facial, and some vocal cues of emotions; we contextualize emotions in a situation. Then we ask the children if they know what is occurring emotionally.

We found that they are good at telling us about emotions. We have children as young as 2½ years who are capable of answering a fair number of questions correctly. We have another puppet measure where we talk more about causes of emotions. On this measure we ask the children to talk to older children. If you stop and listen to the naturalistic conversations of the younger children, you will often hear them using language about the causes of emotion. With our puppet measure, we try to have the children identify with the puppet. The puppet is either themselves or their best friend. They say amazing things to us like "Well, that puppet is happy because it has a really messy toy room and the sister puppet loves it, too. But the mommie puppet is very unhappy about it." They begin to understand and talk about some of the situational causes of emotion.

They also begin to acquire some more sophisticated emotion knowledge. I observe many children thinking about emotional situations where people could easily feel different, because it is a part of the puppet measure. Most children say, "I got ice cream and that made me happy." But not everybody would say a big dog came running up to me today and I was happy. Some children would say it really scared them. We find out from parents how their child would react in a number of situations. Then we have the puppets act out the scenarios but act the opposite way. You can almost see the little gears in the mind going.

One of my favorite items is to ask the favorite food of the child and the least favorite food of another child. We have the puppet loving the mother puppet for having oatmeal for breakfast. The other child cannot believe it. This is impossible. This could never happen. The child thinks it is impossible but gingerly picks up the happy face and puts it on the puppet. Then the child starts wagging his finger and begins to lecture the puppet about demerits of oatmeal.

Some issues of emotion and understanding are more difficult for preschoolers, especially understanding that two feelings can occur at the same time.

In terms of emotion regulation, part of the problem is defining it. It is both a process and a product. Therefore it is necessary to figure out how to define it and how to measure it. The process of having a strong, or not strong enough, emotion depends on one's goals. The process of figuring out how to either dampen it or boost it is important. How long does it take to get over a strong emotion? Do you go right up to 100% angry and then it takes a long time to taper off? Those are important issues but in our research we have been more likely to discuss some emotion regulation outcomes since we are interested in outcomes of social competence. Are there ways in which children who are placed in emotionally difficult situations react, either regulated or disregulated?

The socialization of emotion and independent emotion regulation is important. At first, much adult support is needed to show both of these aspects of emotional regulation. Children increasingly use some independent emotion regulation strategies during the preschool period and they realize, when they try them, whether or not they work. Some of them use self-distraction by approaching or retreating from a situation and others use symbolic play to work through the situation.

Social competence is another construct that needs fairly clear definitions and I would take from a review article by Linda Rose-Krasnor. The construct is "Are we effective in social interaction?" If you use that construct definition you have to think that it might depend on whose goals we are talking about. My goal as a little child trying to get into a play situation might be different from the other child's goal. It might be my assessment of whether I am successful by knocking somebody down. It might be quite different from the person who gets knocked down. It might be different from the teacher's. When we look at social competence it should be from people's points of view. At a more micro-analytic level there are specific skills, such as cooperation and being able to resolve conflicts, that are important.

All aspects at the bottom of the slide of emotional competence should be related to social competence. We continue to know more about the importance of social competence for well-being at the time and also for well-being in mental health in the future. We know children who are having difficulties with peers in preschool and moving into grade school are at higher risk for psychopathology later in life. In addition, we can now say that social competence is also related to school readiness.

We studied the relationship between social competence and school readiness in a longitudinal study of 143 children. We started working with them when they were 3 years old and we followed them into kindergarten. We examined the children's emotional competence and social competence. For emotional competence we observed emotions. We went into the classrooms with laptops and coded their emotions observationally and how they reacted to other children's emotions.

We observed their emotional displays and their reactions to friends' emotional displays during free play throughout the year. Children participated in the puppet measure of understanding emotions and we also examined emotion regulation. Another index was mothers' reports of their children's behavior with questionnaires. We also gathered data using a parallel observational style where children were confronted with peer anger. We noted when they responded, either in-kind with anger or with antisocial behavior.

Peter LaFreniere and John Dumas' social competence/social behavioral evaluation has been receiving much attention with Head Start and NICHD. There is a sensitive-cooperative subscale, an anxious-withdrawn subscale, and an oppositional subscale. We used all the items that are emotions from their subscales in our study, although there are some other items like how often the child is angry.

If we observed an angry child and the teacher said they were angry, well so what? An emotion is not only about social competence. We pulled out some of those items and made an aggregate

that assessed how socially sensitive and cooperative they were minus how anxious and withdrawn and oppositional they were. Peers completed a sociometric assessment with a picture sociometric rating. Young children do know who they like and who they dislike. These are preschoolers so there are changeable ideas but I learned about 10-15 years ago that sociometric assessments can be done rather reliably. There is not perfect reliability but they can give you reason as to why they do not like another child.

There were some reliable and significant results from chi-square analyses. We studied emotional competence including expression, knowledge, and regulation at 3–4 years of age. We were interested in the relations across these aspects of emotional competence. We found that children who had more negative emotion had more trouble regulating it and were more likely to vent it. Children who were less negative scored higher on our emotion knowledge measures. We assessed social competence at ages 3 to 4 with a teacher questionnaire and in kindergarten with the sociometrics. Both measures at the two ages were related.

Even though there were different teachers and different children in each year there was some continuity and stability in social competence. Children who were better at regulating, who showed less venting, were seen by teachers and peers as more socially competent. There might be gender differences for boys and girls, and for children who were relatively younger or older in their classrooms. We examined whether regulation was more important a predictor for boys than girls. It was more important for boys at ages 3 to 4.

We found that younger children may stand out more than older children because of their age; their teachers and friends recognize that they are more put together. They may have more time to practice and consolidate their emotional competence skills leading to later emotional competence. In terms of predicting their competence in kindergarten, we found that the children who understood and were emotionally positive on the puppet measure at ages 3 to 4 were rated as more socially competent in kindergarten. They appeared socially competent to the teachers and their peers.

The children who were angrier, vented more, and had less knowledge, looked worse in kindergarten. The younger children who regulated well at 3-4 years looked more socially competent in kindergarten and the children who had a lot of anger and did not regulate their emotions well looked worse in kindergarten. The results supported that emotional competence is consistent with other people's views of these children and their social success in the classroom.

In closing, if emotional competence is this important, what can adults do? We have to think about what we are expressing if children are learning so much about expressions. If we are prominently negative, they may develop a completely different understanding and view of their world emotionally than if we are predominantly positive. How do we react to their emotions? Do we minimize them? Are we upset and uncomfortable with them? Do we try to show them ways of regulating emotions either by solving the problem or by helping them feel better? Is being a good emotion coach part of our role as adults?

In terms of coaching, I use that term a couple of different ways. Here I mean that we can talk to our children about emotions. We can talk to them about regulating emotions. We can talk about our emotions. All the talking seems to be important to children's emotional development.

In regards to Head Start and this topic, we need an emotion-centered curriculum. We must think about understanding emotion regulation, both at school and at home.

Carroll Izard: I will start by acknowledging the wonderful assistance of some 500 Head Start families and Head Start systems, teachers, and staff who incorporated this research, as well as graduate students and our colleagues. I will discuss modular systems, or emotion systems and cognitive systems as independently functioning systems. I will talk about the implications of the systems and then talk about the nature of emotion knowledge. Another way to conceive of my presentation is why should children acquire emotion knowledge? What difference does it make?

Emotion knowledge provides a powerful set of tools for emotion regulation. It makes a difference because it is a determinant or mediator of negative or positive behavioral outcomes. If you do not develop emotion perception or attribution bias it leads to many negative consequences, including depression. Emotion knowledge, emotion regulation, and empathy, as far as social behavior goes, are pieces of a puzzle. The combination of emotion knowledge and emotion regulation is absolutely essential for the development of empathy, which is the gateway to prosocial behavior.

If emotion knowledge does not develop properly, there is maladaptive behavior. I studied infants, the mother–infant relationship, and erections for a long time and I learned that emotions can operate with some independence of cognition. If you put an infant in front of the mother and instruct her to smile at the baby, the baby will inevitably smile in return. If you tell the mother to look sad or have no expression, the infant (as early as 3 months of age) will have an emotion/expression dialogue with the mother to try to reengage her.

By the age of 7 months, an infant can show an important kind of emotion regulation. They can shut off the emergency cry for help following the acute pain of inoculation or turn on a more specific, more adaptive, and more limited emotion expression. They can regulate their emotion responses to this stress. Infants can express a certain capacity to carry on emotional communication with the mother and regulate their own emotions. I wondered why there is trouble with it in preschool and later childhood when it is so effectively expressed in infancy.

The reason is the relative simplicity of the child–parent interaction or the infant–parent interaction in comparison with a great complexity of child–peer interactions and the child–adult interactions that occur in preschool and elementary school. It is important for us to understand that the emotion systems and the cognitive system have a certain degree of independence. In early infancy we might find some rudimentary connections between emotion systems, perception, and cognition. As the infant grows and becomes a child, there are more emotions and complex emotions emerge. As a result, the business of making connections between the emotion systems and the cognitive systems becomes greater. That task involves, in part, acquiring emotion knowledge.

The infant starts in the world with some sort of preadapted emotion system that can do wonderful things in the fairly simple environment of infant–parent or infant–family interaction. They acquire more systems when they enter the complex world of 15 or 17 peers and a number of teachers. But what is implied by the fact that the infant comes into the world with modular systems that can operate independently is that forming connections between these systems becomes extremely important. Feeling–thought connections are the source of emotion knowledge.

They do not grow automatically. They require some nurturance and some social interaction, and the different range of emotions facilitate specific developmental tasks differentially. Emotions serve certain purposes during the toddler years and serve another purpose in later development. There may be critical periods for connecting certain emotions and appropriate thoughts.

At the age of 9 years, children still have not reached a plateau; there is still room to grow. The growth has been gradual but it takes a long time, that is the understanding of emotion expressions, understanding of emotion labeling from 2 to 9 years of age. It grows even more slowly and they still have not acquired anything close to adult levels in this by the time they are 9 years of age.

For the rest of my presentation I will focus on the three facets of emotion knowledge: (a) emotion expression recognition, (b) emotion expression labeling, and (c) detecting and understanding emotion information in language and context. One of the most important things about this last aspect of emotion knowledge is that the infant can detect emotion cues in language and life vignettes. In language, the infant can predict what the protagonist will feel when an event occurs and that means they are learning to anticipate emotion. By seeing and hearing the vignette or by vicariously experiencing this event, they may anticipate an emotion, which happens to be an important part of the life experiences of a child.

What are we learning about emotion knowledge? We found that one of the least studied antecedents to emotion knowledge is the child's emotionality and temperament. One of the most important things we learned was that after we control for verbal ability and particular facets of temperament, emotion knowledge is still an important predictor of social skills, of academic competence, and of social problems.

We measured the control variables, verbal ability, and temperament, and measured the predictor in Head Start. We were measuring the outcomes in third grade. We followed these children from Head Start systems into 42 different public schools in order to do the follow-up research. We found that emotion knowledge predicts academic competence. You might wonder, as we did, how that happens. We conducted an analysis and the results showed that if you take out the effects of emotion knowledge, verbal ability does not truly predict academic competence.

We thought this was counterintuitive so we ran a separate analysis, a path analysis, using all of the same variables at both time (age) intervals and there was no significant connection between emotion knowledge and academic competence. The process is from verbal ability through emotion knowledge to predict academic competence. We have other evidence to indicate that emotion knowledge somehow is the mechanism whereby children achieve, at least in the eyes of their teacher, academic competence.

In this study, we examined clinically significant social withdrawal and social problems. The clinical significance was measured by the Child Behavior Checklist–Teacher(CBCL-T). The quick picture is that children who were poor in understanding emotion cues, situations, and contexts were the children who were socially withdrawn and had social problems. Some of them had clinically significant social withdrawal and social problems. In another study following these same children from third to fifth grade, after measuring expressible vocabulary and emotion knowledge in first grade, and then measuring internalizing and externalizing in third grade, we found that emotion knowledge was a significant predictor of self-reported internalizing behavior. The important finding is that emotion knowledge predicted social skills and social skills, in turn, mediated the effects of emotion knowledge on peer acceptance.

Emotion knowledge becomes an important cog in the causal process of peer preference or peer rejection, which is important in the life of the child. The social skills mediated the effect of social knowledge on peer acceptance. Social skills provide the mechanism for a child to utilize emotion understanding and motivation in personal relationships. The other side of the coin is what happens if we do not have development of good emotion understanding and the development of accurate perception of emotion cues?

One thing that can happen is the development of emotion perception bias or emotion attribution bias. We are not certain yet because I do not think we have the measures that are precise enough to distinguish between emotion perception bias and emotion attribution bias. The child either misperceives an emotion cue or the child sees an emotion cue and misinterprets it. For example, he sees a sad cue, a cue that represents sadness really does signal sadness but the child interprets it as anger. We would call this anger attribution bias.

We measured anger attribution bias by counting the number of times that the child perceived anger signals where none existed. The child saw an anger signal or an anger cue in a neutral stimulus or in a prototypical expression of some other emotion. In one study in which we measured emotion attribution bias, we found that for boys, high attribution bias was greatly correlated with high aggression and aggressiveness. We did not find that in girls but it may be because we did not have a measure of relational aggression and the aggression we were measuring was more physical aggression.

In a somewhat similar study, we showed that children who are likely to become externalizers or aggressive and hyperactive are children who are low in emotion knowledge, emotion perception accuracy, and high in emotion perception bias. This study has not been replicated so there needs to be more research examination. In a current study with David Schultz at Johns Hopkins we are examining the relationship between emotionality, emotion information processing, and aggression.

We asked teachers and peers to rate the frequency with which children expressed some of the basic emotions such as anger and sadness. We found that the teacher's ratings of the frequency with which children expressed anger and sadness correlated rather well with the frequency rated by their peers. In essence we are conceiving emotion information processing in terms of the child's ability to empathize and in terms of anger bias. The composite teacher and peer ratings on emotionality accounted for 53% of the variance in aggression as measured by teacher's ratings.

The variance accounted for by the emotion information processing variables was a modest 8% but still highly significant. Even with a powerful predictor like emotionality measured in terms of, for example, frequency with which teachers and peers observe aggressive behavior, we can still account for some of the variance on the basis of a child's ability to understand, detect, and appropriately interpret emotion expressions of other children.

To sum up the findings, emotion knowledge provides powerful tools for the regulation of emotion. The work that we have done, Denham has done, and Nancy Eisenberg and others have done, show that if you cannot detect the cues in the face of the other person, if you cannot properly regulate or modulate your own emotion, you cannot be empathic. It is the only way to get there. Through detection of the emotion and signals of others, and through the regulation of one's own emotion you can be empathic. This opens the doorway to adaptive prosocial behavior.

Cybele Raver: Years ago, as a junior investigator in the field, I was struggling to make headway with research in children's emotion regulation and emotional climates in families. One thing that gave me hope was this profoundly good research that helped me make the case for both the excellent ways of measuring emotion, and the significance and importance of emotion in children's lives, largely because of the work of both of Denham and Izard.

This paper is entitled *Emotions Matter* and it came from my effort to think broadly and convince groups of social scientists, such as economists, why we should care about emotions; their interest in early childhood extends usually only to children's school achievements. I wondered if there were data that showed clearly why we should all care about emotions. If there were data, were there corresponding data to suggest that emotional development is malleable, that we can actually foster children's emotional development through intervention, particularly for low-income children who may be at increased risk for having emotional difficulty?

I want to acknowledge the William T. Grant Foundation, the McCormick Tribune Foundation, Irving Harris, and a research fellowship from the National Center for Children in Poverty at Columbia where I did much of the research for this paper. What do we know about young children's school readiness?

Kindergarten teachers are concerned about the emotional development and emotional adjustment of the children that enter their classrooms in the fall each year. From a recent national survey, 30% of kindergarten teachers reported that at least half of the children in their class had difficulty following directions and working as part of a group. Twenty percent reported that at least half the class had problems with social skills. You may think that I am being deeply alarmed and most preschool children have trouble with those skills.

Does this suggest that teachers are more concerned with social and emotional components of children's readiness than they are with children's letter identification, for example? This is a primary concern for teachers who manage classrooms and attempt to make the space conducive to learning. How does emotional adjustment fit with broader educational goals? Emergent literacy and cognitive development are important for early success in the school context. I do not want to draw attention away from those but children's emotional and behavioral adjustment serves as a key foundation for those other domains of competence.

I would argue that schools are profoundly social spaces where children build relationships and reputations, with both their peers and teachers, that either help or hurt their chances of succeeding academically. There are data that suggest the long-term importance of emotional adjustment for later school success.

Children's ability to regulate their emotions come in a package, or style of handling emotionally intense situations, that teachers view as either primarily prosocial or primarily aggressive in terms of how children deal with the social world. Recent research by Gary Ladd and his colleagues studies kindergartners as they move into first grade. It has been convincing to many of us that children with more emotional competence enter the classroom better able to handle the social demands that the classroom poses and that they are more successful in first grade.

The data are longitudinal from the beginning of kindergarten all the way through first grade. We would like to have these kinds of data for earlier years in Head Start and in preschool age. More poignantly aggressive children are repeatedly found to be tougher to teach. Teachers and peers choose to spend less time with those children. As a result, they learn less from their peers and it translates into these children having fewer opportunities for learning and for seeing school as a fun place.

Those children who are aggressive report liking school less and missing more days of school. We can think of the cost of those behavioral difficulties for children but also the cost of those behavioral difficulties to the classroom. Teachers devote less time to teaching when they have to devote more time to classroom management. I am particularly concerned about teacher burnout. Throughout the thread of these talks there is some emphasis on how teachers are regulating their emotions and how they are handling their stresses. I also recognize that many Head Start teachers are working long days and handling much stress.

The long-term costs of children who exhibit predominantly aggressive and emotionally negative profiles early on have been established by research. A substantial proportion of these children are at grave risk for lower academic achievement, greater likelihood of grade retention (being "held back"), greater likelihood of dropping out of school, and greater risk of delinquency and of committing criminal juvenile offenses in adolescence. I am only focusing here on externalizing behavioral problems. I was unable to clearly locate the evidence for the costs of being quiet and withdrawn.

There is evidence to support that it is costly to be aggressive, out of control, and disruptive. That is the reason for the focus. I am not suggesting that there should be no focus on withdrawal, sadness, or other dimensions of emotional difficulty among young children. I am a big proponent in most of my research in looking at resilience and positive outcomes in children although you will notice this paper focuses quite a bit on the negative side. I want to highlight that we need to deliver services to the children who are in greatest need of those services without resorting to a deficit-oriented perspective. I want to find a way to target these children who are having the most behavioral difficulty in ways that do not stigmatize them and instead provide them with the most services possible.

There are a number of different ways that we can address the prevalence of this issue. The first is a clinical definition of prevalence, where the children who would be at such a severe level of acting out or having difficulty, emotionally or behaviorally, that they would be eligible for a DSM IV diagnosis. The data suggest that 2% to 7% of preschoolers struggle with clinical levels of oppositional defiant behavior. Using a more broad-based and flexible definition of elevated levels of behavioral problems (the not yet diagnosable), it has been estimated that between 10% to 33% of Head Start preschoolers demonstrate such levels of problem behaviors. That would be about two to five children per classroom.

A third definition uses a public health model of risk prevention. For example, if we think about heart disease, we are not concerned only with the individuals who have heart disease. We want to identify those factors that are risks for heart disease and inform those individuals that there are behavioral steps they can take to reduce their risks, so we never have to treat them for the problem. That model is helpful for specifically externalizing behavior problems.

What do we know about young children who are exposed to multiple risks such as homelessness, violence, parental substance abuse, and depression? Specifically it is the accumulation of these risks that best predicts children's likelihood of developing long-term emotional behavioral problems.

In fact, we are really interested in those children who do not end up hitting those hard outcomes. We know that it increases the likelihood of having those negative outcomes if one faces multiple risks such as homelessness, violence, parental substance abuse, and depression. Specifically it is the accumulation of these risks that best predicts children's likelihood of developing long-term emotional behavioral problems. Who faces those risks? Between one quarter and one half of children in a given Head Start classroom face at least four of those risks using the early childhood longitudinal survey of 23,000 kindergarten-age children. The FACES data report that 17% of the children have been exposed to a violent event either within their home or outside the home in the past year.

There are considerable amounts of cumulative risk that children face in any given morning before they arrive at school. With that grim story having been told, what can I say that is more optimistic? I will focus our attention now to the fact that children's chances for success can be substantially improved. I will discuss some rigorous intervention studies that suggest that children's behavioral problems are identifiable early, amenable to change, and can be reduced over time. I am learning from a policy perspective that this is necessary in order to convince people to leverage time and effort to affect an outcome.

Increasing the number of children who are ready for school is possible by encouraging families and teachers to support children's emotional adjustment. What do those programs look like? I will focus on classroom-level approaches given the context of this presentation. Higher quality care with better teacher/child ratios have been found in longitudinal data to lead to more positive relationships between teachers and students and to lower levels of behavioral problems in classrooms and for individual children.

Teachers may inadvertently exacerbate children's behavioral problems. By no means am I trying to fault teachers, but rather to say that teachers could probably use support in figuring out ways to avoid the cycle where both teachers and parents have been found to sometimes ignore children's low-level disruptive behavior. As a result, they tend to overreact to higher intensity levels of acting out. I am guilty of this as well. I think many of us have encountered this (as parents). The problem is that it ends up negatively reinforcing aggressive, adversative behavior because children get attention when they are explosive.

As for universal approaches, how could we help teachers to maintain a more positive classroom climate? I will start with the most expensive solution first because I believe that in our effort to implement ideas we often opt for less expensive solutions. I want to highlight the more expensive solution: staffing. Staffing means improving quality and lowering teacher/child ratios. Would we see a substantial reduction in behavioral problems? Not by implementing any particular curricula but by hiring additional adults who are competent in the room. Random designed evaluations of child-care quality may give us better answers to that question.

Training should help teachers in classrooms to maintain an atmosphere conducive to learning. There are some data from studies that suggest randomized evaluations are successful. Teachers should have a curriculum where children in classrooms learn about emotions and about positive behavior leading to more positive outcomes. Then we can consider targeted approaches for children who show elevated risk for behavioral problems and that would involve linking home and school. The recent research from Family Emotional Socialization on how families socialize their children about emotions suggest that families play a significant role in children's ability to handle their emotions.

Most families, particularly low-income families, use optimal strategies or no-nonsense parenting. Jean Brodie in her work with low-income, African American two-parent families in the South defined no-nonsense parenting as the right combination of firmness, consistency, and warmth. That is the prevailing approach among most families but families that are highly stressed may resort to inconsistent and coercive parenting. That particular parenting style puts children at greater risk for developing these behavioral problems for the same reason that I discussed earlier, the idea of negatively reinforcing aggressive and disregulated behavior.

How do we handle that? Some interesting programs have been developed. There is one program by Webster-Stratton and colleagues called The Incredible Years, for Head Start families. This program involves groups of parents and teachers (separately) who meet in a supportive environment to watch videos and take a 12- to 16-week course using group dialogue to learn to handle problems and set firm limits. This intervention has shown remarkable reductions in children's behavioral problems.

Another option that has not been tested through randomized trials is clinical consultation linking mental health providers and classrooms. Earlier research found that pull-out programs are not so successful in Head Start with children who have emotional behavioral problems. I read a paper from Yoshikawa, Cauthen, and Knitzer and from anecdotal reports that teachers do not trust the community mental health referral system for dealing with emotional problems.

First, they do not know whether these emotional problems are transitory or developmentally normative. You could be a 3-year-old who is just throwing a tantrum because you are a 3-year-old and that is typical. The other problem is that it is a lengthy process to have a child identified as having special needs. In this area there is little faith that a pull-out program will remedy that problem. Parents and teachers are wary of having children placed in special education or pulled out because they are fearful of the stigma that is associated with that diagnosis.

One alternative is to have on-site clinical social workers work individually with children in the classroom context. I heard somebody from Syracuse talking about push-in programs where clinicians come into classrooms and work in that sphere trying to help children function in the context they have to deal with all the time. Working with families, particularly those facing severe crises—economic crises as well as emotional crises—and training and supporting teachers is a way to deal with classroom-based and classroom-level behavioral difficulties.

There are innovative things that we can say about these different approaches. We could combine universal and targeted approaches as many have done with older children, specifically thinking about interventions that target both emergent literacy and emotional behavioral adjustment. Are they cross-domain-influenced? Are children who are emotionally and behaviorally disorganized more able to listen and learn about literacy outcomes once they address these issues? Are children who are having trouble with literacy and are having trouble with phonetic awareness starting to act out because they are bored and restless in a task that is pushing them past their limits?

We can combine curricula, staff training, and mental health approaches for children facing varying levels of risk so that there is not an either/or way of looking at this, but, in fact, a both/and one, which is more expensive but likely to have a bigger impact. The Head Start Quality Research Centers are currently testing the effectiveness of these approaches in multiple sites using randomized designs starting next year. We may have answers for the questions from their studies: What is the magnitude of impact in choosing a literacy-focused approach versus a mental health consultation approach versus a curricula approach? What different approaches work best for different sites?

Which type of program should we invest in? My argument is that we should make a range of investments. Low-cost investments to the least troubled children may be one option, but it may actually have a smaller return. It still may not reach the children who are in greatest need while larger, more comprehensive investments will likely reach more children and have a greater impact on the children who face the most serious emotional hurdles. More or equally important, we should constantly monitor our progress in terms of what is implemented in the site and whether it works in the long term by evaluating our efforts.

How would we do that? Indicators for benchmarks of success are something I am particularly interested in, especially in terms of assessments, broad-based and fine-grained ones of how children are doing on social and emotional fronts. The most common way that I have found researchers examining this is by lower Child Behavior Checklist scores or lower rates of behavioral problems in the classroom context, a shift for example from higher to lower risk. Or to

look at the percentage of children who were in a clinical range but are now in a normal range of behavioral problems.

I would be pleased to see more measures of increased social and emotional competence rather than the more difficult measures of emotional adjustment such as LaFreniere and Dumas' Social Competence and Behavior Evaluation measure. We could look directly at whether children exhibit greater inhibitory control and whether they have fewer conflictual relationships with teachers and peers across the school year compared to a control group that did not receive this treatment. This crossed domain emphasis, where the children have had emotional and behavioral intervention, shows better learning outcomes.

In addition, we could look at school-based outcomes at the level of classrooms. Are classroom climates less chaotic? Are teachers less stressed? Are there fewer children going to the principal's office or being sent fewer times? Are there fewer fights on playgrounds and lunchrooms? Answers to these issues will provide us with an insight into school climate and classroom climate as a structural context that supports or hinders children's emotional development. Are there things that can happen at a structural level, not just at an individual or child level, so that we cannot always identify specific children as having problems and target only those children, but think about fostering environments that are productive for everybody in that environment?

We often misdiagnosis or misidentify children with trouble and I believe that if we were less targeted and more universal in our approaches, we might be able to prevent behavioral problems among children that we would not necessarily have identified early. I know that is a little weird and complicated but I think you all get my point. Other things that should be addressed are teacher confidence in handling disruptive students, teacher stress, and teacher turnover. Can we make veteran teachers earlier and make them feel there is support in their contexts, their Head Start administrations?

In summary, how do we identify and support emotional and behavioral development? I would say that we should identify and support it as a school readiness activity. We should specify emotional and behavioral adjustment as a goal, both in performance standards and in concrete terms of what is implemented each year. We should monitor fidelity of the implementation of our programs and assure quality. I noticed that the programs that cannot show substantial impact often report that they were not able to reach many families most of the time. We should make a sufficient investment in the program to give it a reasonable chance for success. In addition, we want to monitor both the cost and the outcomes so that we can explain to funders what they received in return for their investment.

I want to give a few words of caution. I believe it is inappropriate (and I have learned this from Edward Zigler) to expect that short-term programs will "inoculate" children from the debilitating consequences and material hardships such as deep poverty, inadequate housing, and certain surroundings; that without economic security many families and children are hard pressed to be emotionally healthy, well regulated, and ready for school no matter what curriculum is implemented. Programs that target economic self-sufficiency should be coordinated with early educational programs in a cohesive way. For example, programs in communities that expect parents to work longer hours should be aware of Head Start/Head Strong mandates for family involvement.

It is Head Start's effort to include parents in parent involvement pieces or in these emotion-based parent curricula, to be aware of and sensitive to parents' increased work mandates that is influenced by the TANF office. I want to argue that those systems need to be more coordinated in order for parents and children to be more emotionally well-adjusted.

Lastly, the glass is half full. There have been improvements in family income, in neighborhood safety, and in residential stability in terms of structural interventions. For example, there is a program where families were allowed to use their Section 8 vouchers only in higher income neighborhoods and were randomly assigned to mixed-income neighborhoods. This opportunity

may have significant effects on children's emotional and behavioral well-being if there are researchers to measure it. We should remind those programs that emotions matter and are affected by residential interventions and interventions to family income. We should tell providers in education and child care they can make a significant and lasting impact on young children's emotional and behavioral development as a school readiness activity.

Veronica Klujsza: I am a Head Start director, not a researcher. What can we do in Head Start with all this information starting from the day when the children enter the program? You have to make the child and parent feel welcome in their language. You have to be aware of the child's behavior and the reaction of the other children to that child. It is going back to the basics; if children enjoy school, they will want to learn. If children like their teacher, then they will be motivated to learn. If you get the child turned on to school, they will be turned on to learning.

The same concept works with the teachers. Head Start has an advantage because parent involvement is a mandate of the program. Home visits are made so that the child sees the teacher as a friend of the family. We ask the parents to volunteer in the classroom so they can begin to understand that children are different.

On the other side there are many difficulties in Head Start that surpass the basics involving children and parents. Recently, there is the pressure of the literacy initiative. We tell parents to work and to volunteer at the program, when they cannot be in two places at once. Therefore we should not focus solely on the child. We want to work with the parents to meet their needs, whether it is English as a second language, or receiving a GED, or providing parents with job training. We cannot ignore that because if the parents are under tremendous stress, it is not enough to tell them to pay attention to their child or read to them. These parents have to deal with survival issues first.

The director, administration, and the education director need to work with teachers to understand the problems as well as the basics of teaching children and working with parents. The research is now supporting what we know in practice. We cannot lose sight of that fact. I want to stress that the situation is complicated because we will not get to the child if we do not reach the parents.

What can we do? We can create an atmosphere in the school where children are happy to be there, parents are happy to be there, and the program is supportive of teachers. If the teachers do not want to be there, the children will not enjoy school. The staff should feel supportive of each other and feel that the work they are doing is important. It sounds simple but it still needs to be done in Head Start and we are capable of having these qualities in the program.

Sherrod: We now have the opportunity for questions or comments.

Question: Dr. Izard, you spoke about a quasi-typical description regarding the attribution bias and anger attribution. Can you comment on whether there are additional opportunities to examine how children perceive mixed emotions in other children? I was not sure whether you dealt with it, or if it is an issue you are currently studying, or if it is an issue you may have already examined. How are mixed emotions perceived in other children?

Izard: Are you asking if they have mixed emotion signals on their face?

Comment: Yes.

Izard: This is certainly a source of the possibility for misperception or misattribution because it is a greater challenge for the child's emotion processing systems to detect what is happening. Also, the child may have a slight proclivity to respond to one type of emotion more than to another because of their particular experience in the family or with their peers. We did use

ambiguous pictures or mixed signals as a way of measuring emotion attribution bias. It is clearly a potential source and I think they may need a special training or a special tuition in order for them to compensate for that.

Question: I would like to know more about mixed emotions in children and how they have a sense of them. Are they able to talk about the mix of emotions?

Denham: Susan Harter also talks about how children older than preschool age who would be able to understand that you could feel two different emotions at the same time. I think that it puts a big burden on a preschooler's ability to process information and also flies in the face of their developing theory of mind. If you are telling yourself well here is how a person feels and, then, you have to overlay that, they could feel two ways at the same time. That is against one of the first rules I discovered about the theory of mind. It is like standing on its head.

I do not think it takes as long as Susan Harter suggests for children to understand that. At least there is the possibility of feeling two different ways at one time. We began to see it in the kindergartners and that was under conditions where they were given cues and they were able to indicate that two emotions were being felt by a protagonist, not by themselves. That is another layer of complexity to be added.

Kirk Crosby: I am from Texas Tech University. My question is about the modular systems. There is a separation between the toddler and the emotional system, and later, the cognitive system becomes more integrated with that and probably has more control over certain emotional responses. Are there dual components in older children so that there still maintains some separateness? Or do you see it as the one overlaying the other completely?

Izard: I do not believe that they ever become integrated in the sense of becoming one. They become more closely interrelated and more highly interactive with the development of greater cognitive capacities and with the development of the emotion system. Now this is debatable because some people will talk about the wonders of integrated emotion and cognition. I do not support that is the way it works. Neuroscience is uncovering evidence which shows that the emotions can do things of which the mind knows nothing. Sometimes we make decisions based on how we feel even after we have made a long list of pros and cons regarding potential consequences.

Denham: There are also situational and individual differences. I know of children who are 12 years old, or in one case, a 22-year-old, who have more trouble in integrating those two. If you ask him how he feels, he will say, "fine." If you probe and pry as mothers do sometimes, you will get more information out of him. Context is also an important factor. If you are extremely upset about something, it is harder for the cognitive integration to occur.

Raver: I want to add that it is important to distinguish between modular systems and paths of influence in development. I would completely agree that there is strong evidence for modular and cognitive emotional systems in a human's biocycle and social functioning. In terms of paths or influence I think you are starting to find evidence for the social and emotional context of learning. For example, whether your teacher likes you or whether you have a bad reputation as an aggressive child.

Question: I wonder if you could tell us about cultural barriers during emotional reactions. How does that impact emotional bonds?

Raver: There are a series of papers that have been published called *Model Equivalents Across Cultural Groups*. They address issues of parenting and children's understanding of emotions, children's expressiveness of emotions, children's regulation of emotions, and children's ability to get along with peers. Ellen Pinderhughes is the lead author on one of the papers, so are Nixon and Watson. These articles discuss the issue of whether models fit equivalently across racial and cultural groups or whether there are different ways in which models fit across and cultural groups, particularly when we talk about issues of socialization, parenting style, and emotional expressiveness of parents.

Our past and ongoing work with some different cultural groups suggests that some of the parental values about what they should be imparting in terms of expressiveness, understanding, and regulating of emotion will differ across different cultural/sub-cultural groups. The outcomes work that Pamela Garner and others have done suggests that, no matter the pathway, if you have appropriate levels of culture emotional competence, then it is related in the same meaningful ways as social competence. In other words, the richness of the pathways gets one to the same level of competency.

Question: In your model they are saying 53% of aggression with accountable bias emotionality and 8% even in that model was coming from this information processing. Before we were talking about how automatic the nature of it was, and now it is adjusting to more about schemas, critical schemas where the way we learn emotion is often very much embedded in particular situations.

These types of models do not provide enough theoretical richness to perhaps distinguish which one is operating. In some cases where we perhaps are out of control because of a whole scenario, it gets triggered where the cognition part in the schema is all there together and it all goes as a package. We cannot desegregate at certain times, though in some circumstances we cannot get out of the old habits so easily. And for young children I guess they are much more caught up in the context. If there is a comfortable context to what happens at home, then, it gets treated at preschool. Perhaps we should look more carefully at context, how they fit into models, and how children learn things in the home.

Izard: I quite agree with that. I would add that from my perspective the schemas that you talk about are not pure cognition.

Comment: No, they are not.

Izard: Almost nothing is.

Comment: Emotions are all there together.

Izard: By the time you get the kind of schema you are talking about you probably have a complex series of emotion cognition connections. If they are bad connections, what you are calling a schema is going to be problematic for the child and you need to consider these. You need to consider the context in which they were learned because some contexts are more likely to give rise to poor connections or maladapted connections and bring about schemas that are not favorable for social/emotional confidence.

Denham: I have talked about contexts, about how the kinds of contexts in which parents show emotions, and about how teachers tell children when it is appropriate to show those emotions. Part of the problem I think in our research is that it is complicated enough already.

If we broke it down by what contexts the anger was shown in, what context it was learned in, and then we tried to make predictions, we would probably run into difficulties. But then, I think

about the child who learns that it is okay to be angry when they see their father knock a hole in the wall. I mean he is stressed out and he punches a hole in the wall.

If that child's schema for anger, when to use it, how to use it, and when and when not to regulate it are different from the child who experiences familial anger in other ways in similar situations, then understanding those levels is really important.

Question: Is it possible that the complexity of emotional knowledge is because there are many sources from which the child draws emotion knowledge? They are conflicting for a long time. For example, "In Johnny's home his mother attends to his needs in certain contexts and he draws attention to this in school. He then cries that a teacher said no to him." That inconsistency in different contexts in which the child is exposed shows the complexity of emotional knowledge. Which part should I label appropriate and in what context? The cognition and the feelings are difficult to bring together within the complexity of it.

Izard: You have outlined a great rationale for preventive intervention to include parents, families, teachers, and staff as well as the children because there is a need for some common language and some common ground to be laid for all parties involved in the child's development.

Comment: From my observations in working with children in Head Start, teachers must accept the importance of the concept of social and emotional competence, because in the communities they are going into the programs to help coach emotional competence and social competence.

They are the ones who help train parents. All systems should come together to form a consistent way to communicate with the child.

Denham: There is another strong factor that we have not mentioned that influences children and it is the media, the movies, television, or the video games. Ask any teacher and they will tell you that these are prominent influences on children.

Comment: I wonder if children's emotion knowledge and their behavior are learned from those people that matter the most to them.

Denham: Absolutely.

Comment: If they have an intense relationship with parents, then the knowledge will come better from the parents and less from the teacher because the teacher sees them at age 3 or 4 and starts building a relationship from that point. Children already have a significant relationship with their parents. Children may act out scenes from movies that I would not watch, but perhaps there has been too much said about learning trends. There has to be a relationship for any kind of learning, whether it is cognitive or emotional, and that relationship is with a parent or a significant other.

Denham: You have to deal with the quantity of time children are spending as well as the quality. If a significant amount of their day is spent watching these movies and playing these video games, that must have an impact.

Saline Dietrich: I am from North Carolina University and I am involved in developing some social/emotional curriculums to implement in a Head Start classroom. I am interested in Dr. Raver's work on interventions as a member of a faculty who can influence the quality of interventions. Are researchers measuring or developing ways to tap into alternative interventions?

Raver: Nicholas Ialongo is one of the interventionists who went in to the classroom and tried to encourage classrooms as a group to police themselves or to monitor themselves and to regulate themselves by rewarding children if the group hung in together and did not act out. If the group started to fall apart, they did not get their rewards and this was for older children. The long-term outcomes of that study are profound. Children in those classrooms have substantially reduced the risk of acting out, sucking teeth, and so forth many years down the line. His argument is that they learn key self-regulatory skills so that in a chaotic context those children would be able to draw upon those resources they learned as a group in an early educational context. That was more important than learning the stop, look, and listen, cognitively-mediated piece of information about how to regulate. Having to regulate for a specific game was more influential than learning a lesson plan about regulation.

Comment: There is probably a process going on beyond the individual if you capitalize on the peer dynamic influence with rewards and entire group benefits.

Raver: Yes, I agree. Some good data just came in on teachers regarding classroom climate. One researcher is finding impressive results for the child/family as well as teacher component of the intervention, specifically about trying to provide teachers with additional support so that they have mentoring from more veteran teachers. Some teachers feel that they are isolated in rooms where nobody is helping them.

Sherrod: Although the focus here has appropriately been on school readiness and prevention of problem behaviors, I think the impact of this work is more profound and long term. Several years ago, I was on a Workforce Development Commission in New York City set up by then Mayor Dinkins. The idea was that we would be moving from a manufacturing to a service economy and what would be the demands on the workforce in this new service economy? The employers and the businesses were quite clear that they needed workers who could communicate and work in a group. They wanted to hire individuals who have the emotional knowledge and skills we have addressed today.

Currently, only Head Start teachers are taking the bull by the horns and asking how to promote this. Otherwise the development of these skills is left to chance, or to good families if they happen to exist, or to whatever children receive from the media and video games, and so forth. We should be more strategic and proactive about asking how, throughout an individual's educational careers he/she can be helped with developing emotional knowledge, emotional regulation, and the other skills we have discussed. This kind of training continues at least up through early adolescence and onward.

It has been difficult to sell this to the commission where the employers and business people as well as teacher training programs and school systems quite adamantly said, "No, we do not do that. We teach reading, writing, and arithmetic. That is for parent and families." We need a revolution and Head Start can be the driving force because they are doing it first.

Children With Special Needs and Disabilities

MASTER LECTURE

Early Assessment and Treatment for Young Children With Autistic Spectrum Disorder

CHAIR: Harry Wright
LECTURER: Catherine Lord

Harry Wright: Catherine Lord is one of the premier persons in the field of autism, particularly for early treatment assessment and diagnosis. Dr. Lord is Professor of Psychology at the University of Michigan and Director of the University of Michigan Autism and Communications Disorder Center. This center is involved in direct assessment of families and children with autism spectrum disorder and in consultations to schools and early childhood programs around issues of autism spectrum disorder. She is a clinical psychologist with interests in autism diagnosis, associate communicative disorders, development, and intervention with children who have autistic spectrum disorders. Dr. Lord is well known for her longitudinal studies of children and adults with autism and also in the development of the measures that almost all of us use in research and clinical practice, the Autism Diagnostic Interview (ADI) and the Autism Diagnostic Observation Schedule (ADOS).

Catherine Lord: I will talk first about early assessment and then about some treatment issues. I am not going to present a great deal of data, but I will present conclusions. It is important to realize that autism is a neurological-based, organic disorder with a strong genetic component. We do not know what causes it, but it probably begins before children are born. If a family has one child with autism, their chances increase of having a second child with autism, up to maybe one in five or one in ten.

On the other hand, we do not know where autism is caused in the brain. There is not an autism gene, but there are some places on different chromosomes that seem to contribute. Still, there is not a blood test for diagnosis of autism or a specific abnormality in the brain to confirm a doctor's diagnosis based on behavior. The most common definition of autism involves a frustrating Chinese menu approach, which is a little bit of this and little bit of that and a little bit more of that. In order to be diagnosed as autistic, a child must show very basic social abnormalities. There are four examples of these kinds of abnormalities, and a child has to demonstrate two of them for an autism diagnosis. The four different abnormalities include difficulties with nonverbal behavior such as eye contact, failure to develop peer relationships, failure to seek to share pleasure with others, and a lack of social emotional reciprocity.

For example, a little boy we tested for autism had a blue drum mallet and was going around the room tapping the drum mallet on different things, tapping it on the table, drum, chair, and wall. When he came to the therapist, he tapped the mallet on her nose and then continued on to the wall. He is different from other children in that if another child taps someone on the nose, he would probably look sheepish or look back at his mother. Most children would not tap a stranger on the nose the first time they met anyway. This autistic child is not unfriendly, nor is

he trying to hurt her. In fact, he does not acknowledge in any way that tapping her on the nose is different from tapping on the table.

Besides social development, communication is the second area that defines autism. A range of behaviors serves as examples of how communication is different in children with autism. First of all, many children with autism are language-delayed. This failure to speak by 1 or 2 years of age is the most common way that autistic children are identified. However, there are children with autism who speak, and some will talk your ear off, even if they often have difficulties carrying on a conversation with give and take. For example, I watched one of the therapists in our clinic work with a boy yesterday trying to prompt him to ask her some questions.

She began, "Do you have any pets?" He said, "Yes." She asked, "Oh, what kind of pets do you have?" He replied, "I have a dog." She said, "Oh, what kind of dog?" He said, "A black lab." She asked, "Well, what is his name?" He answered, "Charcoal." Then she said, "Well, hmm, I wonder what I have at home." After a few moments, she said, "Do you want to ask me any questions about my pets?" He said, "Okay. Do you have a lawn mower?" Most children would know that if you are on the topic of pets, it is probably good to stick with the topic of pets. This boy did understand that the therapist wanted him to ask her something, but he instead chose the topic most relevant to him, which is typical of children with autism.

In addition, many children with autism have stereotyped and repetitive use of language, which seems to stem from learning language through memorization. I once saw a little boy with autism who, when he called for his mother in another room, called, "Mommy, I'm coming, honey!" He had memorized the words as a unit and was communicative in his attempts to get his point across. While this kind of behavior can be charming for adults, it can be confusing to other children and does not help in establishing friendships or general peer relationships.

A final area of communication issues involves make-believe play. Many children with autism have difficulty with social imitation, shifting gears, and playing with others. Many children with autism can learn to imitate, but it is not an automatic trait.

Another example is of a child with autism who is communicating, but in a different way than most other children. He wants to put a ball with Velcro on a figure on the wall, so he leads the therapist with the ball in her hand to put it on even though he can reach there by himself. In this way he is using someone else's body to accomplish a purpose, typical of children with autism, whereas most children would first try more efficient methods of communication involving eye contact and vocalization.

The last area of autistic behavior is restricted and repetitive behaviors. Most autistic children have one or two behaviors that serve as preoccupations and specific rituals. Children will see routines in something, even when there are not necessarily routines. Repetitive movements are a third characteristic that is very common for autistic children, especially for those between the ages of 3 and 8 or 9 years. These movements often involve the hands or fingers, often in peripheral vision, although not always. These actions may include children looking at or flicking their fingers, twisting their hands, or flapping when they become excited.

The last category involves sensory abnormalities, including an acute sense of smell, an enjoyment of spinning things, looking at visual patterns out of the corner of their eye, and playing with light. Often, young autistic children like the same things as other children; but to some degree, these interests in such normal things as dinosaurs and dump tricks tend to be more all-consuming preoccupations. There was a boy whom we tested who was hard to settle down, so we took him to the bathroom. On the way back, he saw a young graduate student, climbed into her lap, and nestled in. He was as happy as a clam working with her. After lunch we came back and again he looked unsettled until one of our other therapists walked in, at which point he began to smile. His mother said, "I know what this is, he loves women with long straight, fine hair. He is too shy to do it, but what he likes to do is climb up and sort of smell it and stick his head under the hair and get it to go on his face." Again, that small children like certain sensations is not particularly abnormal, but with strangers it is unusual behavior.

Another example is of an autistic boy who is smelling a toy telephone that has no particular odor. This little boy smells what is handed to him even if we cannot discern a smell. When we first saw him at the age of 2 years, we did not realize that he was flapping a fair amount. At 2 years old, acting in an excited manner and flapping about something can be normal, and this behavior in itself certainly does not mean autism. If 6 months later a child is still doing this to show excitement, and then 6 months after that, and even at 9 years of age, it looks quite abnormal.

The final criteria for autism is that a child needs to show abnormalities in one of the areas of social interaction, language or communication, and then symbolic or imaginative play prior to 3 years of age. In addition, there is an order of diagnosis, as other conditions may have some similar characteristics of autism. There is a rare condition called Childhood Disintegrative Disorder that is very rare, occurring in less than 1 child per 100,000. These children seem to have normal development, at least up to 2 years of age, and then they lose skills, either gradually or rapidly, and look very much like autistic children within a matter of weeks or months.

Childhood Disintegrative Disorder is also different from autism in that often those children lose motor and adaptive skills. If they were toilet-trained previously, they lose the toilet training; or if they were able to stack blocks, do puzzles, or hold a spoon they may lose those skills. In autism, there is often a regression, but the children generally lose only a few words and there is not a massive pattern of loss. Childhood disintegrative disorders are associated with some kind of progressive brain disease about half the time, as shown in medical testing. But in the other half of cases, we cannot find any cause, and we are unsure whether or not it is an unusual form of autism.

In addition, many of you have likely heard about Asberger's Disorder, which is right now the "syndrome of the year." Children or adults with Asberger's Disorder have social deficits and circumscribed interests that look very much like autism. Rather than an acute interest in odd things, these children are overly interested in normal things, such as books, dinosaurs, or Disney videos. But in order to meet the technical criteria for Asberger's, a child should not have autism.

A diagnosis of autism should be made first if you can do it. If you cannot make that diagnosis, there may instead be a possibility of Asberger's. Overall, children with Asberger's Disorder are not cognitively normal, but they are not mentally retarded or language delayed. However, there is one child psychiatrist who has a separate theory, which sees Asberger's Disorder as a milder version of autism across the IQ range.

One must be careful these days because a diagnosis of Asberger's Disorder is used in practice to mean many things, including mild autism, autism in a person who is quite bright, a child with major unexplained social problems, and Attention Deficit Hyperactivity Disorder (ADHD) plus social deficits. Parents seem to prefer this diagnosis because we know less about it and there are implications that there is more help for it. It also seems less complicated than having a child with a severe conduct disorder, learning disabilities, and language problems.

There is also atypical autism, or what is called Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS), and it describes children or adults who have social deficits like autism. They may have milder problems, along with either communication problems or restricted and repetitive behaviors. They could experience all three issues, or they may have a later onset. What is difficult here is that we talk about these children as if they were a diagnosis, but what they have is not quite autism, and we do not know why. There are many more children with these issues than children with autism. One of the things you will hear me advocate is that there is the same need for these children to have treatment as children with classic autism. We do have a responsibility to help them, but we do not know if they all have the same problem or if there is a mixture of problems that are similar to autism.

Autism is a good example of a developmental disorder, and I mean that in two different ways. First, how a child has autism is affected by his or her development. A 2-year-old with autism does not do the same autistic things that a 30-year-old with autism will do; however, many of the formal diagnostic categories were written mostly for school age children between the ages of 5 and 7 years. On the other hand, autism affects development. An autistic child will engage in

fewer social interactions and will spend one-tenth the amount of time looking at other people and interacting with other children as their nonautistic peers. The kinds of information available to them and the experiences that they have are radically different than other children.

One example of developmental differences in autism is a little boy with Fragile X syndrome and autism. Not all children and probably not most children with Fragile X have autism, but there certainly are some. As part of our diagnostic assessment a therapist is having a birthday party. She has taken some Play Dough and some plastic dowels and is singing Happy Birthday. The little boy is looking at her quizzically, wondering why she is singing to the Play Dough. At least he is paying attention to her, but he does not understand what she is doing.

Another example is a little boy with autism, a little boy who is quite bright and at age level in nonverbal skills and close to age level in language. He was able to whip through that birthday party, tell the examiner to sing Happy Birthday, ask where the presents are and is putting the baby to bed after the birthday party. While he understands that level of pretense, we would not want to say that he is not autistic, because he cannot add much more than that. He understands the routine, but he does not do it in an interactive fashion.

Then there is the example of a little girl who does not have autism. The difference is that she can add her own ideas to this birthday party. She has decided to feed the examiner, who is obviously not keen to have Play Dough in her mouth. This little girl understands the framework of what is going on and participates in a way that the autistic child cannot.

In an example from a summer day camp we ran, we are able to show how autism affects experiences. A little boy with autism had never been in a day camp because his mother was concerned about the number of outside activities, oversight by young counselors, and the fear of her son running off. But we wanted to give him experiences that were like those of other children, not that all children with autism have to learn how to jump across a field in a plastic garbage bag. However, just having to do that helps a child develop a different set of skills than if he or she merely sits at a table being taught by the teacher. The little boy might not look happy but he was not complaining. He was ecstatic when he got across the field. This is an example of the kind of experience that many children with autism do not have because they do not understand different situations, and responsive parents figure that out and can only handle so much in terms of what they ask of their child.

I saw a child the other day who was profoundly retarded and autistic and I was talking to her parents about things they could do. I conducted a home and school visit, and realized that at school her teachers had set up a little cubbyhole for her. They put activities on the left side of a bookshelf, and she would take those down, complete them, and put them back on the right side of the bookshelf. At home, she basically wandered. She had nice parents who loved her dearly and thousands of toys that she would not go near during the two hours we watched her. She simply wandered around the house. I offered to set something up for the parents to use at home, and I thought the mother acted strangely about whether the items would be delivered or whether they would have to be picked up. I realized that her reaction was based on the fact that her daughter was a large girl of 7 years, functioning mentally at a 12- to 13-month range, and the mother did not like to drive and take this girl to unfamiliar or busy places. We negotiated that she could park in the handicapped slot and someone would come out and meet her. It made me realize that this child, to some degree, is a prisoner in her own home for perfectly understandable reasons. Still, it is something that we want to change, but it is not simple.

There are a number of new things that have happened in the last 5 years that are relevant to those of us in the field of autism. We have realized that autism can be reliably diagnosed down to 2 years of age, and we can make guesses at even younger ages although we do not know as much about what we are doing with these younger children. When I began in this field during the 1960s and 1970s, most children with autism were identified at 6 or 7 years old. Parents would bring the children to kindergarten, and at that point a problem would be identified. However, an experienced person who has seen many autistic children can now typically give a diagnosis when a child is 2 years of age.

We also have a better idea of a whole spectrum of disorders, with a prototype model of children that we know about most. Discriminating autistic spectrum disorders (ASD) from other disorders is easiest for school-age children with some language, who are not fluent speakers. As we move up and down the age span, and up and down levels of mental retardation and language delay, discriminations become more difficult. The autism we understand best occurs among children who have difficulties in all the three areas described earlier. We have a much more difficult time with diagnosing children who are brighter or who have more language skills, or children with a lower IQ. In other words, as we move either up in terms of children who are brighter or have more language, or down in terms of lower IQ, or out from the PDD-NOS, we have a harder time knowing exactly what to do and what to call the disorder. If you ask professionals to diagnose a child who is in the middle of that circle, I think that you would get 100% agreement. But as you move out of that center, children would start being diagnosed with different disorders, such as ADHD, Pragmatic Disorder, or specific language impairment with behavior problems. In terms of making a diagnosis, it is easier when symptoms fall in the center of a circle and much more difficult when they fall on the outside. We are not as good at deciding where autism stops and PDD-NOS starts, or where autism stops and Asberger's Disorder starts. This problem does not make a great deal of difference or at least it should not because, in terms of services, the children are diverse and the services should be tied to the child's characteristics rather than the specific diagnosis.

The old epidemiological studies conducted in the United Kingdom, the United States, and Canada suggested that two thirds to three fourths or more of autistic children were truly mentally retarded; meaning that the best things that they did were still significantly below their age level. Other people like Leo Kanner suggested that autistic children were intelligent because they looked intelligent. Other people proposed that autistic children were functionally mentally retarded, meaning that if they snapped out of the autism, they would be smart. There was a realization in the late 1960s and early 1970s that these theories were not true, and that even children whose social deficits improved still remained behind overall.

In the last 3 or 4 years, people have found more children with autistic characteristics who are not mentally retarded. Similarly, it once was said that half of all children with autism would not have functional language, but just in the last 2 or 3 years we have estimated that a much higher proportion of autistic children do indeed speak, using language as a primary method of communication. The language may not be fluent or carry on a whole conversation, but its use is primary. It would be nice if these findings were based on the effect of early intervention, and people with good early intervention programs have used that success to highlight their programs. It also may be that we are finding more children with less severe deficits.

When I first began to look at the prevalence of autism using numbers from several studies over the years, the rate of autism up until the mid-1980s was about 4 to 5 persons per 10,000. In the mid-1980s, the rate increased to 10 to 15 persons per 10,000, and people associated that increase with changes in the diagnostic framework. According to the criteria in the American Psychiatric Association's Diagnostic and Statistical Manual-Fourth Revision (DSM-IV), the definition of autistic disorder involves abnormal or impaired development prior to age 3 years and manifested by delays or abnormal functioning in at least one of the following areas: (a) social interaction, (b) language as used in social communication, or (c) symbolic or imaginative play. In DSM-IIIR the criteria became broader, so some say that the increase from 1985 was due to broader diagnosis criteria, not that there were more children with autism. In the late 1990s, there were sporadic accounts of many more diagnosed children, to numbers as high as 45 per 10,000, or even one study that found 72 per 10,000.

Initially, people discounted those results and assumed they stemmed from very small samples or cluster studies. For example, in 1998 the Centers for Disease Control and Prevention (CDC) conducted a study in Brick Township, New Jersey, where families recorded a high prevalence of autism that they thought was associated with a toxic waste dump. However, in the

last few years more studies have shown higher prevalence of autism, so it does seem the case that the prevalence of autism, broadly defined, is much higher than we previously thought.

We need to ask, what is happening here? Part of the answer is that the concept of autism has broadened to include milder cases like atypical autism and PDD-NOS. We may also be identifying kids whom we knew had autism, but were not formally counted. People are now more on the ball in terms of knowing these children need services. It also may be that we are better at testing these children and are therefore able to realize that some of these children are smarter than one might think if given a language-based test. We do not know why more children are being diagnosed with autism, and these numbers can make parents afraid that autism is caused by the Measles, Mumps, and Rubella (MMR) vaccine, something in the water, or various environmental abnormalities for which we have no evidence. It is understandable why people might be worried. Whatever the case, it is clear that there are more children who need these services than we had originally thought, which has ramifications for early interventions and schools.

We also have to hone our diagnostic tools. We used to think we could diagnose autism using a list of odd behaviors, so we would look at a child and ask, "Does he flap, smell things, look at lines, or say strange things?" Yet, like other psychiatric disorders, a better prediction of who will have difficulties is the absence of normal behaviors, rather than the presence of abnormal behaviors. Both positive (abnormal) behaviors and negative (the absence of normal) behaviors are required to make a diagnosis of ASD.

Therefore, we need people who know about normal behavior and about how to maximize normal behavior. It makes diagnosis much more complicated because it means that in order to make a diagnosis, one must see a child in a context where he or she would act normally. The developmental level and contextual effects can both have significant effects on diagnostic judgments. Often, for example, physician's visits are not the ideal time to view a child having a normal social interaction. When you are looking in the ears of a feverish child, it is not the time to look at their reciprocal social interaction. Unfortunately, our medical system and mental health systems are often geared towards briefer visits, in contexts that are not very normal. In these situations, abnormal markers may be more apparent than fairly subtle differences in normal behavior.

It also means that developmental levels must be taken into account. For example, young children with autism often smile a lot. The fact that they are smiling does not mean that they are not autistic. Perhaps they are happy. Often, when they smile other people smile too. If you have a beautiful 2-year-old that is glowing with excitement, you do not tend to look at them straight-faced. We must be careful not to make simple statements about why this child does or does not have autism.

I spoke earlier about changes in referrals. During the last couple of years, our model age for first referral has been 2 years of age. However, there are incredible social class effects in that referral process, and children with parents who are aware of autism or who have contact with professionals are identified at younger ages.

When we first began looking at young children with autism, we found different information from different treatment studies. There were behavioral studies that said if a group of autistic 2-year-olds were provided intensive treatment, half of them would look indistinguishable from other children at 7 years of age. It was an exciting finding at the time, but it has not held up. On the other hand, longitudinal studies of clinicians' reports said that most children with autism become adults with autism. Some of them improve and learn amazing things, but no one could say that they were indistinguishable from normal.

Many wondered if there is a type of autism that children grow out of, one that may be affected by early interventions starting at 2 years of age? In addition, there are empirical studies of preschool children with autism that have shown consistent results. Young children with autism have much more difficulty with joint attention, in knowing what other people are talking about, and having an automatic response to someone else's shift in attention. Autistic children may also have difficulty directing someone else's attention and sharing with others.

Children with autism spend less time looking at faces, and many, even at the end of the first year of life, spend less time looking at people's faces compared to other children. At 12 months of age, another of the best identifiers of a child with autism is a failure to respond to his or her name. Another thing autistic children have difficulty with is pretending. Children with autism tend to spend much less time pretending, even in a small fashion.

We found that a while ago, when I was in the Department of Pediatrics, that many children were referred to me at age 3, and the parents were telling us that they had been talking to their pediatrician about the condition for a year beforehand. They claimed that the pediatricians were suggesting to wait, come back for further visits, and not to worry. I went around to the pediatricians in our hospital and those who referred to our hospital, and said, "Please, if you see any of these issues, or if a parent brings these things up, refer them right way, and I promise I will not scare the parents half to death. I will help these parents get started in treatment, then we will see what happens to these children."

In one year, I was able to see 30 referred children who possibly had autism at 2 years of age. Later on, when we looked at those children at age 3 and 4 years, the two things that best discriminated the children who had autism were, based on a parent interview, the following: (a) spontaneously directing someone else's attention whether through pointing, saying a word, or through gazing; and (b) response to a neutral question. A neutral question is something the child might understand that is not very important, like a comment on the weather. The child's lack of response is one of the best identifiers at 2 years of age, based on parent reporting. For example, the parent does not say something of interest like "Let's go get ice cream" or "What a mess, clean up" but something like "I cannot believe that it snowed again." What does the child do? Would he or she look at you because you just spoke to them?

One thing we must be careful about is how parents characterize the child's answer to his or her own name; some parents will say no, the child does not respond, while other parents will say yes. If you ask parents to imitate how they do this, some parents go up to their child's face and say, "Jimmy, Jimmy, Jimmy" and of course little Jimmy responds. The parents are correct in noticing Jimmy's response, but they are not answering the question that you have posed. So, we felt that this neutral question approach was a better indicator when asking parents.

Interestingly, when the child is 3 years old, we have moved from just social communication items to other behaviors. By age 3, the four items that best predicted which children would later be diagnosed with autism were attention to voice (but still not name), pointing to express interest, hand and finger mannerisms, and use of another person's body as a tool. Before 3 years of age, pointing did not make a big difference because there are many reasons why children do not point, including general delays and communication delays.

What is important here is that if we go back to 2 years old and if you think back to the DSM-IV criteria—social reciprocity, communication, and restricted repetitive interest—the 2-year-olds are clearly showing these difficulties that fall between social deficits in communication. One could not use restricted and competitive behaviors to diagnose the 2-year-olds, whereas by age 3 one could use it, although still not as well as with older children. We then decided to do a study that not only looked at parent report but also tried to develop a way to assess children's social behavior in a short time of 20 or 30 minutes. That goes back to what I had said about the need to have context where one would expect children to be social and to want interaction before judgments are made about their interaction. Out of that, we developed something called the ADOS.

Question: Am I right that you are listing some responses "yes, it should be there," and other responses "no, it should not be there?"

Lord: They are all things to be aware of, including the absence of attention to voice and the presence of motor mannerisms. I will now describe ADOS in four different children. These are small descriptive excerpts from a 30-minute observation. The first child turns out to have autism and is also quite mentally retarded. He does not look that bad; he is just not doing much. He is

in a room with an examiner and his mother, and he is organized about what he is doing. By making a bunny go, he can shift attention, even though he is not paying attention to his mother behind him, so he smiled. We are interested in whether he will try to get anybody to get this bunny to go again. What is important is not what he is doing but what he is not doing, and that is what is hard.

A 1-year-old on the edge of autism, is looking in the wrong direction. He knows that he is supposed to do something with the car in front of him, and then because his finger was on it, he ended up seeing it. However, he did not know what the therapist wanted from him, and he did not particularly like the car. The therapist is trying to get him to ask to be tickled, and she is waiting. Instead, he just tickled himself a little bit, and said, "Play tickle." He has the words, but he cannot look at her even though she is right in front of him.

Another child looked at his mother, who is across the room. He has a bunny that is just about to fall off the chair, and he looks at her as if to say, "What did you just do to that bunny?" He directs her attention and then takes it to his mother, which he has not been told to do. He also signed more.

The other thing to make clear is that the children with autism do not look radically abnormal. It is often not what they are doing that is so odd, but rather there is so much that they are not doing. They would not look at an adult or parent who is present and use them as a source of information or as someone with whom to share positive things. If we were interactive with these children, we might be able to make them look a lot better. For example, we might pick them up and throw them in the air and they will smile. They do not have a sense of automatic reciprocity.

Trying to predict the amount of change in children with autism between the ages of 2 and 5 years old, we looked at a measure of adaptive functioning. How well can a child do the kinds of things that other children do at 5 years old? Can they cross the street? Do they answer the telephone? Are they toilet trained? Do they know that part of having a bath is using a little soap? Cognitive variables, such as level of language at age 2, were by far the greater predictor of who would make the largest gains. Even subtle differences had effects, and most of the children in these studies at that age who were referred to us for possible autism did not have words or had very few words.

Having one word, or understanding a few words out of context, was much better than having no words. They had to be words where you could say "Grandma is coming" without hearing Grandma enter the driveway; or, "Let's go find your shoes" without the child being barefoot, headed out the door. Also on this topic, understanding a few words out of context was also much better than having none. If language was not put into the equation, then nonverbal communication and problem solving was also a good predictor and accounted for about 32% of the outcome variance at age 5. However, if a child has language skills, then the nonverbal problem did not matter.

In addition to cognitive variables, we also found a measure of the severity of autism useful, particularly social deficits, which are primarily the absence of normal behaviors rather than the presence of odd things. Here we had three different variables, and the first one—a best estimate diagnosis taking all the information from both the observation and the parent interview—was the strongest of these predictors. If you could not use that, the second-best predictor was the parent's report of social skills on a diagnostic interview. The third was a measure called the Childhood Autism Rating Scale (CARS), which teachers can use or you can use in an assessment. Those things together accounted for more than 60% of the variance of outcome, which is a lot in terms of trying to predict who will be able to make the most change. It is important to remember that these are quite subtle differences.

In terms of expressive language, there are some children who make dramatic progress in expressive language while other children make almost no progress. There are children who are all starting at very close to the same point, which is often having no words at age 2. By the time they are age 5, there are incredible differences, with some children talking fluently and others who still cannot say even a single word.

From this research, we were able to see what one would look for in an 18- to 24-month-old child that would predict an autistic spectrum disorder. This includes not just classically autistic children, but children who were anywhere in that area. From parents' descriptions, the things that predicted this outcome of having an autistic spectrum disorder included not understanding words out of context, not responding to name or the social comments that we talked about previously, and poor eye contact. One of the best predictors was a parent's spontaneous comment that "There is something not quite right about this child. It feels like he is in a world of his own," or "He just does not feel like other children."

Some parents have not had enough experience with children to know, but we found that when a parent spontaneously brought this up, it was often related to these kinds of difficulties. However, we must be careful, because when we asked parents in another study, "Do you have any social concerns about your child?" 70% of all parents responded, "Oh, yes, I think that my 15-month-old is a bully," or "I think he is tactless," or "He is shy." If you ask parents, many can tell you something that is not perfect socially, which is quite different from a parent who says there is something wrong. Again, this is something that we have stressed with pediatricians because many parents feel like they bring this up and are not taken seriously.

Additional red flags that we identified included the following behaviors. First is if you could not interest a child in a game without tickling them, as many autistic children love to be tickled. Many children with autism like to be chased, and they like games with physical contact. A good question is whether they will play a similar game if it does not involve physical contact or tickling, which is a quantum leap for many children with autism. Another red flag involves limited vocalization, meaning a child who does not make many sounds. Many autistic children, particularly when they are young, are incredibly silent, or they act as if they are deaf. Therefore, one of the problems parents first report as a concern is if their child does not hear. Often they will admit that the thought crossed their mind, but they will say that once a McDonald's commercial came on television, the child would hear it from across the house and run into the room.

Unusual eye contact is another red flag that appears, even with people the child knows well. Eye contact is often better with parents, but still not flexible, and does not often involve a third object that might lead to looking at something else and then looking back to the parent. Other red flags we discussed are failure to respond to their name and then repetitive behaviors. In this age range, the repetitive behaviors are mostly important if they are also associated with a language delay or social abnormalities. Many children at 18 months old can line things up or can spend more time than we can believe dropping something into a container, but we are more concerned with that behavior coupled with these other things.

The other interesting red flag is when a behavior that is very unusual becomes almost normalized as a family ritual. Some examples are a child who loves the bottoms of garbage cans or one who likes to look at how the rim of a garbage can fits into a well in the park, despite family disapproval. This behavior is unusual, as most children would realize that this is not something that other people want them to do, and most parents would stop the behavior by saying "no." The fact that the parent is reluctant to intervene suggests something about that child as well because parents tend to be quite sensitive to what they can interfere with and what they cannot. Overall, it is likely that many children with autism can be identified at 2 years of age, but we cannot use those criteria just described at the very beginning, because many children with autism do not have restricted and repetitive behaviors.

Additionally, most children with autism are not aloof, and many do not show odd behaviors when they are 2 years old. We tried doing an Answorth attachment sequence to see if children with autism acted differently upon separation than other children, but it did not work. The children with autism were just as likely to be upset when they are separated from their parents, and they were definitely happy to see their parents at reunion. What made them different was that once they got the parent back in the room, the first and most common strategy for the autistic children was to try and leave. Secondly, once the parent was back, the child would ignore them and move back to whatever they were doing. It is almost as though the child felt that once

the parent was back, he could move on with life free of any particular wariness or a desire to show what he had done in the parent's absence. So, by 2 years of age, children later diagnosed as autistic fail to respond to someone speaking to them in a neutral fashion and do not try to direct others' attention in ordinary, unstructured situations.

It is important to remember that small differences in developmental level can seriously affect how autism is manifested in the preschool years. There is not any one behavior where one can say, "Okay, this child imitated, so he cannot be autistic." A bright child with autism at 2 years of age might imitate some or might do a little bit of pretend play, so one must be careful in diagnosis.

The last thing I want to say about assessment is that often what is more important than the actual diagnosis is the process of working with the families, trying to figure out what is going on and what to do about it. The formal process of thinking with parents about a child's cognitive and language levels is very helpful, but it is not the end. The whole purpose of assessment and diagnosis is to introduce children and families to intervention programs with appropriate goals and methods.

I will summarize the report on educational interventions that I was involved in for the National Academy of Sciences and the National Research Council. This report can be downloaded from the National Academy of Sciences Press website at www.nap.edu, or it can be ordered from them. This was a committee that I chaired with people from other disciplines, including educators, pediatricians, psychiatrists, psychologists, and speech and language pathologists. We were asked to address our selection of the most appropriate interventions for young children with autism, those from birth to 8 years of age. We were then asked how guidelines were set for decisions related to public policy. This committee was convened because there was a great deal of concern about frequent lawsuits, primarily against school systems, brought by parents who felt that their children required special services that were unavailable in local school systems. There was also the question of what to do in even earlier interventions for children from 0 to 3 years. We were asked to separate the common beliefs from those supported by research.

I must present a few caveats about the research. First of all, it is important to recognize that there are virtually no comparisons across different treatments for autism. Some treatments for autism have had a great deal of media attention and some treatments have been heavily marketed or promoted by fine educational institutions, while other treatments are promoted by those who earn their income from them. It is difficult for parents to sort out what is true and what is not. It is also the case that data from some group studies comparing small sample sizes of children can be of poor quality and are mainly done by people who are very committed to their interventions and kind of tacked on an outcome study. We should not blame them, but it is hard to love your intervention and then fairly analyze what it does or does not do. We have realized there is an enormous amount of research done using single-subject designs, which are extremely helpful and full of information. However, these designs are limited in interpretability, since it is hard to go from the individual level to judging which program is best and what a school system or county should do. It is not possible to give each county a list of 500 things to know in terms of what to do with autistic children.

In this report, we summarized what could be concluded from the existing scientific literature in order to find some basis in published research. On those premises, we were able to make recommendations. One of the first recommendations is that local educational and intervention programs should provide families the opportunity to learn techniques for teaching new skills and reducing behavior problems of children with autism. Families have different resources and different priorities, but there are often beneficial things they can learn, and there is evidence that families benefit from strategies that include them in their children's early intervention.

The second recommendation is that communication should be the focus of early intervention. If one thing is going to be done, it should be to help children communicate, particularly spontaneous communication that they must engage in during regular, ordinary life. In addition,

given the new data and everything that we know about communication, the assumption for young children is that they will be verbal. Some children with autism may never learn to speak, but everything suggests that most of them will, so the assumption should be that they will learn to speak. This should not stop you from doing other things too, such as using pictures and object systems. Effective teaching techniques for both verbal language and alternative modes of functional communication should be vigorously applied across settings.

Sign language should not be used. Speech is faster, more flexible, and a critical part of our social interaction, even if we may want to use alternatives. I am not saying to not do those other things, but they should all be aimed toward language. There is evidence that if a certain strategy will work with a young child, it will work in 2 or 3 months. There is no evidence that a child will suddenly pop out normal after an intervention of 1 year. One should be able to increase how much they vocalize, and one should be able to show that they can recognize a word. Also, one should be able to show that they put their arm out when they want something. If your goal is to get a child to speak, they may not speak in 3 months, but one should continue using incremental steps. If there is no progress toward a particular goal by 2 or 3 months, something needs to be done differently. Therefore, measurement of a child's progress should be frequent.

Our major emphasis on social behavior is that it needs to be taught in the context of the real world with different people who are important to the child, including parents, siblings, teachers, typically developing children, and classmates. There is no sense in thinking a child's social behavior will improve if they are taken off into a room and then returned. For problem behaviors, the primary goal should be to replace behaviors that are problematic with something else. For example, if a child has tantrums, we want to figure out when those tantrums occur and why and what else the child could do to accomplish the same purpose.

It is important to recognize that there are some things that do bother children with autism. For a child to whom social skills do not make much sense, being around other people is not always a positive experience. We assume that if children are doing a boring activity, it will be more fun if they do it with other children. For a child with autism, if you pair something boring with other children, you are pairing two things that are hard. An example would be if you are partially fluent in a foreign language, and then you are put in a situation where you have to pay attention. I used to attend grant panels in Canada where one third of what went on was in French. Even with my high school French and prior reading of those proposals, I would leave the panel feeling overloaded, like a person with autism. We need to remember that children with autism may have this same reaction. We want to do is minimize their stress levels so they can go out when they have to and be as happy as possible doing that.

Many early interventions exist, and on the whole, most of them seem to be effective if done by a well-trained person. There are reasons to believe that specific aspects of the interventions may be related to effectiveness. One of the things that we suggested is that the intervention should not be an "either/or" proposition, like choosing which cult to belong to. Which types of interventions make the most sense for a family and make them the most comfortable should be easy to identify. It is also important to know to add more things to help them move a bit in their efforts.

Characteristics of effective interventions involve different strategies, including discrete trials, incidental teaching, structured teaching, "floor time," and individualized modifications of the environment. It is important to start the intervention as soon as someone is concerned about the child, to minimize potential waiting periods. Six months or 1 year should not go by, waiting to see if the child will change. The intervention also needs to involve active engagement for a substantial part of the week, and we recommended 25 hours a week, 12 months a year.

We are not advocating that parents should drop off an 18-month-old child at school for 6-hour days the minute they are concerned. However, we need to identify a substantial part of the day where someone is thinking about what the child is getting out of the activity. It is fine if a mother wants to be at home, doing laundry and going around the community, and the child participates in that. But if there is not such a situation or if the child cannot handle it and

instead spends time at home watching television, it is important to come up with substantial interventions, even for young children. Children with autism interact and engage less than other children, so providing an intervention for a child with autism is like providing a hearing aid for a child who cannot hear. That engagement is important, and the only reason to keep it down is to not exhaust the people and wear out the people who have to promote that engagement.

In terms of public policy recommendations, states should have clearly defined minimum standards for personnel in educational settings for children with ASD. States should also develop a systematic strategy to fund the interventions that are necessary for children with ASD in local schools, so that the cost is not borne primarily by the parents or local school systems.

Running themes include the fact that there is a huge range of children with autism. There are children with autism who are profoundly retarded, who have IQs of 20, and are developing slowly. There are children with autism who are mildly retarded, who have words, and are likely to be able to hold jobs; but they will need special help in school. There are also children with autism who are probably smarter than any of us, and who may have strong skills in a particular area, but who still need social support. Other running themes are that we want to start early. It is better to start an intervention and then discover that a child's problems are mild and that he or she can go into a regular kindergarten rather than not starting due to hopes for miraculous change. This training must be ongoing.

This committee also felt that new laws are unnecessary. The issue is not laws, but rather making things happen such as early intervention. Unfortunately, funding does not match the laws that guarantee help for families. The place to start is with a family working with agencies to set goals. We also need multidisciplinary teams who work together across a whole range of disciplines in order to make this all happen. There is also a need for minimal standards, integration across perspectives, and different approaches in research. Because these children are different in some ways, tried and true tricks with other children will not always work. The simple contrasts between "pure" treatments are obsolete. The point is to match treatments with children and families to find an effective solution. The reality is that none of this will happen instantaneously or for free. If you are trying to treat children in context and substantially change their amount of engagement, money is necessary.

The last thing that I want to say is just that this is an incredibly interesting area where there have been major improvements and shifts in understanding in the last few years. In 1960, people still thought that children with autism were driven into their autistic world by uncaring parents. We had no understanding of the biology of autism, the trajectories of these children's deficits, or the fact that they can learn in many different environments. On the other hand, autistic spectrum disorders involve complex problems that affect children and families in different ways. Solutions to these problems will mirror this complexity and the need for individualization.

Marilyn Arons: What has been your experience with using Head Start as a placement for autistic children?

Lord: My experience has been that it is incredibly variable, and we find pockets of areas. I just moved from Chicago to Michigan and the same thing has happened. We have certain programs that will refer children quickly and appropriately and then other places that you never hear from. There is very much a phenomenon of word of mouth among the difference places, and I do not think that people over-refer. It is hard, because people feel that telling parents something serious is happening to their children and causing worry can be potentially damaging.

There are ways to deal with that, in part by saying that our working hypothesis is that it could be autism, but that we will focus on communication and not get carried away. If the problem is communication and it gets better, that is great, but if it is autism, we have questioned the other things that might have been related to it. North Carolina had the best community-based program that I have been involved in. There is a teach center that focuses on autism within one

hour's drive of every area in North Carolina, providing free community service. There was a lot of involvement in Head Start because there were people who could go back and forth.

In Chicago, I was part of the medical system, which is fee for service. We would agree to do 5 hours of consultation, but basically that was not part of our job. A big issue for many autism centers is that they are funded through medical resources. It can be done, but the hard thing is that it has to be done on an individual basis because the children are so different. You can bring in a group of people who are running Head Start classrooms or early intervention programs, give them a lecture, and get started; but then you have to follow it up by asking "What is this child doing? What is your center like? What are we going to change?" There is a lot of room in working from that model.

The other thing that has happened is that there is more awareness in using multiple placements. For example, it is not an unreasonable combination for a child to be enrolled in Head Start, receive speech therapy and occupational therapy, and go to a special education autism classroom. For working parents it is very hard to manage. You almost need a full-time chauffeur to make this happen. We have not been very good at figuring out how to get the resources so that the burden on parents is lessened.

Cornelia Taylor: Can you improve a child's ability to perceive social cues and reduce mental retardation?

Lord: When you have a 3-year-old functioning at a 12-month-old level, we cannot pull them out of mental retardation; but there are children who might function in a range of mild retardation who do make substantial improvements.

For example, one of the things that we found is that we have these longitudinal studies where we took groups of children referred at age 2. If we used Bayley scores, the average child improved about 20 points. You could have a child with a Bayley of 65 who improved by 20 to 85 or 90 and was in an average range. You can change cognitive ability, and you are giving the child a different world than what they would have had. However, these children make so little sense out of social awareness that not only do you have less social input, but you have a child that needs more to make more sense.

Terry Frankovich: In North Carolina, in the centers, are the diagnostic teams trained?

Lord: Yes, an important aspect of that program is training of the people in the centers. Another aspect is training community supports, so there is a nice infrastructure where things begin with the centers, but the idea is to train more and more people. When we did a study taking all of the referrals to these autism centers of children under 2 years old, we thought that maybe 50% of the children would end up being diagnosed autistic, and the other 50% would have other kinds of problems, which is what I had found in Canada. In fact, we found that 80% were autistic, and it is because the community-based networks and publicity about free services meant that everyone was more aware of autism and the kinds of children who could be helped. It is a good model.

Question: Who did the funding?

Lord: There is state funding through the University of North Carolina, but they have a line in the state budget. Michigan is wonderful in many ways, but state support for special education services is just grim. One of the reasons I moved there was that at least there is some university funding. We do not have state government funding, but it is through the university. If we can somehow rationalize it, if this is a good experience for the students or this will result in genetic research, we are going to work hard to do that rationalization.

Jeffrey Seltzer: I read developmental histories where children seem to be developing typically, including their language abilities. Then there seems to be a regression in language. I often think it is harder to know at 18 months of age what parents are seeing, but I believe a lot of these descriptions are accurate. They can tell me the child's use of language or where the child is heading, and then at 18 months of age there is a steep regression. Is that something you see?

Lord: Yes, and I am glad that you brought it up because it is common. We used to think that perhaps these parents did not know what they had until they see it. With videotape (parents bring in these videotapes), we can see their child doing something at 13 months of age that one cannot get them to do at 20 months old even if you stood on your head. We are involved in a big study looking at children who were reported to have regressions, like our early diagnosis sample. We have interviews at 2 years old. The regressions generally occur around 18 months old. It is pretty good, at least for retrospective data.

We are finding a couple of different things. First, that this phenomenon does seem to be unique to autism. Children with various forms of mental retardation generally do not follow that pattern of having some words that later fade out. Sometimes parents report that it happens overnight or that they went on a trip or they had another baby. More commonly, the words just disappear. They are usually not many words, it is often under 10 words, and the words are pretty normal words, such as mine and baby and bottle and their sister's name.

Of interest is that most of the children are probably plateauing and then losing. If we look at that, most of the children are losing skills at about 18 months old and they have had, at least in our group, a mean of four or five words. This is low, they should have more, and they have started at 12 or 13 months of age. If a child starts talking at this age, he or she should have many more than four or five words by 18 months. It looks as if they are getting a few words, hanging on to them for several months, and then fading out.

Even more parents report loss of social behavior than word loss; and with videos, I do believe parents. If they say that he played peek-a-boo, I believe that he played peek-a-boo. It may be that parents had to work harder to make that happen, especially as the children get older. We tend to forget how hard we work with a small child. I do also think that the children are losing things, and that is partly why there has been so much concern about vaccinations, because it is a high vaccination time.

Our study is supposed to look at that. We felt like basically that is what the data suggested, but parents are so worried about it so it is important to do a more careful study than has been done. On the whole, the evidence for vaccination causing autism is not at all strong, but these patterns are complicated. There is the issue of social behaviors fading out, as well as the issue of talking and stopping talking, which occurs with a smaller number of children.

As far as we can tell in Down Syndrome, Fragile X, William Syndrome, and Idiopathic Mental Retardation, one sees children who start babbling, but not children who get words and lose them without their being replaced by anything else. Many normal children will say one word and stop saying that word and say another one.

Sally Townsend: I work in the public school system in a first grade classroom, and one child has autism. The other children are uncomfortable with this child. Are there resources for help?

Lord: The Michigan Autism Society and the North Carolina Autism Society have web pages, and they also have bookstores. They have lists of books and suggestions that might be relevant. You may want to find someone experienced with autism to talk to your teachers. There are many things that you can do. You want to give the child an alternative behavior and some other way of making contact. You must also give the other children something positive to do with that child, but that does not involve being hugged.

The Multimodal Treatment of ADHD: An Overview of the NIMH Study

CHAIR: John Pascoe
DISCUSSANT: Judith Bloch
PRESENTERS: L. Eugene Arnold, Benedetto Vitiello

■ Effectiveness of Different Treatment Approaches to ADHD: The MTA Outcomes

L. Eugene Arnold

■ MTA Study: Implications for Clinical Care and Further Research

Benedetto Vitiello

Jack Pascoe: Dr. Gene Arnold is Professor Emeritus of Psychiatry at Ohio State. He was executive secretary of the steering committee for the Multimodal Treatment Study and is currently chair of the committee. Dr. Ben Vitiello is Chief of Child and Adolescent Treatment and Preventive Intervention Research at NIH. Ben was a coinvestigator on the study. Judith Bloch is the founder and CEO of Variety Child Learning Center. It is a center in New York for children with, and who are at risk for, developmental disabilities. The center serves children from 2 to 7 years of age.

L. Eugene Arnold: The Multimodal Treatment Study of children with ADHD, or the MTA, as it is affectionately known by those of us who realize that after 10 years we still cannot get off it, is currently doing a 6-year and 8-year follow-up study. We hope to do a 10-year assessment to follow the subjects through adolescence. The MTA was the largest study and clinical trial done by NIMH up to that time and the first one with children. It was a real team effort, involving a dozen universities as well as NIMH staff.

For those who may not be completely familiar with ADHD, I will quickly run through the fact that there are several criteria—and having the symptoms by themselves is not enough. It is true that to have combined-type ADHD, which is what we were studying, you must have six of nine symptoms of inattention, distractability, disorganization,and so forth, and you also must have six of nine symptoms of overactivity and impulsiveness, such as blurting out answers, not being able to wait your turn, restless climbing and running, and so forth. The behaviors have to be inappropriate for the developmental level and mental age. They also have to be a chronic problem over a long period of time, with impairment dating from prior to age 7. The impairment has to occur in more than one setting. More importantly, it cannot be explained better by some other mental disorder like autism, schizophrenia, or bipolar disorder.

The MTA was designed to answer two primary questions. It is important to keep these in mind while evaluating the results. One of the things you will notice is that the study was not developed to test whether a treatment is effective or not. All four treatment conditions we studied were established as effective treatments. We were merely comparing the relative effectiveness of them.

The first question was to compare the two major, well-documented treatment modalities—behavioral treatment and stimulant medication—to compare them to each other and to compare each one to the combination of the two. The hypothesis is that the combination of behavioral treatment and medication would be better than either modality alone. We had no a priori hypothesis as to which one of the two single modalities would be better. The second question was to compare good state-of-the-art intense treatments in each of these three strategies to the way treatment was delivered routinely in the community.

The sample was 579 children, ages 7 to 9 in first through fourth grades. Eighty percent of the children were male, which is what you would expect with ADHD. All of the participants had categorical and dimensional diagnoses of ADHD. There was a lot of comorbidity, that is, other mental disorders besides ADHD. One third of the sample had an anxiety disorder; about one half had either oppositional defiant disorder or conduct disorder, one of the aggressive conduct problems. The average impairment score of 22 on the Columbia Impairment Scale (CIS) was fairly high; 16 is considered the threshold for clinical impairment. In order to keep a widely representative sample, the only exclusionary criteria were factors that would interfere with participating in the treatments or assessments.

The children were randomly assigned to four treatment conditions over a period of 14 months. These were actually treatment strategies, not just single treatments. There was medication management alone, behavioral treatment alone, the combination, and then the community comparison group that received no treatment by the study but found treatment in the community and was assessed at the same time points—baseline, 3, 9, 14, and 24 months—as were the MTA-treated groups.

The medication strategy started out with a placebo-controlled crossover titration of methylphenidate (MPH), which was chosen because it is the most studied drug for ADHD. A kind of priority list was compiled from a number of controlled studies that showed efficacy and safety of medications that had been tested. The first one was methylphenidate; this had a placebo-controlled trial. The others were open trials titrated to a standard of no room for improvement or a clinical global impression (CGI) of 1 or 2, which is normal or minimal impairment. In other words, we were aiming to normalize the function of the children.

The behavioral treatment was intense. The continuity was provided by 35 sessions of parent training, 27 group and 8 individual. That was linked by a daily report card to teachers, who received behavioral consultation, which occurred twice monthly throughout the first school year and for 10 sessions of the second year. The recruitment was in the spring of one school year, and the study extended through the following school year. In the summer the counselors filled out daily report cards at an all-day treatment program. The summer program was an 8-week, 9-hours-a-day behavioral treatment with a staff to child ratio of 2:1. The counselors were trained in the classrooms of the same children during the spring, then they followed the children into the fall classrooms as paraprofessional aides. One aide was assigned half-time to each of the subjects in the study, worked with the teacher and the child, and were available to help with general classroom activities.

All the treatments began simultaneously, but in the combination strategy both the behavioral treatment and medication strategy were used together. There was an adaptation with the combination strategy because you could not have two different therapists to manipulate two different treatment strategies independently. The algorithm was that the behavioral treatment took primacy. If a problem developed, there was an adjustment in the behavioral treatment first. On the medication strategy, the only thing you could do was adjust the medication.

For the 289 children assigned to one of the MTA medication groups—either combination or medication management—198, something like 65 %, had a good enough response to methylphenidate to keep them on it and not try any other drug. There were 26 children who had a poor enough response that they were immediately shunted over to try the next drug on the list, which was dextroamphetamine. Interestingly, 32 children had a good enough response to placebo that they were started into the 13-month maintenance period on no medication. This included children who were not receiving any behavioral treatment, but they were monitored and had monthly visits. Most of them ended up needing medication later on, but there was this initial placebo response. Seventeen refused to take medication, and there were some who had problems with the titration.

I want to mention methylphenidate's side effects because of an interesting finding. As expected appetite, insomnia, and blunting of affect tended to be dose-dependent. Irritability,

however, actually decreased with rising dose. The same results were found with teacher ratings of irritability. I think this is because irritability is part of the ADHD syndrome, even though it is not an official diagnostic criterion.

During the first month of titration, the teacher ratings showed a dramatic effect, while parent ratings did not. Teachers were blind as to whether the medication was placebo or not, but the children's behavior may have been a little worse than at home due to the difference in setting. The demands in school generally bring out problems. One thing you can see is that with the high dose, teachers and parents are kind of equalized. Even the improvement on parent ratings was highly significant.

The important data on the whole sample of 579 children come from the outcomes at 14 months. Many different domains of outcome were examined. The parent inattention ratings on the Swanson, Nolan, and Pelham (SNAP) rating scale, which includes the 18 DSM-IV symptoms, showed that there was most improvement in the combination group. All groups improved, but the combination and medication management groups improved significantly more than the behavioral treatment and community comparison groups. Although combination treatment consistently came out best, the difference from medication management is not significant. Similarly, the difference between community comparison and behavior alone is not significant, even though intensive behavioral treatment seems consistently slightly better than usual community care.

The same pattern not only showed up on the parent ratings of inattention but also the teacher ratings of inattention. It also showed up on parent ratings of hyperactivity/impulsivity, the other major domain for ADHD symptoms. On the teacher ratings, the behavioral treatment group separates a little bit from the community comparison group and is no longer significantly inferior to the two MTA-medicated groups. However, behavioral treatment is still not significantly better than the community comparison. Statistically, the two MTA-medicated groups are better than the community comparison group.

Again, I need to point out that the community comparison group is not a control group; it is not an untreated control. Two-thirds of the community comparison group sought out medication from their own physicians, so they were medicated and generally used the same drugs as the MTA-treated medication and combination groups. This means that the outcome was not only dependent on whether the child received medication, but the overall treatment plan including the care, consistency, and attention to the psychosocial aspects of psychopharmacology.

On the oppositional-defiant-aggressive spectrum, there was a similar pattern. An interesting surprise was that on internalizing symptoms (anxiety and depression) on the social skills rating system, even though one would not expect these factors to improve from a stimulant medication, there was a significant effect. The children in the MTA-medicated algorithm have more improvement in internalizing symptoms than those with behavioral treatment alone or in the community comparison group. Both the combination and medication management groups are significantly better than the community comparison group for social skills as well. The behavioral group is not significantly different from any of the others as it falls in between the MTA-medicated groups and the community comparison.

We had a number of measures for family functioning, one of which was parent-child arguing. All three of the MTA-treated groups were significantly better than the community comparison on this measure of parent-child conflict. Behavioral alone was almost congruent with the medication alone group on the measure, while combination was a tad better than the two, though this difference is not significant. Interestingly, the medication management group had a significantly higher dose of medication over the 14 months than did the combination group.

There was a signification effect on reading with the combination group, better than either the community comparison or the behavioral alone group. The combination group showed significantly more improvement than the community comparison group in all domains of

function whereas medication alone or behavioral alone were not consistently superior to community comparison.

For just ADHD alone at this age without co-morbidity, well-delivered medication seems superior to behavioral treatment and may be enough for the ADHD symptoms by itself. Behavioral management is an acceptable treatment for those preferring not to use medication. Three fourths of the sample could be maintained for 14 months with no medication. One fourth supplemented with medication, and that was a protocol violation. They either got it on their own or we were forced to let them have it for ethical reasons. The other three-fourths were able to manage without it.

The combination group had the biggest decrease, that is improvement in comorbidity. The community comparison had the least improvement in comorbidity, and the other two groups fell in between.

One of the striking differences between the behavioral treatment and medication management was a kind of crisscross in terms of nonacceptance. The psychosocial, behavioral treatment was very well accepted, while medication management was actually declined by 21 participants even though they had agreed to accept whatever treatment they were assigned. On the other hand, only 3 of the children who used medication had to supplement it with behavioral treatment, but 38 out of 144—about 26% of the behavioral group—had to supplement behavioral treatment with medication.

On a composite score of all the measures in the study, combination was significantly better than medication management alone. Both of them were significantly better than the community comparison and better than behavioral treatment alone.

The local normative comparison group came from the same classrooms as the other children. The four treatment groups were fairly congruent at baseline on the total of ADHD and OCD symptoms as rated by parents and teachers. All four groups moved toward the normal group with treatment but the combination group moved the most, with 68% having a SNAP item mean of "just a little" or less.

Secondary analyses showed that children with both ADHD and anxiety but not other disorders improved the most and about equally well with combination, medication management alone, or behavioral treatment alone. Those with oppositional-defiant or conduct disorder require medication for optimal benefit, and those with both anxiety and oppositional or conduct disorder (besides ADHD) need combination treatment for optimal care. I do not have time to go into the 24-month data. If it comes up during questions, then maybe we can discuss it.

Question: Could you clarify who was in the community group? You alluded to the fact that some children used medication and others did not. It would give me a better understanding of the difference for that group compared to the combination group.

Arnold: The groups were evenly matched on all sociodemographic variables. There was a statistically significant difference in age. If you listed all 20 variables, there was one that happened to be statistically significant. It was a difference of 3 months in age, which we thought was clinically meaningless. There was random assignment to the four groups, so they should have been similar.

Question: What percentage of the community group was already on medication?

Arnold: Thirty-one percent of the entire sample was already on medication. I do not know offhand what the numbers were for each of the groups, but by random assignment, you would expect some spread. I suppose somewhere between 25 and 35% in each group had taken medication before. Two-thirds took it after being randomly assigned to community comparison. Two-thirds sought out medication at that point, even though only 31% had been taking it prior to that.

Question: You talked about medication levels, and there seemed to be quite a bit more medication given to the medication only group versus the combination?

Arnold: The difference was 31mg a day for the combination group and 38mg for the medication only. The difference of about 20% was statistically significant.

Question: When you were monitoring side effects, was there a difference?

Benedetto Vitiello: There was more loss of appetite; for instance, the impact on weight is dose-related. The group that received a higher dose of medication had lower growth in weight, and I believe also in height, compared to the other group.

Comment: I think these are important issues to bring out in discussion—time, dose, and so on.

Question: Why did you choose 14 months?

Arnold: The 14-month period was a compromise between what we should have done and what we could afford to do. We wanted to conduct a 2-year study based on the previous work by Cantwell and Satterfield. When we tried to fit the study into the budget, completed the power analyses, and realized how many subjects were needed, we could only afford 14 months of treatment. That was the end of the treatment phase.

Question: Have you conducted any subsequent analysis of the period before the 14 months ended?

Arnold: The chosen endpoint in the design of the study was 14 months. We decided that we would not peek at the data prior to that. However, because of questions that have been raised about the fading of the behavioral treatment, we recently analyzed the 9-month data and compared it to the 14-month data. I am leading that paper, and it is almost ready to submit. I can tell you that there is no striking difference in the results at 9 versus 14 months. For the most part, the changes occurred early in the treatment and then continued through the treatment period. In fact, by 3 months, most of changes were obvious.

Vitiello: My task now is to discuss the implications for clinical care and research. The MTA has contributed a lot to what we know about attention deficit disorder. I will try to integrate a little bit of what we know without the pretense of being comprehensive. Basically, I'll try to address what we know about the treatment of children with attention deficit disorder and what we do not know but still need to learn in order to eventually have a more rational approach to this condition.

It is clear that there are effective treatments that are able to decrease symptoms of attention deficit disorder; they are able to improve other behavioral components such as being oppositional, being defiant, conduct disorder in general, and aggression. We have treatments that are able to improve school performance in terms of completion and accuracy. We also know that behavioral, pharmacological, and combined treatment are all efficacious in some way, even though medication is more effective than behavioral treatment on most of these targets. For medication, the effect size is large, with a difference of about 1 standard deviation between stimulant treatment and placebo. This translates into the so-called number needed to treat of 1.5. The number needed to treat is used a lot now in evidence-based medicine and is the number a clinician needs to treat in order to add 1 more improved subject to those improved regardless of treatment. So if you treat 1.5 children, you will add 1 subject to the half that would improve regardless of treatment. This is an extremely high number to treat. For instance, if you

want to consider treatment of ear infection in pediatrics, how many ear infections would improve spontaneously versus how many would improve with antibiotic treatment? You compare antibiotic treatment with no treatment; the number needed to treat is about 7, because about 80% of children would improve in their otitis media regardless of treatment. The successful rate of treatment will be about 95% with the use of antibiotics, but the difference between 95 and 80% is fairly small, so the number needed to treat is high. What all this means is that stimulants are very powerful, effective treatments. The efficacy has been consistent and replicated across treatments.

We also know that treatment not only improves behavior, but can also normalize it. This means that the behavior of ADHD children can become indistinguishable to that of children who are non-ADD. The percentage of normalization is higher (68%) for combined treatment that includes medication and psychosocial intervention or behavioral therapy. The percentage is 56% for medication alone and is lower with just behavioral treatment. If you use a community control, which is not optimal treatment, the improvement is much lower in terms of normalization rate. What is important is the type of treatment. When there is a stimulant medication involved, the success rate is greater. The quality of treatment is also important, because we know that community control uses medication, but they use doses and levels of monitoring that are inferior to the MTA trial. We believe that for such reasons there was less improvement.

I want to say that Ritalin was optimal treatment for about two thirds of the treatment groups. There was no head-to-head comparison between Ritalin and Adderall or dextroamphetamine. It just happened that we selected Ritalin as the first stimulant. The conclusion here is that if you try one stimulant on a child, the probable chances of success are about two thirds or 65%. Only 4 children or 1% out of the 289 children had prohibitive side effects such as skin picking, big mood changes, or loss of appetite that prevented the continued use of treatment.

What is important also is the comorbidity. For the children in the MTA trial who had either attention deficit disorder alone or attention deficit disorder with another behavioral problem, like oppositional defiant disorder or conduct disorder, behavioral therapy was not terribly effective. It was actually the same as community control. On the contrary, medication management and combined treatment resulted in better response rates. However, for the children who also have anxiety disorder or anxiety symptoms in addition to attention deficit disorder, behavioral treatment was quite effective. I would say it is almost as effective as combined and a little more effective than medication management, even though the difference is not statistically significant.

The conclusion from the secondary analyses for these subgroups must be taken with some caution because it was not predicted when the study was launched. The conclusion is that if there is coexistence of attention deficit disorder and many internalizing symptoms such as anxiety or mood changes, behavioral intervention may be the most appropriate or, at the least, an appropriate treatment and likely to be as effective as stimulant medication.

We also know that the treatment remains effective over time and is not just a short-term effect. Eugene has already pointed out the difference in medication dosage between medication alone and combined. Combined treatment was associated with lower average dose of stimulant medication, so that is a potential benefit of combining behavioral therapy and medication. The finding needs to be retested in a separate study, because this was a serendipitous finding and there were potential confounders.

Targets such as social skills, cognitive performance, interpersonal interaction, and internalizing symptoms can be improved by treatment including stimulant medication. These have been traditionally targets of psychotherapy, but can be improved also by stimulant medication based on the MTA data. However, we do not have enough data to conclude that treatment improves academic achievement other than it helps with the completion of schoolwork. The existing data, including the MTA trial, do not seem to suggest that the grades of these children improve more with a specific treatment. We still do not know whether later psychopathology—meaning

incidents of depression, antisocial behavior, or substance abuse—can be ameliorated in some way by earlier treatment of ADHD. Also, we suppose that treatment will lead to a better outcome for social achievement but there is no empirical support of that yet.

We know quite a bit now about the safety of stimulants. Most children will present with some side effects, but will be able to live with them and tolerate treatment. There are no cardiovascular side effects or seizures, so the heart or blood pressure is usually not affected with stimulant treatment. Tics can be a problem, but they are much less of a problem than originally suspected. Years ago, the presence of tics was an absolute contraindication for treatment of stimulants. For the last 4–5 years now, it has become a relative contraindication, meaning you need to be careful and monitor the child. In most cases, even if they get tics, they will be able to handle the medication and the tics will not get worse. Sometimes, strangely enough, the tics get better with treatment of ADHD.

There is a delay in physical growth, both in weight and height that is statistically significant with time. This is dose-related; the delay is greater with the higher dose of stimulant. "Drug holidays" can help minimize delay on growth, but the MTA data show that intensive treatment without drug holidays translated into a better treatment of ADHD symptoms. The family needs to be aware that this is sort of a tradeoff at the moment until we have better medication that is as powerful without the side effects.

Another important question from a clinician's point of view is whether the stimulants induce mania in children who are predisposed to mania in some way. The little data that we have does not seem to support that, but it is too early to draw a conclusion. A major concern that has come up is do stimulants encourage substance abuse in some children later on since they are drugs with abuse potential? There is little evidence of that. Most of the data suggests that, if anything, there is a negative association between treatment with stimulants and substance abuse later on. The reverse aspect of that question is whether treatment with stimulants protects children from later developing substance abuse problems. Again, there is limited evidence.

If we see the phases of research on ADHD as different chapters, Chapter 1 would be whether there are effective, short-term treatments. I think it has been settled that there are such treatments. The second question would be whether the treatment remains effective for long-term, chronic use. I would say yes, it does. The third important question that deserves a chapter is whether treatment leads to distal benefits, whether it really improves the lives of these children as they become young adults.

Current research is moving in this direction. There is the extended follow-up of the MTA trials. Another approach would be to use a prospective study of naturalistically treated samples. The advantages are that they are easier to recruit and likely to be representative of usual patients in clinical practice. However, there is no experimental control, which is the major limitation of this approach. So, at the moment our best hope to contribute data for this important question is to have a systematic follow-up of the MTA trial. The retention rate is high. We are focusing on major outcomes such as psychopathology, function in several domains, and substance abuse. This extended follow-up is ongoing at the seven sites.

In spite of such extensive studies, attention deficit disorder remains a major area of research. Attention deficit disorder remains third in terms of the amount of funds spent in that area. One currently ongoing study is examining the efficacy and safety of stimulant medication in preschoolers. The rationale for this study is that attention deficit disorder typically starts in preschool years. Retrospectively, for all the children who are typically diagnosed in elementary school, one can actually trace back the beginning of their disorder to ages 3 and 4.

Typically this is the classic story of attention deficit disorder: The child enters preschool. The teacher complains a lot but is still able to handle the situation. Sometimes the parents say that preschool is too early for him and keep him at home. Basically that is a period where there is already a signal of the problem, but it is not recognized or treated. When the child starts elementary school, he/she is unable to function. At that point, the diagnosis is made, but it may

be too late. It would be desirable to make the diagnosis early in an attempt to prevent complications and comorbidity. In practice, many clinicians are already using medications in preschool children, even though they are not FDA-approved. As a result of that, about 2 years ago we launched a study called PATS (Preschoolers with Attention Deficit Disorder Treatment Study). This study examines children with severe attention deficit disorder and functional impairment at home and at preschool. The children must first be treated with behavioral therapy by the parents for 8 weeks under the direction of an expert. After that, if they are still impaired, then they enter the medication phase, so it is a complicated study where the approach to medication is administered conservatively to protect the child and not begin medication too early. The study is in progress and being run at six sites. Larry Greenhill is the major coordinator of this with NIMH. I do not think we will have results for a couple of years.

Another study that we are funding through a grant involves psychosocial treatment designed for preschool children. So far all the behavioral therapy manuals have been done for school-age children, but certainly this can also be applied to preschoolers. George DuPaul is conducting this study at Lehigh University.

Pelham at Buffalo is looking at the interaction between behavioral therapy and medication affects, meaning the different doses of medications and different levels of intensity of behavioral therapy. The purpose is to see what happens when you combine these different degrees of intensity of treatments.

Arnold is involved with a study at Ohio State University in the RUPP (Research Unit of Pediatric Psychopharmacology) network that is trying to test the efficacy and safety of stimulant medication in children with pervasive developmental disorders that include autism, Asperger's syndrome, and other types of pervasive developmental disorders. These children may benefit from stimulants but can also have side effects; we want to do a systematic study to give some directions to clinicians.

There is a study that attempts to develop treatment for a combination of attention deficit disorder and anxiety disorder that is run at five sites. There is also one small study that is focusing on attention deficit disorder inattentive type. Arnold pointed out at that the MTA sample was a combined type of either hyperactive or combined types of attention deficit disorder. There are children who have only inattention, and they were not included in the MTA study. The inattentive type was left out in some way and has not been studied quite as well as the group with hyperactivity, so we need to catch up on that particular subtype of attention deficit disorder. I do not have time to go into the details of each study, but I wanted to give you an idea of how much interest and research is taking place in this area.

Pascoe: Are there any questions or clarifications for Ben?

Young Juhn: In the combined group and the medication group, do we know what proportions of the children were not responders to the medication? Somehow, if we have some kind of demographic or clinical characteristics to identify those children, it might be very useful in terms of knowing when the medication would be effective.

Vitiello: The question is about whether it is possible to identify characteristics of nonresponders to medication. I think it is an important issue. We are trying to focus particularly on the children with autism and pervasive developmental disorder, because the percentage of children who do not respond to medication is small among the children with normal IQ and attention deficit disorder. Some people estimate that it is less than 10%, which cannot be dismissed, but certainly it is a small number. On the contrary, pervasive developmental disorder can be as high as 30%. We have more chances to detect possible moderators of nontreatment or treatment failure, including pharmacogenetics components.

Judith Bloch: I am not a physician. I come to this issue from a different perspective. For more than 30 years, I have spent my professional life working with young children who are at risk and those with developmental disabilities. I am by training a social worker, an educator, and the founder of a program that has worked with thousands of young children both in what we call self-contained classrooms and in integrated and inclusionary programs. All of the children at the center in a self-contained program are classified between the ages of 2 and 7. They have at least a 33⅓% delay in one domain of development or a 25% delay in two domains of development.

The MTA study examined children ages 7 to 9. My area is for children under 7, which I assume many of you are concerned about in Head Start and in the field. Believe it or not, there are still many parents and other significant people in the lives of children under 5 who question the evidence that a child as young as 2, 3, or 4 can have some kind of a neurological disorder based on behavior alone. There is no blood test or "real test." The media does it all the time, so those of us who work with young children need to be able to say that there has been a major study funded by NIMH. The study found that there is indeed a neurological disorder and that these children can be identified by ages 3 and 4. It is not that the child is bad or disobedient; this is a driven child, who often cannot control a motor that is running. Some parents believe that their child got the wrong genetic loading. We need to remember that they themselves often may be struggling with some of this disability and now, at the same time, have a child to manage. So there is the importance of informing adults involved in children's lives about the nature and validity of this disability.

The MTA study identified the effective interventions. What we take from the study is that it is not only what we do with young children but the quality of how well we do it that makes much of the difference. The community care, which was the control group, showed that professionals in the mental health clinics and private practice share the same ideas. Perhaps the links between home, school, the teams, and the monitoring of medication was not always at the same effective level that the experts in the field have learned needs to exist. I wondered whether medication alone is just that, because the child and mother were seen monthly by a well-informed and knowledgeable professional who provided not only care for the monitoring of medication but also information, support, and readings.

I recently received some information on demographics of children with ADHD. The children who are classified at the ages of 3 or 4 more typically tend to come from families of privilege and education. What does that tell us? It tells us that a well-informed parent is more likely to be familiar with the early child developmental sequence and more likely to seek out help early on. I think that a great deal of what we now know about behavioral intervention and praising and rewarding is almost common knowledge; it is no longer limited to those of us who have been trained.

The study identified what they called the core behaviors and separated out what they thought were secondary problems. This may be true with 7–9 year olds, but I have not seen children between the ages of 2–7 who have only had core disabilities. This disability affects the child's total social functioning. It affects the relationship with their parents, family life, and their ability to interact with children of their age. At school, it affects their relationship with the teacher and their sense of self and self-esteem when they realize that they either cannot control how they behave or that Johnny next to them is getting compliments and approval in ways that they cannot expect to receive. Issues of self-esteem begin as early as 3–4 years old.

I think there is a potential for harm if we overlook the effectiveness of behavioral intervention in that we can rely too heavily on medication. Maybe there are opportunities that we would be using as we move away from the area of highly qualified, well-trained professional people and move into a more general insurance-favored modality of "a pill will fix it all." I know from both professional and some personal experience that there is never 100% improvement with medication. The practical problems emerge during early morning when there is no medication. If the child wakes up before mom does, it can be a disaster with who should be coming down-

stairs, getting ready for school, getting dressed—it does not happen. There are problems in the early morning and after dinner, all of which go on to affect a child's relationship with their parents. As a result, I would say that behavioral intervention is even more important. There is a rationale to why parents prefer behavioral interventions. They feel desperate that they cannot control their children and comfort their children when they misbehave. They have not found a way to anticipate, avoid, or deal with the impending disaster. The critical advantages of behavioral intervention is that parents learn the skills to deal with behavior and anticipate experiences that may overstimulate a child or that a child may not be ready for.

Let us consider why behavioral intervention may be more beneficial in children under 7 years of age. Everybody talks about the plasticity of brain development, the window of opportunity. Although medication is now used with children this age, in our program none of the children 5 years or younger is on medication. There are concerns about safety. We have children who were started on medication, and their parents became frantic because of the side effects in some of the children; maybe the dosage is an issue. The question is whether the intervention equips parents and teachers with the skills to deal with behavior.

The severity of the disorder is also an issue and that it is on a continuum. I may have missed a component in the MTA study that identified where children were in the continuum. At the center we look at that in the young child, because there is a range and there is a difference. We start by preparing an assessment with an instrument we have been working on for about 25 years called The Five P's. It is the Parent/Professional Preschool Performance Profile that is a shared assessment for children 2–5 years of age where parents and teachers rate the child on 458 developmental skills and interfering behaviors. I mainly speak to the early childhood crowd, so I publish and write for a magazine that's read by early childhood educators. I have one article on troubled children, "Preschoolers Could Cause Trouble Later," which talks about interventions and another article on approaching and informing parents about the possibility of disability. What we monitor over time is the state of the disability, the intensity, and then we look at the frequency, intensity, and duration in the way in which we can measure or see changes over time. If there is a child who has five temper tantrums in a half hour because he cannot wait, and those temper tantrums each last 10 minutes, we may see in 2 months that the number, length, or the intensity of those tantrums decreases. The child can begin to self-comfort and turn around; that is progress.

We also conducted an outcome study in conjunction with Hicks at Fordham that examined results at the end of 15 months. We thought we could expect change after 6 months just from maturation. Children get better; they learn; they improve. We used the same instruments to review and look at the behavior after 6 months, but the place in which the water started boiling—this is what I tell parents when something is happening, you have the fire under the pot, you do not see it, but something is going to happen—was with our 2- and 3-year-olds who had begun in the program. We are trying to write that up and get the paper out into the field. It did lead to a designation by New York State Education Department so that we became a validated model; we had to demonstrate that we had an outcome.

Head Start centers can be pivotal because they can identify and intervene. I work with Dylan, who says a good teacher is worth 10 milligrams. I would say that a good mother is worth another 10 and would conclude by saying that when all of the stakeholders and all of the parties to the issue collaborate and work well together, maybe for the younger children we do not need medication all the time.

Linda Scheer: I am from the New York University Quality Improvement Center for Disabilities Services. Thank you for your concerns about medications for the preschoolers because the behaviors we have seen in children of that age have origins in many different places. I think that too often we like to jump to the conclusion that they have ADHD or disorders that need to be treated with medication, especially with children who are so vulnerable and challenging as our

own at some times, who may just be responding to their environments. We need to be careful about how we determine how to handle them, plus the fact that expectations are raised in how we approach children and the environments we have them in.

Roslyn Galligan: I'm from Svinburne University in Australia. I am interested to know how tightly you apply the diagnostic criteria of ADHD across two contexts. How did you manage that?

Arnold: The question was regarding how it was determined that there were symptoms or impairment in both settings. There was a dimensional criterion that they had to be 1.5 standard deviations above the norm on the inattention overactivity factor of the IOWA Conners scale rated by teacher and 1.0 standard deviation above norm on the same scale by parent. They also had to meet DSM-IV categorical diagnostic criteria by parent report on a standardized interview, the Diagnostic Interview Schedule for Children.

Robin Vander Groef: I am from New Jersey. One of my concerns is that many of our children are put on medication based upon the parent telling their pediatrician, "This is the behavior. I feel my child should be on Ritalin." Is there a protocol that should take place? Should a pediatrician put a child on this medication or should the child's neurological history be addressed before a child starts on such medication?

Arnold: First of all and particularly for preschoolers, there should be a reasonably complete physical exam and medical history. There are medical conditions that can mimic ADHD symptoms, such as thyroid abnormality, lead poisoning, and a number of other things. Even though these are low percents of all those who would otherwise meet diagnostic criteria for ADHD, you might have 2% for each of these, these are still important things not to miss. They are real medical problems and should be treated; to just treat the symptoms with a stimulant or even behavioral treatment without addressing the cause would be certainly wrong. In addition, there needs to be a psychiatric or psychological evaluation to rule out better explanations of it, such as early bipolar disorder, posttraumatic stress disorder, and other severe problems that require a different kind of treatment. There should also be direct communication of some kind from someone other than the parent such as the teacher. This does not necessarily have to be person-to-person or even on the phone; it can be a note from the teacher. Typically before I evaluate a child for ADHD, I will send the parent a rating scale for the teacher to fill out. It has a space on it to make any additional narrative comments. By assessing the child from different informants, you are sure it is not just a parent–child problem. There is a good chance you are not going to miss something else if it is coupled with a good medical history and psychiatric evaluation.

Bloch: You have to look at children's behavior over an extended period of time at multiple sites with multiple observers. We all know that an office visit alone gets children to behave with strangers in different ways due to the unfamiliar setting. As Arnold says, all of the information that you gather should come with checklists and observational scales. There are many of them out there. In our program we use one in which parents and teachers observe and rate the child on the same behavior—social, emotional, relationship to adults—and share and compare so they can see how the child is the same or different.

Arnold: Incidentally, there is a low correlation between parent and teacher ratings of the same child in terms of comparing individual items on the questionnaire. However, there is high correlation in terms of the rating of changes with an intervention. The explanation is that each setting brings out different symptoms that are observed. It is not the case that there are basic disagreements in the informants.

Bloch: Let me add to that. It is interesting that we find differences in the share and compare initially. There are 458 observed items, and there is increased congruence over time as the center becomes a more familiar setting. As the parents trust us more, they can tolerate identifying more difficulties than they might have been comfortable identifying initially, so we see the ratings come together after at least 6 months.

Vitiello: The only thing to add is that we do not need to reinvent anything here, because there are accurate practice parameters and guidelines for making diagnoses of attention deficit disorder. The American Academy of Pediatrics published one a number of years ago that has been revised. The American Academy of Child Psychiatry also has practice parameters, so there are guidelines. There are situations that are clinically ambiguous, but there is clear guidance about the steps for arriving at a diagnosis.

Pascoe: The practical question is with a prevalence rate of maybe 1 in 20 children, do we have enough resources and people in the field to do the kind of assessment we are talking about right now? Any comments on that other than we need more?

Arnold: I think that is a question that answers itself. It is pretty self-evident that the majority of children are not receiving optimal care. I think that was shown in the comparison group in the MTA; you could see the difference between the optimal treatment and the way it was being done at that time in the community.

Lynn Brown: I am from Florida. You mentioned the difference between children who were treated in the community and the MTA treatment. I thought what I heard you say was that a lot of times, the children who were treated in the community had a dosage that tended to be low or inadequate?

Arnold: She was asking what the differences were between the treatment in the community and the MTA. One of the things was dose. The average dose in the community is 23 milligrams a day; in the MTA-treated ones, it was 31 milligrams for the combination subjects and 38 for the medication management subjects. The number of times per day it was administered averaged 2.3 in the community and 3 in the MTA. The frequency of visits were monthly in the MTA algorithm, but we actually allowed some of them to go 2 months if they were stabilized, doing well, and wished to cut down to every 2 months. About half of those who were eligible opted to do that, and it did not make any obvious difference. If they deteriorated, we brought them back to monthly visits until they were stabilized again. In the community, it was an average of 4 visits over 13 months compared to 10 visits in the MTA-treated group. The number of days they actually took medication was about half; in other words, they would start it, run out, and not return to refill the prescription. There was all this inconsistency and no titration to an optimal dose; all these factors contributed to the differences. We currently have a paper in preparation that is teasing this apart, doing a propensity analysis for the propensity to seek out medication in the community for a better comparison to the MTA-treated subjects.

Bloch: I was wondering also whether the community-based group had the same connection to the school that the other group did because I feel that is a very significant variable.

Arnold: The combination-treated group and the behavioral group had an improved relationship with the school. The teacher and parent were required by the treatment protocol to be involved with each other.

Bloch: But what about the community-based group? That is the issue.

Arnold: The community comparison group had nothing done treatment-wise by the MTA, nothing other than assessments. The school was involved at the beginning, because we had to have agreement of the principal and the child's teacher to cooperate with the study before they could be randomized. However, one fourth were randomized to community comparison where the only further involvement was ratings by the teacher.

Jane Goldman: I am from Connecticut. Did any of these treatment programs consider intense physical exercise for the children? There is some debate in the literature about it. We know now children are not getting recess, and they are so sedentary compared to how they used to be. Although I do not see that as the cause, I am wondering what your opinions are on increased exercise as one piece of treatment.

Arnold: The question has to do with increased exercise and other treatments, particularly controversial treatments. A cooperative agreement like this, by definition, has to take treatments that are already established as efficacious. It is not a place where you test out unproven treatments. You have to assume that you are comparing the relative value of established treatments. I did a recent review of alternative treatments for ADHD, and there are over 24 with very widely divergent evidence bases ranging from some reasonably well-controlled studies that show effect in a small subgroup to some that just have no data at all.

Kathleen Flanagan: I am from New York state. I am thrilled that with the little amount of money you get, you are able to study this. I am a mental health specialist for Head Start, and I wondered if you could tell us more about the PATS study that sounded right up our alley.

Vitiello: It is a multisite trial that is currently running at six universities. The purpose is to see whether Ritalin is an effective and safe treatment for children ages 3 to 6 that have a severe form of attention deficit disorder that does not seem to improve with behavioral therapy alone. The study is in progress; I would say that roughly half the sample has been recruited. We project that the results will be available probably in a couple of years.

Jeffrey Seitzer: I am from Maryland. I am also a mental health consultant. To follow up on that, we work with preschoolers, and alarmingly so many children are already on medication. Are there any clinical studies available for us to look at right now to give us some information about that?

Vitiello: The question has to do with what data are available now on the efficacy and safety of stimulant medication like Ritalin for preschoolers. The answer is that there are eight published control studies over the last 20 years. These are small studies, so they do not really settle the issue. From the results of the studies, we can glean basically that Ritalin does seem to be efficacious for some children, but there also seems to be greater incidence of adverse events than you may expect. It is not that the adverse events are qualitatively different, but their rate is different rate. The younger children appear to be more prone to develop some of these side effects, particularly the changes in mood. If you give a high dose of stimulants to a child, you will get a zombie-like feature; they will become listless and blunted. You get those more easily in children, but again this is just an impression; it is too early to really draw conclusions.

Pascoe: I have read repeatedly without seeing any data that dextroamphetamine works better in preschoolers than methylphenidate. Any comments on that?

Arnold: I recently did a meta-analysis of the studies that directly compared amphetamine and methylphenidate in the same study. They were all in school-age children, I believe, although a

few of the studies may have included some preschoolers in the sample. In general, the differences between the drugs were not significant; however, the trends tended to favor amphetamine over methylphenidate. For example, the response rate to methylphenidate was something like 60% and for dextramphetamine 70-some %. If you put the two together, the overall response rate was close to 90%; if you tried them in succession, one or the other would work. It is noteworthy though, that amphetamine is approved by the FDA for use in children under 6 years of age and methylphenidate is not. I think it is a historical accident that dextramphetamine kind of got grandfathered in; it was an earlier drug. When methylphenidate came along, they did not bother to get the indication for it, but it is probably used more than amphetamine in preschoolers regardless of that.

Cheryl Marsh: I am from Batavia, Illinois. I am a social worker who provides mental health consultation services. I have a comment in reference to the question about physical activity. It was interpreted by the panel as a form of treatment or intervention. I feel a need to say something about developmentally appropriate practice, particularly in addressing preschoolers and what we know about children from lower socioeconomic groups. Outdoor play particularly seems to facilitate creative expression, creative play, let alone just physically getting out. When you couple this with the inability of these children to be outside and to have safe neighborhoods, I want to emphasize that you need to look at that environment as well and not minimize this. I have children that have definitely needed medication, but I think you need to look at that developmentally appropriate practice with these younger children.

Bloch: I want to make a comment about the way in which we evaluate behavioral intervention in preschoolers. Often the skill level and training in the preschool system is of concern. There is sometimes a great deal of turnover, of underpaid and inadequately prepared staff, and behavioral intervention is a much more complicated kind of intervention to clarify, design, implement, and monitor than medication. On the other hand, when how we do the work is done in the way it needs to be done, it can in fact have an important impact. The question would be how much time do we leave or allocate for behavioral intervention? I thought I heard something like 8 weeks for parent training, then if that does not work, we move to medication. Some of us might wonder about that study design.

Cornelia Taylor: I am Cornelia Taylor from the Kennedy Krieger Institute at Johns Hopkins in Baltimore, Maryland. I just wondered what methodology you are using to evaluate the safety of drugs in the PATS study.

Vitiello: It is a traditional approach of gathering routine lab tests and a careful collection of adverse events that may emerge such as stomachaches, headaches, anything. It involves monitoring the height and the weight at different times periodically.

Question: Do you have a checklist?

Vitiello: Yes, there is a checklist.

Ethnic Psychopharmacology: Focus on Young Children

CHAIR: Harry Wright
PRESENTERS: Keh-Ming Lin, Uma Rao

■ Ethnic Psychopharmalogy: General Issues
Keh-Ming Lin

■ Pharmacogenetics of Childhood Psychiatric Disorders
Uma Rao

Harry Wright: The issue of ethnopsychopharmacology, or pharmacology in general for a younger population, is becoming increasingly important, because in practice many young children are now being prescribed psychopharmacological agents. Without much evidence and research in this area, how to prescribe and the actions of these psychopharmacological agents are of great interest.

The first presenter is Keh-Ming Lin from California. He is a professor of psychiatry at the University of California at Los Angeles (UCLA) and director of a research center on psychobiology of ethnicity. He is the premier person in this area and started research around ethnopsychopharmacology.

Keh-Ming Lin: There is an impression among the public of widespread use of medication in many child and adolescent patients. However, there are questions about the right medicine, the right dosage, potential side effects, and whether the problem confronting the use of medicine for children may be different from those that we are more familiar with for adults. This is an emergent field, and numerous questions have not been clearly resolved. I am not a child psychiatrist, so I will present more of the general principles.

In some ways, there is a commonality when treating patients of different ethnic and age groups, in that such factors influence what kind of medication may work and what may be the right dosage. The problem is our general tendency to want to prescribe the same medicine and the same dosage for all patients. In reality, there is a wide variation in terms of how individual patients respond to medication. If one looks at the dosage used for any particular medication in a group of patients, there is up to a 40-fold difference, or sometimes even higher. On top of that, there are group differences. The magnitude of these differences is quite large. These two things are superimposed on each other, along with developmental stages, which also make a difference.

It becomes clear that these variations should be expected when looking at all the factors that influence how people respond to medication. They include genetics and all the environmental factors. The environmental factors are interwoven with cultural factors. Even if identical twins with the same genetic background—which controls drug metabolism and how receptors, transporters, and the target organ respond to medication—are exposed to different environments or have different lifestyles, certain genes may be turned on or off. This will cause distinct drug responses. Culture and psychological factors will also influence factors that are not immediately biological in nature, including medication adherence or compliance, placebo response, and many other psychosocial factors. Numerous factors make the treatment response complex; it should not be viewed simplistically.

According to the most recent census survey, more than 25% of the United States population are now classified as ethnic minorities, so it is important for us to pay attention to ethnic variations. Only about 70% of the population are classically called the Caucasian group. This

diversity will continue to expand, so that in 50 years, less than 50% of the population will be Caucasian. Other groups will be more prominently represented, which is already the case in California. There is no majority group; actually the Latinos are the largest group in the state of California, even more so in Los Angeles County.

The Caucasian group only represents 20% of the entire world population. The issue that has not received attention until recently is that most of what we know about how medication works is based on clinical and research experiences with this small Caucasian group. This is even more prominent in the traditional clinical trials; they use young White males. The applicability of the findings to other groups is extremely limited.

This is also the case in terms of practice with children. We have information about how drugs work with adults, but the information about how drugs work with children is limited to clinical experience. It could be completely erroneous to base the information on a small group of people and then assume that it might apply to most of the world. Many drugs have not been tried with children, and questions remain.

In terms of evidence of ethnic differences in dosage and treatment response, a study conducted 20 years ago looked at the neuroleptic dose that was needed for patients to bring their psychotic symptoms under control. This study found that the maximal dosage for Asians necessary when the patients were in the hospital, as well as the stabilized dosage when they were ready to be discharged from the hospital, was less than one third of the dosage given to Caucasians. Yet they responded about as well as the higher dosages that were needed for the Caucasians.

The question is why, and the next step is looking at whether these drugs were metabolized differently. For that study, we used a small amount of Haloperidol and gave it to a group of Caucasian volunteers and a group of Asian volunteers, then looked at their blood levels of the Halperidol over time. We found that most of the Asian subjects metabolized Haloperidol significantly slower than the Caucasian subjects, such that their blood level was significantly higher than the blood level of the Caucasian subjects.

Although the two groups were significantly different, there is overlap in terms of the average. This means that not all Asians are slow metabolizers, and not all Caucasians are fast metabolizers. There is a danger in stereotyping and simply saying that one group would always be more sensitive to one drug as compared to the other. Within each group, the variation is also substantial. Therefore, we need to pay more attention to individual variation in treatment response.

Other studies have repeatedly shown that ethnicity makes a difference in dosages. The literature is now huge, and the message is that we cannot ignore ethnicity or cultural differences in treatment response. This is true with lithium as well, where studies of how lithium is used in different countries have consistently shown that the blood level of lithium needed for the European and North American patients is quite different from the optimal treatment response for patients in Asian countries. In different parts of China and Japan, the therapeutic level of lithium is about two thirds of what is used in this country.

Outside of psychiatry, cardiovascular medicines have also been shown to have differences in effects across ethnic groups. One study showed that Chinese patients with hypertension only require about one third of the blood level of Propranolol to achieve the same target clinical response as Caucasians. Chinese patients often need almost one tenth of the dosage that is commonly prescribed in the United States.

Clinically, we have seen Chinese patients who were visiting the United States. They came to Los Angeles and ran out of Propranolol, so they went to a physician for a refill prescription. Typically, patients did not know the strength of their pills. The doctors asked how much they were taking, and the patient would say that he took the lowest dosage, so the doctor would prescribe the lowest dosage. However, the lowest unit dose in the United States is about three times as much as the lowest dose in China or Taiwan. Quite a few of those patients went into hypotensive shock.

This is a summary of why there are individual differences: ethnic, gender, and age in terms of treatment response. Basically, there are two processes. One is pharmacokinetics, which is what happens to the drug or what the body does to the drug. Our body does not recognize drugs as drugs; we recognize drugs as foreign substances, which are potentially dangerous. The body has a system of enzymes to try to rid itself of these foreign substances. Commonly, about 99% of the drug disappears and does not make it to the brain; it is destroyed in the gastrointestinal system. It could be different depending on how much enzymes one has.

The other process is pharmacodynamics, which simply means what the drug does to the target organ, to the body, or the brain. There are also variations with this process. Genetic and environmental factors determine both processes that lead to different clinical responses.

Jon Korfmacher: Do any environmental factors operate through the genotype, or could environmental factors have a direct effect on the pharmacokinetic system?

Lin: Environmental factors often influence whether a gene is turned on or off, but that is only one factor. The pharmacokinetics system is made up of four processes: (a) how it is absorbed, (b) how it is distributed throughout the body, (c) how it is metabolized, and (d) how it is excreted from the body. For example, at least the absorption part does not depend on a change in one's genetic expression. Whether one eats more food or not could direct or influence how drugs are absorbed.

Of course, there are things we do not know about these factors that influence kinetics and dynamics completely. One area that is emerging, and that we have information about, is a group of enzymes called Cytochrome P450. These enzymes seem to be important in terms of determining how fast one metabolizes drugs. They may represent a limited step in terms of how drugs are metabolized, which is why people focus their research on these enzymes. We have information about some of the most important Cytochrome P450 enzymes, including the CYP 2D6, CYP3A4, CYP1A2 and CYP2C19, and I think also CYP2C9, which is not as important in psychiatry or mental health but is important in other medical fields.

The interesting thing here is that there is huge individual variation in terms of how much of the enzyme one has in the body, and it is superimposed by clear ethnic variations. These variations are partly determined by one's genetic endowments but are also influenced by environmental factors. Some of these enzymes can be induced or inhibited.

If a drug is not metabolized by one enzyme, another metabolizes it, so there is no escape from enzymes for most drugs. It is also true for antidepressants that one enzyme may be more important for a certain drug, and a different enzyme may metabolize another drug. They all have to go through these metabolic processes. By knowing how much of the enzyme one has in the body, we have some understanding about whether a patient will need larger or smaller dosages of the medication.

The most thoroughly studied of these enzymes is the CYP2D6. The way it was discovered is actually an interesting story. The field identified this enzyme through clinical trials about 30 years ago. A new compound was tested, and they went through the Phase I and Phase II trials. A new compound is first tried out with volunteers, to find out how the drug is metabolized and whether there are side effects. Then one looks at the dosage that is best for physiological effect.

When looking for volunteers, a researcher usually volunteers himself or herself. A pharmacology professor conducted a study, tested a compound on himself, and almost died. He recovered, and the compound was tested on about 100 people; he found out that only a few of them had a severe response or reaction to the drug. He looked into it and found that this drug, Debrisoquine, which is useful for treating hypertension, was metabolized by an enzyme that he was lacking. About 7% of Caucasians do not have the enzyme; the other 93% have the enzyme. Even with people who have the enzymes, the activity varies about 100-fold.

The next question is why people are different in terms of enzyme activity. It turns out that most of the Caucasians who lack the enzyme have mutations in the gene that control the expression of this enzyme. The mutation inactivates the gene so that the gene does not produce enzymes, or they produce enzymes that are not effective. The so-called extensive metabolizers who have the enzyme have the normal gene that leads to the production of the enzyme.

Across ethnic groups, the difference in terms of the enzyme activity is interesting in that few of the non-Caucasian groups are poor metabolizers, so most of the Asians and African Americans have enzyme activity. The maturity of Asians and African Americans is slower in terms of their enzyme activities compared to Caucasians. What are the reasons? After 20 years, it is evident that most of the non-Caucasians are slow in CYP2D6 activity because they have mutations. It only takes one point of mutation to change the activity of the enzyme and make it less effective. For Asians and African Americans, the responsible allele is different. For Asians, it is *10, and for African Americans it is *17. This gets technical, but the point is that now we have a way to easily identify what kind of alleles an individual has. Then we know whether one has the enzyme or not, and how much of the enzyme one has in their body. We also know now that the alleles that should be tested are different depending upon the ethnic group.

Basically, any population can be divided into four groups in terms of the CYP2D6 activity. We start from those without enzymes—they are poor metabolizers—to those who have the alleles that make the enzyme less effective—those are slow metabolizers. Then there are extensive metabolizers, who are the "wild types" without the mutations. Finally, the ultra-rapid metabolizers are those who are highly effective in metabolizing drugs. It now becomes clear that these people who are efficient in metabolizing enzymes actually have more than two copies of the gene. In our chromosomes, humans usually have two copies, one from the father and one from the mother. Sometimes, the gene gets duplicated, and instead of two copies there will be three copies. Some people have 13 copies.

Thirty years ago, a professor at a Swedish university had a depressed wife. She was referred to a psychiatrist who treated her with antidepressants. No matter how much medication she received, she did not respond. A few years later, they started studying the blood level of the antidepressant. They looked at her blood level, and it turned out that her blood level was zero for the medication. At that point, the psychiatrist suggested that the professor's wife was not compliant, and that she had not been taking the medication. It almost led to divorce, because she was accused of being uncooperative. Ten years later, they looked at the genotype. To their surprise, they found that she actually had 13 copies of the enzyme. That is why it did not matter how much medicine she took. It all disappeared right away.

The ethnic variation in the metabolization of enzymes is clear. We talk about European and East Asian differences. East Asians are most likely to be slow metabolizers. African Americans are also slow metabolizers, but again there is danger in stereotyping. We need to pay more attention to intragroup variation. We often lump all people from Africa into the same group, but actually Ethiopians are different from those from South or West Africa. Most of the African American ancestors can be traced back to people who came from West Africa, so they are different from those with Ethiopian origin. Up to 30% of Ethiopians have ultra-rapid metabolizers; they have gene duplications or multiplications. As a result, they will probably need much larger dosages of neuroleptics and antidepressants for the same effects, whereas for the African Americans, often it is the reverse.

Diet and environmental factors can influence drug metabolism. For example, Sudanese people living in Sudan are slower in metabolizing a drug called Antipyrine. When they move to England, their metabolic profile becomes more similar to British Whites, because of diet change. A high-protein diet induces enzyme activities. In this case, it is another enzyme called CYP1A2. It is the same situation with South Asians: The Indians and Pakistanis have a changed metabolic profile when they move to England. They are slow metabolizers of the drug Clomipramine compared to the British Whites, but when they adopt the British diet, their metabolizing profile becomes more like the British.

The influence of environmental dietary factors on drug metabolism is also important for psychotropics. There are three individual and ethnic differences in how much CYP3A4 Asian Indians, Pakistanis, and British Whites have. Again, there is overlap. Nifedipine is an antihypertensive drug metabolized by CYP3A4. The Asian Indians and Pakistanis are slow in metabolizing Nifedipine compared to British Whites. We do not know why yet, but it is likely that dietary differences may be responsible.

Aside from dietary differences in terms of food intake, herbal supplements also have an effect. For 2 years, we have known that St. John's Wort profoundly induces CYP3A4, which is involved in metabolizing many drugs in the treatment of HIV infection and cancer. The problem is that if one takes some of these drugs or psychiatric medications, they are metabolized by 3A4. If one takes St. John's Wort with the medications, there will be much more enzymes; the other drugs will be metabolized and will disappear. This could be dangerous because if you are adequately treated with HIV medication, are in remission, and take St. John's Wort, you could go into relapse.

We conducted another study showing that St. John's Wort significantly induces the enzyme Nifedipine. The blood level after taking St. John's Wort for 2 weeks drops more than 50% compared to the baseline. In this study, ginseng and gingko were also used. Both of them have the opposite effect and inhibit the enzyme so that the blood level of Nifedipine goes up. The blood levels were much higher than the baseline. We tested three herbs, and all of them have significant effects on the enzyme's production. Essentially 90% of the herbs we take modify our enzyme activities. Individual and genetic variation is important and may be responsible for a risk of psychiatric problems. Of more importance is that they determine pharmacological treatment response.

Hopefully, in the next 5 or 10 years, these procedures will become clinically available, and we can test just once to know what kind of genotype an individual has for these drug metabolizing enzymes as well as any other genes that may determine treatment response. This knowledge, in combination with the patient's behavior, will make treatment more rationally based and individualized.

I have entirely focused on the technical side, but the psychosocial side is even more important. If the patient does not take the medication, then there is no way to benefit from the treatment effect of the medication. There is a need for more research in this area. The understanding of cultural and psychosocial factors should not be limited to the patients, because many of these factors also impinge on the clinician's behavior and prescription patterns that again also determine the treatment.

We have a golden opportunity for research now with the technical advances available. Numerous techniques are available to enable us to make treatment planning more precise, but we need to couple that with research in the clinical side to make it easier for us to understand the patient's lifestyle, behavior patterns, and how they impinge on treatment response. We hope to make treatment more individually tailored and more effective.

Susan Longcor: Have your studies looked at the differences with children?

Lin: Rao will review that. From my understanding, little has been done with children, both in general and in terms of ethnic comparison. We do not have enough information.

Wright: Uma Rao is an associate professor of psychiatry at the University of California at Los Angeles (UCLA), School of Medicine. For a number of years, she has been involved in studies of mood disorders, particularly in the adolescent population. She will add to Lin's presentation with a focus on research with children. Hopefully, there will be more information forthcoming as a result of her work. She has grants from the National Institutes of Health (NIH) and the National Alliance for Research on Schizophrenia and Depression (NARSAD) and has won several awards over the years.

Rao: Lin mentioned that there has been little research in child populations. I hope to offer more of the general trends on what has been done with children so far and then discuss what we can do in the future. The questions raised in the beginning are basic questions that we are all trying to grapple with in child psychiatry.

Lin described how various ethnic groups are becoming a larger proportion of the population in the United States and in the world. I tried to break down the 2000 census in the United States based on age groups. Over 25% of the population are under 18 years of age, and 12% of the population are people over 65. Scarce resources have been extended for this young population, in terms of research at the federal level and by private foundations and the pharmaceutical industry. The geriatric population is less than half the size of the child and adolescent population. Extensive resources are spent on geriatrics, knowing that age plays a significant role in metabolism and drug response; both the pharmaceutical industry and NIH have spent significant amounts of money on this smaller percentage of the population. Unfortunately, children cannot advocate for themselves. For example, the American Association of Retired Persons (AARP) is a big advocate for the older population. In the end, it is up to parents to advocate for their children.

Some questions arose about who is prescribing the medications and about recent patterns. Again, little work has been done to truly understand what we call pharmaco-epidemiology. The major data sets that have been completed by Julie M. Zito from the University of Maryland and Daniel J. Safer from Johns Hopkins University have examined large populations. Their sample included Medicaid populations in mid-Atlantic and midwestern states. They also studied an HMO population in the northwestern region. Over the past decade, they have found patterns of how psychotropic medications are prescribed for children and teenagers.

Who is prescribing these medications? Pediatricians primarily prescribe these medications for the population of children seen in clinics. I believe that they do not want to prescribe these medications, but unless they work in a large metropolitan area, there are few child psychiatrists. In Los Angeles, people come to me from 150 miles away for an evaluation. They cannot make appointments on a regular basis for medication, so we end up sending them back to their pediatricians.

Dodds: We see that in some of our rural areas, it is not even a pediatrician whom the children see; it may be a physician's assistant or a nurse practitioner. Frequently the physician's assistant prescribes medications. We even have a retired surgeon who seems to be the doctor of choice for the people who shop around for medications.

Rao: In some areas, adult psychiatrists are prescribing medication for children. As Lin mentioned, one size does not fit all. In some sense, adult psychiatrists see children as mini-adults, and they are not. There is variation among ethnic groups, and there should be a case-by-case evaluation. Sometimes, children even need more medication than one can calculate on a dose per kilogram basis, and in some cases they need less.

Zito and Safer found a 65% increase in the number of prescriptions written per year within a 5-year period. They have no control data for preschool children. Right now, there is a multisite study funded by the National Institute of Mental Health (NIMH) with control data. For the past 3 to 4 decades, there have been no control studies for medication, even though there has been a three-fold increase in prescription rates.

Part of it is probably recognition of these disorders, but another factor is the services available for these children, such as psychosocial or behavioral interventions. When the treatments are not available, either because there is no insurance coverage or a shortage of patients participating in such interventions, then medication becomes a quick fix. I am not saying that medication cannot be used in these children, but the assessment needs to be made carefully.

The types of medications being used for Attention Deficit Hyperactivity Disorder (ADHD) are mostly stimulants and antidepressant medication. Zito and Safer found that pediatricians are significantly more likely to prescribe an antidepressant drug for ADHD than a psychiatrist. The main reason is that some of these stimulants are controlled substances requiring a special prescription packet and close monitoring. Sometimes people tend to think more about prescriptions that are not controlled, and antidepressants are the logical answer. It is not that antidepressants cannot be used for ADHD. Studies suggest that if a child does not respond to a stimulant or has significant side effects as a result of taking them, the next line of medication can be an antidepressant. Tricyclic antidepressants have been tested for ADHD.

The current plan for prescribing antidepressants is called serotonin reuptake inhibitors (SSRI) such as Prozac, Zoloft, and Paxil. People are really not prescribing tricyclic antidepressants, which have their own problems in terms of side effects and safety, although they have been best tested in children, particularly for ADHD. Pediatricians tend to use antidepressants in the SSRI class where they have not been tested.

Another issue is the use of a newer, less established agent, or off-label indications of these medications, rather than using medications where data are available. For example, tricyclics among antidepressants and Ritalin among stimulants have been best studied in children. One of the prescribing factors nowadays is the SSRIs. To some extent there are data for depression and anxiety disorders, but not for other conditions of ADHD and newer stimulants such as Adderol. We are collecting more data, but they are not as established as Ritalin. This is unfortunate, since the newer agents are more frequently prescribed than the older medications.

Korfmacher: Do you think that one of the reasons antidepressants work with children who are not responding to stimulant medication for ADHD is because of misdiagnosis, or is there some common denominator?

Rao: This is not because of misdiagnosis. These are well-categorized children with ADHD. The reason is that most of these medications do not act on a single specific receptor; they are broad-spectrum antibiotics. For example, Baceptron, one of the broad-spectrum antibiotics, can also be used for pneumonia, urinary tract infections, or a variety of disorders. One particular medication that has been tested for ADHD is Desipramine.

Antidepressants are not as effective as stimulants; about 70% of children respond to stimulants or do not have significant side effects. The remaining 30% either do not respond adequately enough or have significant side effects. Another medication that has been helpful, Clonidine, you again have the same issue. It is not as effective as stimulants. Stimulants work in a different manner; that is, there is a quick response. One knows whether they are acting or not, whereas other medications such as tricyclics or SSRIs need to build up in the blood system before the action is apparent.

Korfmacher: Is there any research right now about the use of SSRIs on ADHD patients?

Rao: There are no placebo control studies, but some case studies indicate that they can be of some benefit, whereas for the tricyclics, there have been placebo control studies.

These days, patients use multiple medications at the same time. This is a common clinical practice in adult psychiatry, and it has been studied to some extent. For example, people have looked at one medication versus two or three medications and antidepressants used in what they call treatment-resistant depression. These have never been studied in children but have been commonly used in them—not just specific classes of medication but various classes of stimulants with antidepressants, or Clonidine with antidepressants, or Clonidine with stimulants. Some case studies have resulted in deaths from the combined use of stimulants and Clonidine.

Lin focused on how ethnic or cultural factors influence metabolism or drug response. There have been numerous studies during the infancy period; actually not the entire infancy period, just particularly newborns. We learned that drug metabolism differs compared to adults. We know little past the neonatal period to mid- or late-adolescence. The research goes from the postnatal period straight into adult life. The little that we do know is that there are significant developmental differences in the capacity of children to dispose or absorb drugs. One difference is the liver capacity in children compared to adults. The enzyme activity is more efficient in children compared to adults, so for certain drugs that are metabolized by the liver, children may need a higher dosage than adults on a weight per dose basis.

There are also other differences in the volume of distribution, depending upon the amount of water in the body. Certain medications that are cleared by the kidney, such as lithium, may need to be given in higher dosages to children compared to adults. There is deposition of medications in the fat tissue. Usually, there is an initial increase in fat tissue from newborns up to 1 year of age. Then there is a decrease. After puberty, there is a rapid increase again. When thinking about children and adolescents, they are not just one age group; they are subsets that we have to study in the same way as various ethnic groups. There are wide differences in how children and adolescents dispose or absorb drugs. Overall, children tend to absorb drugs faster than adults. The blood levels of children peak faster. As a result, they may sometimes have more side effects. These are all necessary factors to take into account.

There has been some data to indicate how neurotransmitter systems change with age. These systems are still developing into late adolescence and early adult life. When thinking of what Lin described as what the drug is doing to the body or to the brain, we know that most of these medications act on the still-developing brain. In a way, we have little knowledge of how the drugs are acting and how the systems are maturing. We only know that there are many maturation changes, based on animal studies.

Other factors that are not well studied are the early experiences themselves. The experiences that occur at these various developmental levels can significantly affect the child in terms of clinical course. For example, child abuse or child trauma can have significant influence on the hypothalamic-pituitary-adrenal system, which is a neuroendocrine system. Research on adults with major depression shows that those with early experiences of child abuse have an increased risk of depression in adult life.

Charlie Nemeroff and his group have shown that people who have major depression can be separated into two groups: those who have major depression due to a history of sexual abuse, and those without sexual abuse. They have shown altered hypothalamic pituitary activity, which shows that one way these antidepressants work is through these endocrine systems. In animal studies, early exposure to trauma, even during prenatal life, can influence this activity into adult life indicating the drug response in adult life.

We conducted human studies that examined sleep responses and how the serotoneurgic system responds to Buspirone, which is a medication that is a serotoneurgic agonist. We found that adolescents produce a significant response at REM latency with a very low dose of Buspirone compared to the adults.

Tricyclics have proven ineffective in children compared to the placebo, whereas in adults they are effective. We completed a study, in collaboration with Mike Stoba, on adolescents suffering from depression and their response to various medications. He compared those who had been given Fluoxetine or Prozac to those who received Imipramine, the another medication known as Toflanol. Adolescents who were given Fluoxetine responded better than those who were given Imipramine. This was also found in another large multisite study sponsored by SmithKline Beecham, where Paroxetine, or Paxil, was more effective than placebo, but Imipramine was not significantly more effective than placebo. With adults, they have shown to be equally efficacious. My point is that adolescents may respond differently to certain classes of medications than adults, so we cannot extrapolate the data. There have been similar findings for side effects.

We know little about ethnic factors and how they influence treatment or services with adolescents versus adults. We are aware that ethnic minority groups tend to use mental health services less frequently and also tend to terminate treatment more rapidly than Caucasians. It is possible that they have had bad experiences in terms of how they have been treated, and there may be other cultural factors.

In most cases, children are referred for services by clinicians, schools, and other community agencies. There have been some studies on whether youth from ethnic minority groups are pushed for treatment. They found that African American youth with less clinical severity were pushed for treatment more than Caucasians. We may use a lower threshold of severity to identify a minority child who shows overactivity or aggressive behavior, and, as a result, refer them to treatment more quickly. Is the issue here age (child vs. adult) or ethnicity? It is not sufficiently apparent. This differential treatment threshold may explain why people with less severe disorders have more side effects when given the same dosage as Caucasians. Also, they may stop medication more frequently than Caucasians because of the side effects.

Studies have also found biases in how ethnic groups receive treatment. When one objectively assesses the severity of aggressive behavior and the service provided, it has been shown that African American youth with aggressive behavior are more frequently incarcerated than Caucasian youth. Caucasian youth showing the same severity of behavior more often receive mental health services.

Melissa Del Bello at the University of Cincinnati School of Medicine compared African Americans and Caucasians with bipolar disorder. All of them were given mood stabilizers such as Depakote and lithium, but she also examined the neuroleptic use. For the same severity of psychotic symptoms, the Caucasians and African Americans did not differ in terms of their treatment, but African Americans were more likely to be given a neuroleptic in addition to the mood stabilizer. I am only describing African Americans because this is the only ethnic group of youth who have been studied. Other ethnic minority groups such as Asians and Latinos have not been studied at this level.

When clinicians, or even the lay public, are asked whether, in their perception, ethnic minority groups are prescribed drugs more frequently than Caucasians, they answer is "more frequently." However, the data for prescribing medication by ethnic group show the opposite. This is true for psychotropic medications, as well as for all sorts of medications, including those for asthma, cardiovascular disorders, and even commonly used medications in the pediatric age group. Specifically, they find that African Americans receive fewer prescriptions compared to Caucasians. There is a much wider gap for the discrepancy in psychotropic medications compared to the nonpsychotropic medications. On the one hand, they may not be prescribed because they do not need it, but it can go both ways; underprescribing and overprescribing are both a disservice to the patient.

One thing that happens in clinical trials is that the participants do not represent the individuals receiving the medication in the community. In California, Latinos and Caucasians are present in almost equal proportions, but Caucasians are more commonly enrolled than ethnic minority groups into the clinical trials conducted by pharmaceutical companies and federally-funded programs. A number of reasons could explain why these ethnic minority groups may not want to participate in trials, but again we have not focused on recruiting those populations.

Another difference is that participants in clinical trials are from homogeneous populations. They are more typical within the clinical population as opposed to those who receive medication in the community. For example, they have less comorbidity and are therefore excluded from the studies.

There are other factors, such as sociodemographic characteristics or psychosocial factors. People from lower socioeconomic conditions have more life events. When these people in the community are eventually treated, they may respond differently from what we know from the studies. We say that this percentage of the population will probably have side effects, but it may not be true.

The primary topic is what we know about pharmacogenetic studies. There have been studies both with dopamine receptors and dopamine transporters. They have been studied specifically in association with ADHD, and studies that have been replicated suggest that there is an association of these factors with ADHD. These studies have been done on Caucasians, so results may vary with minority groups.

There has been one study on African American youth and stimulants that are affected by the dopamine transporter system. They found that a higher proportion of African American children with ADHD who respond poorly to Ritalin have 10 copies of this dopamine transporter system compared to those who are responders to this medication. This suggests that pharmacogenetic factors are important, not just for understanding the pathophysiology of the disorder but also the drug response. There is no data yet, but some multisite studies are examining whether the 5HT2A genotype shows a differential response to Clozapine in youth with autism and schizophrenia.

Although there have been few studies, initial data suggest that these factors may be important. We have to remember that the results found in adults cannot be extrapolated to youth. Just as ethnic factors can influence genotype, we know that early developmental factors, traumatic events, and even psychopathology also are important. Studies have shown this in adults. Early onset of depression is different in terms of clinical cause and comorbidity factors.

What are future directions in pediatric psychopharmacology research? At the more basic level, we need more efficacy and safety studies in children before we prescribe these medications. There has been some advocacy on this part, both from the Food and Drug Administration (FDA) and the field of child psychiatry. More studies are emerging, but unfortunately, most of the pharmaceutical industries now do not want to conduct them. They label medications for adults and know that child psychiatrists and pediatricians will prescribe these medications in children anyway. There needs to be more advocacy to say that we cannot put out any medication that is used both for adults and children. There need to be control studies before the drug is even approved.

The second thing is that we need to increase efforts to recruit youth from ethnic minority groups for studies. Lin mentioned how genetic factors can immensely contribute and help us understand drug response and side effects. Children are the best population to study genetic factors. The child groups have both parents and are optimal for transmission or linkage studies. One needs the parents on both sides to find which genes are transmitted, and we have the capacity to do that more easily with children. This is a promising area, and there should be more efforts to combine pharmacological and genetic studies. We also have to think about ethical factors and how to protect confidentiality, even though these are not invasive studies. All that is necessary to study these factors is a blood sample from the parents and the child.

Multiple genes affect psychiatric disorders and drug responses. Therefore, large populations are needed, and that is why multisite studies are important. The studies should use standardized instruments, systematic assessments, and systematic doses of medications across multiple sites.

Only a small subset of the population actually participates in clinical trials. Control studies use efficacy trials. The effectiveness trials should be used in the wider population among the various ethnic groups. There need to be studies at a larger scale in the community after the drug is marketed.

Steve Forness: Everyone on the panel alluded to the issue of treating minorities in research studies. Obviously, we need to get the Invitation for Bids (IFBs) revamped to include children and minorities. Can that leverage be brought to bear in terms of industry studies? Is there any way they can be brought on board to include minorities within their area? Has anyone had success in doing that or seen a way to make that happen?

Rao: For adults, as well as youth, NIH no longer funds efficacy studies unless they have some novel or genetic factors in association with efficacy studies. They are all straight clinical trials,

because many of the pharmaceutical industries are funding these studies. NIH has moved away from that because they want to put their dollars on things that private industry does not support. In the past 6 years, there has been an effort to include children. A number of child psychiatrists were involved in a conference at NIH from the NIMH and FDA levels, and since then, some studies have included youth within the pharmaceutical clinical trials. When one receives an NIH grant, one must document that special efforts will be made to recruit ethnic minority groups. These groups should at least represent the community. If one third of the population in California is Latino, one third of the study population recruited should be Latino. This is not happening when pharmaceutical industries conduct studies. It should come from the investigators who initiate these studies.

In the larger community of child psychiatry, we have not paid enough attention to ethnic diversity. In general, we do what is necessary to get NIH funding, but more education is needed on this level, particularly in how what has been studied in adults applies to youth. A large proportion of child psychiatrists do not have much information about how these genetic factors contribute.

Longcor: Is there any future in educating the private practitioner, pediatrician, or physician's assistant on this topic? The child psychiatrists need that type of education, but so do the people on the front line who see our children.

Rao: That is true, and it is a big issue. A conference by the Manic Depressive Association a couple years ago specifically looked at depression, how it is recognized, and who is treating it in youth. Pediatricians or family practitioners are treating 85% of the youth, so there was a recommendation to educate the people who are involved in primary care. Unfortunately, this has to come at the policy level and the federal government level. There was a consensus that federal funding is needed to educate them.

There have been studies on how family practitioners and internists recognize and treat depression in adults. The data suggest that training these primary care people will improve the recognition and treatment of depression in adults. These studies have been conducted in multiple communities of adults, so we want to advocate the same principle for children. To my knowledge, nothing has been put into practice yet.

Question: Is it voluntary?

Rao: Yes. Sometimes, pharmaceutical companies do it for marketing purposes. They will host Continuing Medical Education (CME) courses. What is of more importance is how to recognize depression, and that basic level is not being taught. When pharmaceutical companies fund CME classes, they only talk about their drugs. For example, now there is talk that Prozac and Paxil have been shown to be effective in adolescent depression, but there is little detail about how we first need to recognize depression and treat it. Then there are questions about what is the first level of drugs versus the next level? None of these things are taught.

What's Happening With Children With Disabilities and Their Families in Early Head Start?

CHAIR: Judith J. Carta
PRESENTERS: Martha Jane Buell, Ellen Eliason Kisker, Jim O'Brien, Carla A. Peterson

Judith Carta: I am from the University of Kansas. I have had the privilege of being the research partner of one of the Early Head Start programs that were part of the national evaluation of Early Head Start in Kansas City, Kansas, called Project Eagle.

Our first two presenters will discuss data from the national evaluation of Early Head Start and what we have learned about children with disabilities from that study. Ellen Eliason Kisker has been part of the national evaluation team led by Mathematica Policy Research. She has been doing all the hard data analysis work regarding children with disabilities. Carla Peterson is from Iowa State University. She has been one of the local university research partners partnering with the Early Head Start program in Marshalltown, Iowa. Martha Buell is an Early Head Start program director in Delaware. She will reflect on her experiences as a program director and on how Early Head Start and Part C are working together on some of the challenges. Finally, we will hear the national policy perspective from Jim O'Brien, who is the Health and Disability specialist with the Head Start Bureau. Overall, we have pulled together people from many different perspectives who can reflect on all we know so far about children with disabilities in Early Head Start.

I will introduce the topic and give you some context for the national study of Early Head Start. Head Start has had a policy for many years of including children with disabilities in its programs. When Early Head Start began in 1994, it surprised no one that there was also a mandate with Early Head Start to include children with disabilities.

When the national evaluation of Early Head Start was launched soon after the Early Head Start programs began with the very first wave of programs, it was established that that national study would investigate what happens with children with disabilities who are in Early Head Start. That has provided an excellent opportunity to do an investigation and to research what happens with children with disabilities in natural environments. Early Head Start is a wonderful natural environment for children with disabilities.

We know children with disabilities are in Early Head Start, but we know little about what happens to those children, and the types of services that children with disabilities receive when they are in Early Head Start programs, how Part C and Early Head Start work together, and so forth. We also know very little about who those children are, their family characteristics, and what their development looks like over time. The national evaluation has tried to shed light on some of those questions.

The national evaluation began with the first wave of Early Head Start programs in 17 different places around the country. Across those 17 sites, 3,000 children were randomly assigned to either the Early Head Start program in their community or to a control group who were free to receive whatever services were available in the community. Among those 3,000 families were children who naturally had disabilities or who were at risk for developmental delays.

I should also mention that those 3,000 families were recruited during the time window between the mother's pregnancy or up to the point of the child's first birthday. At the point of recruitment, we did not know much about whether or not children had disabilities. It is usually hard to know during a woman's pregnancy whether the child will have a disability or not.

As those children have grown older, and as we followed them over time to their third birthday, we have seen some disabilities emerge. We have also seen risks for disabilities emerge. Across this longitudinal study, we have followed children to find out who might be considered as having a disability based on several things: their assessment scores at 14-, 24-, and 36-months; whether or not they get Part C services, and whether their parents have reported a medical diagnosis of some type of developmental delay.

Kisker will share some of the general impacts found in the national evaluation. This report is "hot off the press;" it came out 3 weeks ago, so what she will report on are some of the national findings, and specifically what we have learned about children who were receiving different kinds of services who might have had a disability. Peterson will describe some of the challenges in figuring out who has a disability in this national set. She will also reflect on how hard it is to get clear answers about children with disabilities.

Ellen Eliason Kisker: I am going to share some of the findings so far from the national evaluation. We have just begun to scratch the surface of what we can do with this data set, so I think our discussion today about the interesting research questions will be helpful as we go forward. I will start by providing a brief sense of the overall impact findings from the Early Head Start evaluation as a context to focus on what we learned about the incidence of disabilities.

We looked carefully at the services Early Head Start families received throughout the evaluation period. We found that the programs in the evaluation delivered some services to almost all of the families who enrolled. The extent of those services varied among the families, and the pattern of implementation of services across the programs varied. Nearly all of the families received some services.

In terms of the impact, we found that the programs make a modest difference for the children and families they serve. A very notable aspect of those findings is that even though any individual impact may be small, the breadth of impact across a broad range of child and parenting outcomes is potentially very important. We did find significant impact across a large number of areas. We also found that the impacts we saw when children were 2 years old largely persisted when they were 3 years old, and even became larger in a few cases. We also found that most groups of families whom we looked at benefited from program participation.

It might be worth noting the data that we had to draw on in our analyses. We collected information on children and families when children were 14, 24 and 36 months old. We used multiple measurement strategies to collect information, including parent interviews and direct assessments of the children. We also collected detailed service information. We did that by interviewing parents approximately 6, 15, and 26 months after they enrolled in the program.

One of the things that we looked at was the extent to which children in our Early Head Start program sample were eligible for early intervention services. As Judy mentioned, programs are required to use 10% of their spaces for children with disabilities and to actively try to recruit families with children who have disabilities. In Early Head Start, that is very challenging because the children are enrolled so young, in some cases before they are born.

In terms of what parents told us in the services interviews, approximately 2 years after they enrolled, 8% of the children were reportedly eligible for early intervention services. There was variability in that across the programs participating in the research, there was a range from a low of 2% all the way up to 22%. That was at the time when children were between 2 and 3 years old. In 5 of the 17 programs, that percentage was at least 10%.

It is possible that parents did not necessarily know about their eligibility for early intervention services. We did collect a lot of information about other diagnosed problems or functional limitations that their children had. We looked at that information to get an indication about to what extent children might have been eligible for early intervention services even though their parents did not report that directly. We found that 14% of children either were reported to be eligible for early intervention services or had a diagnosed medical problem that probably made them eligible for early intervention services. The most common of those were a diagnosed speech problem, difficulty hearing or deafness, or difficulty seeing or blindness.

We also went to another level where it is less certain that the children would have been eligible for early intervention services but had either diagnosed problems or functional limitations that may have made them eligible for early intervention. This included things ranging from nearsightedness, epilepsy, developmental delay, or functional limitations related to vision

problems, hearing problems, or a problem with an arm or leg. Eighteen percent of parents reported that their child had one of those conditions or limitations.

We also asked the Early Head Start staff in the research programs about which children had been identified as eligible for Part C services. We asked them that when most of the children had left the program or were near the time when families left the program. They told us that on average, 12% of the children had been identified as eligible for Early Head Start services. Like parents' reports, there was quite a bit of variation across the programs, from 4% to 30%. In 9 of the 17 programs, that percentage was at least 10%. It looks as though the parents' reports of eligibility underreported the actual eligibility.

We also asked about receipt of early intervention services. On average, 6% of children were reported to have received early intervention services by 2 years after enrollment. Like parents' reports of eligibility, that also varied across the programs from 0 to 16%. Most of those, or 4% overall, received early intervention services that were coordinated with Early Head Start services.

Now I would like to shift from just looking at the Early Head Start children to looking at the program's impact on eligibility and receipt of services. In general, what we see is that the programs increased identified eligibility for early intervention and receipt of services, but the impacts were small. They are significant at the 10% level, which some researchers would consider significant and others would not. It is on the margin, but it is consistent across the different measures that we looked at. The reported incidence of functional limitations and some of those other diagnosed problems were greater in the control group than in the Early Head Start children. The Early Head Start program may have helped families address some of those functional limitations, and it actually had a favorable impact on the children's conditions.

We also looked at these items for some of the subgroups of families in our sample. There were slightly larger impacts in a few of the groups, including African American families, for whom we generally found larger impacts on almost all of the outcomes; families with fewer demographic risk factors, like being a teenage parent, being a single parent, receiving welfare, being neither employed nor in school or training, and not having a high school diploma; and also families who enrolled with older children. That may be related to the effect that disabilities emerge over time as children get older; there may have been more opportunity to identify and have an impact on that.

I will conclude by sharing the impacts on the Bayley Mental Development Index (MDI) scores, in particular the portions of children who scored below certain cutoffs that are used in looking at the extent to which children may have disabilities. There was a reduction in the proportion of children with low Bayley scores, according to that cutoff. That is significant at the 10% level. Then we move to a cutoff of 77, which is 1.5 standard deviations below the mean. That difference is in the same direction but not significant. When we go to Bayley under 70, the difference is relatively larger. The incidence of children scoring under 70 at age 3 years is of course much lower, but it almost halved the proportion of children with the very low Bayley scores.

In conclusion, we saw a general pattern of modest positive impact on eligibility for and receipt of early intervention services. We also saw some modest reductions in functional impairments and low Bayley scores. This is going to be the jumping-off point for more analyses of the characteristics of children in certain groups and for understanding more of what goes behind those numbers.

Question: Did all of these programs have access to the Hilton project?

Kisker: Yes, I believe so.

Question: Could we assume that they probably would do better with that level of support than those who have not had that opportunity? Do we have any way to prove that?

Kisker: These data were collected over a period of time when we enrolled families. This was anchored to their enrollment time. The Hilton program came in midstream when these programs were in the middle of serving the research families, so it did not cover the full time that they had these children.

Cornelia Taylor: How do you define early intervention?

Kisker: When we asked parents about that, we asked them if their child was eligible, and then we filled in the specific name of the intervention services in their community. We said, "or other early intervention programs in your community." We tried to target it to the language that they would use in their community.

Carla A. Peterson: The data that Kisker shared highlight that we in the Early Head Start Research Consortium are seeing it as a success, when it actually appears that Early Head Start has helped to enhance the overall development of the children who were participating. Hopefully, that reduces the need for them to receive or participate in early intervention services as delivered by Part C; but if there is a need for such services, we also see it as a success that in fact they are more likely to be referred to and actually participate in those services.

A point that I wanted to make is that both Early Head Start and Part C are mandated, or are very strongly encouraged, to work in collaboration with each other and with other agencies and services in their community. That is actually what I want to talk about here.

One of the reasons why it is such a challenge to identify the children who are eligible for Part C services, and those who actually receive Part C services is the following. We asked parents these questions at various points in time, and there was quite a difference in terms of the responses. These data were collected earlier on in the study than the data that Kisker is reporting. Hopefully, as families are participating in services over a longer period of time, they come to understand those services better and have more "accurate" reports. I put accurate in quotes because I want to think about the question, "Is it important for families to understand that they are receiving services from multiple agencies? If that is important, is it important to the family or is it important to us that they know that? What are the reasons that this is important?"

Kisker also shared some data relating to this, but it is another illustration about how some of these reports that parents give us are moving targets. This represents families' answers to questions regarding whether or not they have ever been told that their child has some kind of a diagnosed condition that might be indicative of a developmental delay. The response to that varies in terms of the numbers of families that report that.

Almost a quarter of the families that were participating in Early Head Start and in the research project reported that at some point in time, they had heard or been told that their child had some type of a developmental concern. A competent pediatrician may have reported this, it might have been the Early Head Start provider, it might have been the grandma, it might have been "fill in the blank." It might have been lots of different people, but it is helpful for us to think about the fact that a quarter of the families that were participating in this had reason at some point in time to be concerned about the development of their children. These are families who are living in poverty, who are already facing a large number of risks. I would assume that this is fairly scary for them to think about. We might think about how to support those families and the kinds of questions that they might have.

Of those families who reported these various things to us during the process of the first 2 years of research, how many of those families reported receiving Part C services or early intervention services? It is about 8% of the families who were participating in Early Head Start. It increased if they reported their child as having one type of a diagnosed condition. If they had multiple conditions, it increased again.

It is interesting that the children who had Bayley scores even below 70 at 2 years of age did not receive Part C services, or at least not a very high percentage of those children received Part C

services. Kisker also described children whose parents reported conditions that might make us wonder if they would be at risk for developmental delays; or might make them eligible but were much less certain if they would automatically be eligible for Part C services. One can see across those various reports that parents make that there is quite a range in terms of whether or not the parents report any of those kinds of concerns or conditions, and whether or not the family is actually participating in Part C services.

I would like to set up another issue as a discussion point. I have already set up the issue that it is very challenging to define who is eligible for and who should receive early intervention Part C services within that Early Head Start population. In addition to that, there are a number of reasons why we might want to identify children as being eligible for Part C services. One of those purposes would be to communicate with the scientific community and to have appropriate classifications. A lot of us in this room either have a history with and/or are working in the trenches everyday. We are doing programs and serving children and families. I would argue that if one important purpose for identification is to arrange the most appropriate, enhancing, and supportive set of interventions for a child and his or her family, we need to start looking at the challenges that keep Part C and EHS programs from collaborating well together, and at some of the things we are doing to overcome those barriers.

I would like to talk about a study that we did at five sites in collaboration with this larger Early Head Start study that was mentioned earlier. This study was done at five different sites, and we called it a collaboration study. In terms of design, we identified families who were receiving both Early Head Start services and Part C services. We talked with the parents, their direct service providers from both sides of that fence, the local supervisors of those direct service providers, agency supervisors, and the state level administrators in all of those programs. We got data from all of these various perspectives. We asked these people about a number of different things. We asked them about the referral process, assessment, actual service delivery, administrative supports, collaboration, and policies.

I want to talk mostly about what we learned about the referral process. There certainly were referrals made from Early Head Start to Part C and the other way around. However, the two programs reported making referrals in somewhat different ways and for different reasons. In Early Head Start programs, all of the programs reported that they had regular schedules for periodic use of assessments, and that they kept track of this on a regular basis. They also had specific procedures in place that they would follow if there was a developmental concern identified with a child. They also said that they had procedures in place for supervisors to refer, consult, and discuss with the front-line staff before referrals were actually made to Part C.

However, the Early Head Start staff also reported informal processes in place to support families. They talked about persuading families to consider referral to Part C, helping Early Head Start parents negotiate the Part C system, and helping build rapport between the family and the Part C agency that would serve them.

Here is a quote from an Early Head Start provider who talked about persuading parents to consider Part C. "It took a while for us to get him into Child Find, and they were very scared because one of the relatives in the father's family was mentally ill. One of the cousins was autistic. Many different people in the family have issues—on both the mother's side and father's side. To the mother, who confided in me, what she said was, 'I do not want my child to have those problems' and 'I do not want to know that he has those problems.'" That helps us understand some of the emotions and feelings that were expressed by the families as well as the service providers.

I also want to offer more insight about Part C early interventionists making referrals to Early Head Start. As I said, there were also referrals from Part C to Early Head Start, although overall, it seemed as though Part C providers were somewhat more reluctant to make referrals to Early Head Start. Their reasons seemed to be associated with judgments that the Part C provider and/or supervisor made about the family needs for a particular child.

When a Part C provider was working with a family, it did not appear that he or she would automatically assume that if this is a family living in poverty, Early Head Start is an additional resource that might be available to this family, and that a referral should be made. Rather, they tended to make referrals if they saw that the family had a need beyond the child's needs—if the child needed socialization of some kind, if they were worried that the child might later have developmental delays, or if the child was at risk but the family did not qualify for Part C services. Early Head Start, as one Part C provider stated, was seen as an "at-risk" referral agency. "The referrals that I have made to Early Head Start have primarily been for children who have been at risk, but who do not need special education services at this point." That seemed to be a pervasive attitude.

On the other hand, Part C providers often said that Early Head Start catches children first, that is the agency that sees children and families who are at risk, so it is more appropriate for them to make referrals to Part C. In addition, Part C providers sometimes expressed reluctance to overwhelm families with multiple providers. These did seem to have some misunderstanding about what the eligibility requirements were for Early Head Start; they often saw it as a family support project.

When families were dually served by Early Head Start and Part C, this study found that families tended to be in a two-track system; we had not reached the point where the two programs were collaborating. The earlier question about the Hilton project may have some bearing on that, because these data also were collected right before and right at the beginning of the training that staff received from the Hilton project. We did see families as part of a two-track system. It makes sense that Part C people did not want to overwhelm families with two systems to deal with.

If we see referral and identification as the door for getting the most supportive set of services, what does that mean for collaboration on the ground? One final thing about this study is that we did not find that it was the state or local administrators or policies that created this conflict. In fact, at the administrative and the policy level, there had been efforts to put policies and staff descriptions on paper to help collaboration; but people had not necessarily learned how to do it on the ground.

What are some of the things that are in place now to enhance collaboration and help support the service arrangements that we wish to see? There are many local efforts underway. I hear anecdotal stories all the time about Early Head Start and early intervention staff collaborating and providing very good services for families. Some of that is happening because local people are arranging shared training sessions. They are getting to know each other. Early Head Start has been around long enough that trust has built up, and some families have had successful experiences.

We are making efforts at universities to integrate or unify training programs. At Iowa State University, for example, our undergraduate training program is now a unified early childhood education program so that we are not training general educators and special educators; but we are training people to serve children and their families with the needs that they have. We work hard to deliver the kind of training we would like students to have, and to provide them with the practicum experiences that will help them be better collaborators in the future. It is an adventure and a journey, and naturally we still have some improvements to make.

Several of us have referred to the Hilton project, which is a project that is funded at the national level to provide training, teaming, and collaboration for both Early Head Start and early intervention staff. The project has been ongoing for 5 years.

Martha Buell: O'Brien's project does this part of that; it is also referred to as Special Quest.

Question: In your exploration of the collaboration between Early Head Start and Part C, did you have an opportunity to interview the interagency coordinating council member? Did they have input into this information gathering?

Peterson: Across the board, they did not. We were not able to interview those people in every state. In some states, we may have interviewed some of those people, but systematically we were not able to.

Question: Do you have any idea whether staff in Early Head Start are seeing the disabilities and are not making referrals; or whether they are, but families are not following through? Do you have numbers on that?

Peterson: We do not have numbers on that, and I am sure that it is a combination of those issues. It would be interesting to know where to start in terms of training and technical assistance.

Buell: I am the director of an Early Head Start program in Delaware. We serve two of our three counties; it is a small state. We have been around since 1997, and our project runs out of the Center for Disability Studies at the University of Delaware. From the beginning, we thought that working with children with special needs was going to be one of our strengths, like we had that in the bag. Well, that is not true.

We have spent more time with training on how to work with children who have special needs, because it has always been so front and center for us; but as much training as we do, we could always do more. When we bring in staff to do services and talk about Early Head Start and early intervention, the issue always arises that they thought this was early intervention. So, talking about those definitions and working with the staff is important.

We are working all the time. The Special Quest–Hilton project has been helpful, especially in bringing the Part C staff to the table. Since we have been working with our Part C coordinator and our staff on training, we have been able to do things and increase overall understanding of Part C definitions. They get frustrated because they say that they tried to refer somebody to us. There are also income guidelines that we have to meet, and once we are over our 10%, we cannot accept any more children. One influential Part C provider may have a bad experience trying to refer a family, and it is a real political piece as well as a training piece. Building those relationships is incredibly important.

Because we are a small state, we work in and do training for Region III. Some of our families have come from other states. There is a whole issue of them being eligible for Part C services in one state but not in that state. Staff can be from different states with different eligibility requirements. I was once on a panel with a speaker from Washington, DC. I was talking about how easy it was to get our 10% enrollment of children with disabilities in our Early Head Start Program, and she was saying how horrible it was. For them, the state criterion for defining a child with a disability was evidence of 50% delay in two areas of development, while for us in Delaware, it is 25% in one area of development.

A couple of the children we have served in the past had disabilities to the extent that it was questionable whether they would live long enough to enter Early Head Start. So, our staff training has included things like grief counseling and the whole issue of chronic conditions versus the medically fragile children who may not survive.

These families from birth to 3 go through so many transitions, including the transition to a new baby. If the child has a special need during that transition, even if we have our feet on the ground and the family knows what they are doing, we still may need to build the transition plan to Part B. The family who has gone to hell and back now has to learn a new system. Our Part B system is quite different from our Part C system in how service providers interact with families and what they can expect. It is hard for our staff to turn over families when they finally feel like they are helping them. These staff issues come up all the time.

We serve families using three distinct models. We provide home-based services. We also do center-based services, where it is just an Early Head Start center, and then we have many child

care partnerships. We partner with both community-based child care centers and also with family day-care centers. We are all over the map, running around doing all this work. We again found that all of the families we served, to the extent they can, want to be in a home-based option for as long as they can. By the time the children are 18 months to 2 years of age, however, they are more than ready to get a referral to a center-based program. So, even when the mother is working or furthering her education, the family figures out ways, when they can, to keep that child at home. That is not true for everybody; we could fill center-based slots any day of the week. There is a significant effort made on the part of many families to have their child stay at home; but after 18 months, they are ready for the transition.

For the children with significant disabilities, families try to keep them at home even longer. We have issues with the family about resource allocation, because they want to stay at home with their child longer in the home-based option. We then work with the family to figure out how they can make that choice work. If they choose to place their child in out-of-home care, we figure out a way to shore up the receiving center, so it is a transition within our little Early Head Start program from home-based to center-based care.

In our child-care partnerships, we first have to get the Early Head Start piece and then the inclusion piece. It is way too much to do both at the same time, particularly in family child-care providers' homes. We are asking to have a family service worker come in, but if it is also Part C, their personnel come too. Even though we need to work with the center-based care, this is more important with the family child care. We have found that we need to work with them on defining what Early Head Start is in the first place, and then figuring out with them how they will serve a child with a special need in that setting.

Family child care is where we would like to continue to build capacity in our community, because we see that as meeting the needs of many families in a way that the families seem to prefer for their younger children. Then again, when the child turns 2 years of age, it seems that families want a more structured day. We have been challenged with all of those transitions.

Especially for our community-based partners, so many of these systems are new systems, and the language is new language. It can be overwhelming for staff. We have been challenged with that issue over and over again. Conflicting results from the research studies of what the parents say, what the staff say, and what the early interventionists say makes perfect sense to me.

Jim O'Brien: I am from the Head Start Bureau. The complexity of life for families also makes life hard for researchers. With all those differences, it can be hard for policy makers too, but they tend to just jump in. Whenever I hear a description of such enthusiastic and complex work based upon a few sentences of regulation and lines in an act of Congress, I am reminded of a cartoon of a beaver and a duck at the base of the Hoover Dam. The beaver is telling the duck, "You know, I did the design work on that."

When we look at some of the basics from the Early Head Start request for applications, we assumed that the reference to the 10% of enrollment opportunities for children would apply to infants and toddlers as well. I do not think much reflection went into the real fact. We know more about the different definitions states use. When one looks at the actual identification, it ranges from maybe 1% to up to 4% of children who would be identified out of a larger population as having an Individual Family Service Plan (IFSP) and being included under Part C.

The decision was the right one and was consistent with other aspects of the program, in that the intent was to make this service available to an appreciable number of children. The Head Start Act—especially after Public Law 99-457, which is the Education of the Handicapped Act Amendment of 1986, the revisions that created the 3 to 5 and the infant–toddler programs—describes the efforts of Head Start to coordinate with and complement the efforts to implement the Individuals with Disabilities Education Act (IDEA) in the states. We were wedded, as some of the speakers have said, and it continues to be in our policies. This 10% requirement predates IDEA; it goes back to the early 1970s, so we were doing this before Individualized Education

Plans (IEPs) were required. Certainly, our more recent history carried the expectation that we would work together.

We know about how many children were supposed to count, and that is what we are supposed to report to Congress. We do have records from our program's annual information report. We have seen a steady progress nationwide in terms of the grantees' reports. If I could start in 1998, when we served about 35,000 children in Early Head Start, about 3.5% of those were identified as children with disabilities. The next year, we moved up to 6.1%; the last 2 years, 2000 and 2001, we have been at 9.6% nationwide. We know that a range of distribution exists in different communities and programs, and those that have been at it for a while are more likely to be able to reach the 10% requirement.

Some grantees have been frustrated at times when they have asked whether they should count a child as disabled whom their related service provider has said would qualify, if the parent would agree to the service. But the parent believes, and the related service provider may be convinced as well, that the parent is making sense in their judgment that they are not sure of the added value in going through the IFSP process. They feel like they are receiving an early intervention that is appropriate. Jokingly, we have said that this child will count for them in Head Start heaven. Seriously, we know that efforts are underway. The research is showing that we are working with many families, engaging them in conversations to say that children's development is under surveillance. Under IDEA, the parent has decision-making power that is respected, and which will continue to develop as their child reaches school age. That parent's decision might not be to include that child in the Part C program or an IFSP.

We have been pleased with the development of our technical assistance providers. The Hilton project has given us an opportunity to intensively focus on the relationship with Part C agencies and parents. That project is in its 5th year, and we are hopeful about the possibility that we will be able to enter into another 5-year cycle and do this with the Early Head Start programs that came on after Wave 5. An additional 400 programs could participate in this model.

It brings people together for training in one place over several days, but then goes back into the community to follow up with coaches on objectives that those teams set for themselves on improving their recruitment and inclusion of children with more significant disabilities. We have had honest conversations from program staff who get there, when it is obvious that they really have not spent much time with people. We understand the tremendous amount of work in starting an Early Head Start program. Here is an opportunity in a nice location with facilitators, an objective, and a contract to follow up on for the program and for the community.

Some of the measures used by the Hilton project have been ongoing ratings of the Part C agencies, confidence in and opinion of the placement, or Head Start as a natural environment for children with different types of disabilities. They have seen steady growth in that, but we need improved measures. We have talked about things like scenarios, case examples of children or families presenting with certain kinds of concerns, and the Part C agency's confidence that Early Head Start might be a good placement. Most programs say that "you never know until you do it," and no program can wait until they are fully trained and knowledgeable before they say they are ready. We have to work and build the muscles as we are serving the children.

The project has been helpful, and all of our technical assistance efforts have understood that Early Head Start really had to go from zero to 60 in a year or 2. It took time for many systems to become more established, for staff to appreciate the complexity of moving from that design to that huge structure of a fully competent and excellent program. We are pleased but would like to go beyond some of the moderate gains we are seeing. We do believe that the Early Head Start program now has imprinted upon it the view that Head Start is a natural environment where children with disabilities can and will be served, that families will be involved in that, and that Part C agencies will be partners. With all the blood, sweat, tears, bagels, and coffee that went into meetings and efforts to bring those groups together, we believe that has been imprinted on the design of the program and will be a continuing story for training, technical assistance, monitoring, and policy to reach its full potential.

Carta: As we have seen, Early Head Start has attempted to provide services to children with disabilities in their programs over the last several years. How has that changed over time? As O'Brien said, this was a small piece of regulation, and we were not sure what 10% of children with disabilities would really mean. For those of you in programs, how have you seen the characteristics of children you serve with disabilities change over time? Are you serving more children with severe needs or different kinds of special needs?

Comment: I am a training and technical assistance provider. One of the things that many of us have noticed and feel has been our job's delight is that we are in Early Head Start serving more children with varied disabilities that may be more significant in Early Head Start than in Head Start. We are seeing children in the Early Head Start program that have more significant disabilities move into Head Start; then, the Head Starts are benefiting.

Carta: One of the pieces of research that we are pursuing next is following the children who have been in Early Head Start into what we call the "prekindergarten phase." For all the children who were in the Early Head Start study, but particularly children whom we might have identified as having a disability or were receiving Part C services, we are finding out what happens to them in that prekindergarten or Head Start period, and whether they are receiving Part B services. We will be able to look at those transitions.

Buell: One of the things that we found is that there are a few children whom we refer for services, but then they are not eligible when they are not assessed at Part B. That can be somewhat confusing to families. That often happens with our speech therapy cases.

A major piece that we are dealing with in Delaware—and I think that everybody's dealing with across the country—is working with language-minority families. At this point in Delaware, we have one bilingual speech therapist in the whole state. Finding Part C staff who can work with language-minority families is hard. In fact, in some cases, we are called upon by them to be the translators for their IFSP meetings, to do what some people might consider their work. Our staff does a lot because they can speak the family's home language.

A bigger issue for us, and one that we are finding to be a significant challenge, is the whole issue of disability and special needs being understood differently by different cultures, and working with the families around that issue. That transition sometimes looks very different for our families who have recently emigrated from Central America. That is a big issue for us as that group grows every year in our community.

O'Brien: A desired outcome was that as Early Head Start programs served children with more significant disabilities, that these children and families would become familiar in settings including Head Start, and that they would become part of the Head Start family. It was hoped that people would be advocating for them.

This notion of familiarity and reaching certain thresholds of what a program feels is possible to achieve happens over time. What could become routine, which 2 years ago seemed extremely frightening, unusual, and not within our scope of possibilities, is something that requires time. Those first steps are hard and benefit from good partners, early interventionists, and others who can invite the Early Head Start staff into other settings and increase their comfort level. Once it starts, it can catch hold and benefit children coming over time.

Comment: One of the good things that I see happening is a therapeutic setting that is developmentally appropriate. It does not have to be exotic. As our staff see that, they feel more comfortable talking about special needs and even talking about it with families. Families may wonder what will happen to their child if he or she gets identified.

Comment: I want to share a project that we have at Louisiana State University that speaks to several of these issues, including the therapeutic environment and identifying these children. It started out of a problem that was an unusual need for the university in the occupational therapy program and for Head Start. We developed a project where the students would go into the Head Start classrooms and work with the teachers who had identified children about whom they had special concerns. These were children who usually did not meet the disability criteria but were still falling between the cracks and not meeting the classroom standards. The students worked with the teachers to develop some strategies to help them meet the child's performance needs.

It gave Head Start an extra discipline in the classroom and someone to role model for the teacher; and it gave the occupational therapy program an opportunity to have their students work with the community and identify a role in that setting. It also gave them practice with that child relationship. It was a win-win situation for both of us.

Toni Ledet: I want to revisit the language issue about the barriers between how we collect our data, and how service providers and training and technical assistance providers define things compared to the parents. I am aware that parents do not care as much about decisions as long as their child is receiving care; they want the best for their children. We still need to do a better job of defining and collecting data, and figuring out how we count children who have disabilities and who are getting services. It is different in every state, and we need to come up with some generalized definitions so that we are almost on the same page. We try to work with service providers, but when we say "services," it could be talking about early intervention services, mental health services, and so on. We have tried to make it as standardized as possible and talk in terms of IFSPs, IEPs, Part B IEPs, and Head Start-managed IEPs.

We need to try and gain consistency across our regions. When we collect information about a child who has been identified, it may mean different things to different people; but if they have an IFSP on file, that is at least real. We can then count it and say that we are counting that child with children in the program who have disabilities or IEPs by Head Start or Part B. It is not the perfect way to collect data, and we have to consider better ways. For example, our Program Information Report (PIR) data often conflict with other collected data. It is a big issue because we often talk apples and oranges among each other. We have to do a better job of that.

Carta: I am glad you raised that point. When we first began thinking about examining children with disabilities in Early Head Start, we thought we were interested in the outcomes of children with disabilities in Early Head Start. Then we realized that we do not even know who they are. Putting that in a larger context, we all want to know about the outcomes for children with disabilities and the outcomes for children with disabilities in Early Head Start. Until we get a better idea of who they are, I do not know how we even get to that point of measuring outcomes.

Question: I have a question relating to having a health diagnosis. My program deals with a large amount of significant disabilities in Early Head Start. Our Part C now trusts us and knows our center-based program, and there is more than adequate care for those children—a medical diagnosis along with disability. In your studies and other research, how many of those children with disabilities working with Part C and Early Head Start also have a medical diagnosis and are working with health professionals? We have a triangle for many of our children who have disabilities with our Part C, their health professional whom we work with, and who also have their goals checked as quality care.

Kisker: We asked parents whether a doctor had ever told them that their child had a disability, and then went through a fairly long list of different kinds of medical conditions. We should look at that in conjunction with the questions that we also had about functional limitations and other disability-oriented things. We do not have enough information about the health services

themselves to know if there is a plan or ongoing care that could benefit from coordinating with Part C or Early Head Start. We may not have enough detail to go all the way with that. We could look at how those things are combined and at the profiles of the children in terms of disabilities and medical conditions.

Carta: That is also another area in which there is discrepancy in terms of how children with health problems are defined—when we look across different samples of children, what proportion of children have health problems? We were recently at a meeting in which someone from the Department of Education was aghast at a statistic that he had heard, that 17% of the children from birth to 3 years of age in this country had major health problems. He was surprised at that, because it does not come close to the percentage that Part C works with. Part C works with a much smaller percentage, so his question was about what was happening with these other children. The clarification behind the 17% is who that really includes. That percentage included children with asthma, chronic ear infections, and other things; so again, definition played a role in the statistic.

Comment: Both of those things can certainly end up contributing to disability.

Comment: Another issue too is that it is a two-pronged test. Our health condition has to be negatively impacting development. The child could have major health issues, but for example, we have children with spina bifida who do not qualify for services because cognitively they are doing well. They manage to explore their environments. The issue of health was serious in my mind, but they do not qualify for Part C services.

O'Brien: I had a question based on one of Kisker's earlier slides. There was information about the MacArthur Communication Development Inventory scores of children who were under a standard score of 70, with the comparison group in the Early Head Start being almost double. I know the definition of mental retardation is much more complex than just that one score, but from a policy maker's point of view, we were talking about effects of that or even half that size for child outcomes. What kind of conversations have you all had about that, and what are the caveats about overinterpreting that score? Are you excited about that?

Kisker: I should ask these people too; they are the experts on that outcome. That is one of the most promising findings from this study in terms of the magnitude of the impacts, which in general are small but pervasive. I am not sure we have had the full discussions that you are implying we ought to have about that finding; we ought to further explore these data. We have been so focused on the overall findings that we are just now coming to some of these special populations and special topics. I do not have a good answer for that yet, but we should explore it.

O'Brien: Children do not get sorted into either Box A or Box B for the rest of their life at age 3, but the trajectories may be really different that early on. When they are 6 years old or so, there is much less likelihood that they will have some of the social, school, and other problems that would be associated with that lower amount. It could be exciting and substantial in terms of policy, even if it were a 10% reduction.

Comment: You hinted at something important. It is substantial in terms of the numbers of individuals who could be affected. When one thinks about each of those individual children, it is a substantial difference in the life of each individual.

Carta: Reflecting upon our own local study and that question, the reason we see that effect nationally is that in many programs, the impact that we have on children and families is to pick

up the very bottom of children who have many environmental risks. The reason why I say that is because some of the local research we have added to the national assessments are in-home observations of parent–child interaction. We have distilled those highly engaged parents who do a lot of interacting in the Early Head Start program from those families who have been less engaged in the Early Head Start program and have less interactive experiences with their children. The most interactive parents have really "gotten it" in terms of how the program can help and support them. We see big gains in the children from those families and the big changes over time as we follow them from 8 months old until they enter kindergarten.

Question: In regard to referral, has there been any research on the ages of parents and the likeliness of being more willing to do a referral? For example, adolescent parents sometimes seem more resistant to go further with assessment than older parents. Is there data on that?

Kisker: It is less clear when focusing solely on the age of the mother. We looked at parents with a variety of potential demographic risk factors, such as being a teenage parent, a single parent, receiving public assistance, and so on. The families with fewer risks showed larger impacts on eligibility for and receipt of early intervention services. To the extent that teenage parenthood was contributing, it did look likely that the programs may have been having a larger effect for the older parents. If we just look at teenage parents versus older parents, the differences are not large.

Carta: I thank everyone for their participation this afternoon. It has been a great discussion. If there are more suggestions for us as we keep mining this data set, and more questions about what happens with the children with disabilities as they approach school age, please contact us. We welcome your participation in this endeavor.

Kisker: This information and the full evaluation report are on the ACF Core website at www.acf.dhhs.gov/programs/core/ and on Mathematica Policy Research's website at www.mathematica-mpr.com. A paper from the national evaluation on health and disabilities will also come out this summer.

Comment: Another large longitudinal study with 15,000 children may have data and information about disability services. It is on the National Center for Education Statistics (NCES) website. Data are not out yet from that study, but it should have the 9-month data. They are going to go from birth through kindergarten, 9 months through kindergarten.

Carta: That is a big study. Some of you might also be interested in knowing that there is a study being planned on 100,000 children going from birth to 20 years of age. It should start in a few years.

Including Children With Special Needs and Their Families: Research, Practice, and Challenges

COCHAIRS: Sharon E. Rosenkoetter, Mark S. Innocenti
PRESENTERS: Marci J. Hanson, Judy Swett, Mary A. McEvoy, Korey Powell-Hensley

Sharon E. Rosenkoetter: This session is jointly sponsored by two cooperating organizations: the Division for Early Childhood of the Council for Exceptional Children, and the National Head Start Association. We have been working together for more than 5 years to encourage research on inclusion and quality services for young children with disabilities and their families. This session is a part of that effort. There are two parts to this session. In the first part, a number of experts on early childhood inclusion will highlight recent findings. Some of the sites for inclusion are Early Head Start and Head Start. In fact, Early Head Start and Head Start are providing more inclusion sites that any other program in the United States. So, this is an appropriate setting in which to talk about this topic. In the second part, there will be an open discussion when we hope the audience will bring comments and questions to the group and share thoughts with one another and with the panel.

Marci Hanson is a Professor of Special Education at San Francisco State University and a coprincipal investigator in the recent multisite, 5-year, Early Childhood Research Institute study on inclusion. Mary McEvoy is the Director of the Center for Early Education and Development at the University of Minnesota and a widely published researcher on inclusion of young children with behavior disorders. Judy Swett is from the staff of the PACER (Parent Advocacy Coalition for Educational Rights) Center in Minneapolis. PACER sponsors projects in Minnesota and nationally to help family members understand their rights and advocate effectively to support their children's development. Swett is also the mother of two daughters, one of whom has Asberger's Syndrome and some physical disabilities.

Korey Powell-Hensley is the Director of Heartland Programs in Salina, Kansas, which has developed numerous innovative programs for young children and their families. Heartland was one of the original 68 Early Head Start programs and also sponsors a blended program of Head Start and early childhood special education that operates in multiple communities. Heartland also pioneered in establishing Head Start services within existing community child care programs of quality. My cochair is Mark Innocenti, who is Codirector of the Early Childhood Research Institute at Utah State University and the past principal investigator of several Head Start grants on inclusion for children with disabilities.

From the earliest days, Head Start included children with disabilities. In 1972, the regulations began to require that 10% of slots in Head Start and later Early Head Start be held for children with disabilities. Typically, that 10% has been exceeded. In 1975, the Education for Handicapped Children Act was passed. This established free services and appropriate public education in the least restrictive environment for all children with disabilities as a civil right in this country. However, for children younger than kindergarten age, that was an "iffy" proposition, because there were some loopholes.

In 1986, those loopholes began to close as the reauthorization of that law created services for infants and toddlers with disabilities or developmental delay and also preschool services. All of those programs became operational in every state by 1992. The final key date is 1990, when the Americans with Disabilities Act was passed, bringing inclusion to child care. Children in communities have rights to be included in child care programs.

Over the course of history, we have seen a number of phrases: least restrictive environment, mainstreaming, integration, services for all children, program blending, natural environments, and inclusion. They are all in the same neighborhood but not in the same house. "Least restrictive environment" focused on the child and what is most appropriate, with adequate supports

and services for that child in the least restrictive setting. "Mainstreaming" emphasized putting children together, initially, for parts of the day, although those parts might be playground time and riding the same school bus as opposed to what we tend to think of as inclusion. "Integration" came out of the civil rights movement. "Services for all children" continues to be used. "Program blending" came out of the fiscal and administrative combination setting. "Natural environments" came to the floor in 1986 with Part C, the Infant and Toddler Program for Children with Disabilities. "Natural environments" are services in places where children without disabilities would typically be served. Finally, "inclusion" has also had an evolution. In 2002, inclusion is thought of as planned participation between children with and without disabilities in early childhood development programs. In other words, children are not just colocated; active steps are taken to ensure that they will be included and benefit from being together.

Who are we talking about? In 2000–2001, Head Start and Early Head Start enrolled more than 900,000 children, birth through 5 years of age. Thirteen percent of these children had identified disabilities. There is anecdotal evidence but not data to show that over time, since 1965, an increasing number of these children have more severe disabilities. When I started in the field, the children with disabilities in Head Start typically had speech delays. Now we see a great variety of children being served.

In 1999–2000, early intervention was started. That is the birth to 3 program under the Individuals with Disabilities Act, which has enrolled more than 205,000 infants and toddlers, all of whom have disabilities, such as developmental delay, or in a few states, major risk for disability. In the same year, the Preschool Grants Program, which is popularly called "Early Childhood Special Education," enrolled nearly 600,000 children with disabilities aged 3 to 5 years. It is important to note that many of these children are the same children. Children in Head Start have Individual Education Plans (IEPs). Children in the Preschool Grants Program or early intervention may also participate in Early Head Start or Head Start. In fact, the Bureau has actively encouraged this participation in recent years.

Another major thing to note is that Head Start and Early Head Start, through their screening programs, are major participants in Child Find, which locates children with special needs who are attending those programs. To support inclusion, the Division for Early Childhood's position statement advocates the following points: supports, services, and systems of high quality, preservice and inservice training to support inclusion, and collaboration for flexible fiscal and administrative procedures. Our emphasis here is research that contributes to recommended practice, restructuring of social, educational, health, and intervention supports, so that they are responsive to all children and families. Finally, there is a focus on optimal developmental benefit for each individual child and family. We see quite an agenda that is not yet finished. The panel will talk about research questions—the whichs, hows, wheres, with whoms, and how effectively this planned participation will happen.

Michael Guralnick sees four areas for research. The first area is access. How are children able to be involved in community programs that they would otherwise attend if they did not have a disability? The second area is feasibility. Are those community programs able to maintain their philosophy and approach and also provide the individualized program needed by children with disabilities? Third, what are the developmental and social outcomes of the inclusionary efforts? Fourth, what about social interaction and social integration? Are the children interacting? Are they forming friendships? That is a background of what we are going to discuss in this session. Hanson will begin by talking about the results from the Early Childhood Research Institute (ECRI) on Inclusion.

Marci J. Hanson: I will begin by describing the results from the ECRI on Inclusion. Our website is located through the Frank Porter Graham Center at the University of North Carolina at Chapel Hill. We invite you to visit that site, because all the publications related to ECRI are on there, as well as practical handouts such as news briefs and our administrator's handbook.

Briefly, the goals of this 5-year institute were to identify barriers and facilitators to inclusion and to develop, test, and disseminate strategies for supporting the participation of young children with disabilities and their families in classrooms and in community programs.

We did many studies over the 5-year period. Let me give you a taste of the type of research that we did. Our foundational study was an ecological analysis of intervention, and we lived in a number of classrooms across the country. We interviewed and observed all the stakeholders, yielding a great amount of data on the children and their interactions with one another. We got to know the families of the children, their teachers, all the people affiliated with them in terms of related services, personnel, and so forth, as well as the local and state policy makers in those systems. All of those different perspectives informed our points of view in our research project. We followed 112 children and attempted to look not just at children with disabilities, but also at a sample of typically developing children in those same classrooms as the children with disabilities, allowing us to compare and contrast the experiences of both children. We also looked at classroom interventions, professional collaboration, family perspectives, and social inclusion policy.

As researchers, we needed to find a way to disseminate all of these findings, and we came up with eight synthesis points. The first synthesis point is that inclusion is about belonging and participation in a diverse society. That means that inclusion is not just a school issue. It is not just about being in an early childhood program, but about families and communities in which those children and families live. The other major issue that we found in our work is that inclusion is not just about disability. Inclusion is about the rights and participation of all children in a diverse society. We came to understand that disability is just one form of diversity. When programs started with that as a foundational concept, they tended to more fully embrace inclusion and have more successful long-term experiences in their community.

The second point is that individuals define inclusion differently. In fact, we started our own institute writing our definition of inclusion. While there was a fair amount of overlap, there were differences. As we came to understand inclusion from the various points of view, we found that there were tremendous differences from school administrators or program managers. For example, inclusion was a particular program located in that district or that area. Families tended to see it differently—inclusion means their children's participation and being included as a community member. They defined it differently, and these definitions were often not in sync.

The other issue was that depending on where one was in that ecological system, one's responsibilities and roles tended to make a difference in terms of how one defined inclusion. We also found that how people embraced having children of all different characteristics played out differently in different kinds of programs and experiences. For example, for some people there was the notion that we did not identify diverse characteristics in children. Rather, all children should blend together; whereas in other programs they tended to celebrate and emphasize differences along all the dimensions of children and families.

The third synthesis point was that beliefs about inclusion influence how it happens. The perspective one holds has a tremendous impact on how those children will experience their early childhood experience. Some of the competing beliefs occur between professionals and families. Again, families tended to emphasize their children's acceptance and the ability to participate and be full members of that community; whereas the professionals tended to look at goals in terms of classrooms.

We also found that families were often in a "catch-22" situation: families of children with disabilities had to choose between having their children socially integrated and able to participate with a wide range of children, and having their special needs met. That is not in the spirit of the law, but that was what we found repeatedly. Parents had to make that decision one way or the other rather than having both co-occur in that same program or experience. We also found some conflicts between regular early childhood and more special education types in that they tended to overphilosophize how children grow and develop. In some cases, people said they should not intervene in any exceptional or specialized way, because children would just bloom

or outgrow characteristics like looking at themselves or rocking or whatever. In other cases, they thought it should be more active in terms of changing the behavior.

The fourth synthesis point, and perhaps the central one, is that programs and not children have to be ready for inclusion. We found that children and families' access to programs had much to do with child characteristics. There is the view that some children are includable and others are not. You can probably guess the dimensions on which people discriminated. It has to do with behavior—child characteristics and the degree of severity. We found that programs that embraced this notion of diversity in general were able to include children with all levels of severity and that that was not a major factor.

However, it is definitely a perceived factor out there, as people allow or do not allow children in their programs. Do they meet that milestone? Are they toilet trained? Are they ready? Are they includable? Needless to say, families had a different perspective on these issues. We also found that social status, culture, and language had a big impact on whether or not one was able to break through those barriers to get into inclusive environments. All families and children were not at all equal in terms of their access to services. We found that the most successful programs were those that started with diversity as an underlying foundation rather than this notion that children had to earn their way in.

The fifth point is that collaboration is the cornerstone to effective inclusive programs. That involves a personal commitment on the part of the adults. We did several studies related to critical factors and key influences. One thing that comes out repeatedly is how important a single individual is, such as a teacher, program manager, or someone who believes in inclusion or believes in the right of children with disabilities to be there. One person can have a tremendous impact both as a barrier and, more often, as a person who is able to facilitate the inclusion of children with disabilities.

The sixth point is often overlooked. It is that specialized instruction is an important component of inclusion. Participation or just placing children in experiences with other children is not enough. There are a variety of effective strategies that we can easily implement in settings and in curricula. Those strategies have to do with environmental supports, adapting materials, simplifying activities, looking at children's preferences, providing adult or peer support, and providing specialized equipment in some cases. We have created some publications that are aimed at helping teachers do this. One is a book called *Building Blocks*, published by Brooks Publishing. We have also done some little booklets for parents called *Me, Too*. They are meant to facilitate the inclusion of children in early childhood programs. These materials should serve as some practical supports for people.

The seventh point is that adequate support is necessary. By support I mean training, personnel, materials, planning time, and ongoing consultation. Of course, all of these must be budgeted and advocated for in programs for these circumstances to be effective. The last point is that inclusion can benefit children with and without disabilities. In the past, we had this notion that children without disabilities would somehow be harmed or negatively influenced by children with disabilities. Many studies have shown that that is not the case. There are no negative repercussions for typically developing children. In fact, our research found that many parents of children who were typically developing wanted their children in inclusive environments because they felt that it added to their children's self-esteem and their notions of diversity.

As one parent said, "My child has to learn to live in the real world. This is what the world is like. We are all different on many dimensions, and this is a value that I want for my child." I would like to end with a quote from a principal who was a regular early childhood educator and felt that inclusion is important. She went about almost single handedly providing an inclusive experience in her community, which was opposed to it in the beginning. She said, "We seek to create a community in which all of us have a place and are valued." That is what full inclusion is all about.

Mary A. McEvoy: This entire presentation will be available on the Early Childhood Behavioral Project website. I am going to talk about challenging behavior. Our website is full of information about the last 8 years of research that we have been doing in the area of preschool challenging behavior. It has a strong, proactive, applied, basic focus, so it contains much information that can be used readily. There are also links to other projects that are working with young children who have challenging behavior.

One of the things that I gathered from Hanson's remarks was how those of us who actually started our careers in early childhood special education have evolved as professionals in both the area of inclusion and in preschool challenging behavior. I no longer think of that as a special education issue, because it affects all young children and their families. One of the reasons that inclusive programs do not work for children is because, in many instances, early childhood educators are not familiar with or not aware of procedures that they can use to manage challenging behavior.

The calls that I get about children in inclusive programs who are having problems are for those with challenging behavior. It is not only children with disabilities. We do not own challenging behavior. More and more, it is just the rank and file—any child in the classroom who is engaging in behavior that the classroom staff feels is detrimental to themselves and to the child. Unfortunately, I often find myself coming into programs when the only solution that seems to be workable and acceptable to the program is removing the child. In many instances, they are not wrong, because much of what we talk about when we talking about challenging behavior is relationships. Hanson talked about an advocate or someone who cares for the child. We spend much time talking about whether there is someone in this program who likes this child. In many instances, the behavior has gone on for a long time and the problem has been exacerbated; and the program and the teachers have been asking for assistance for a long time.

Maybe the best intervention is a change of placement so that that child can be in a new setting, where a new relationship can develop. Unfortunately, that is often not a situation that is acceptable to families or to programs. There are not other places for the child to go and so the real solution is: How can we start to look at behavior early, before it gets to a point where the child is breaking one's back? Where can we intervene and actually prevent the challenging behavior from occurring in the first place?

I am going to talk about challenging behavior and some of the interventions that we are using. I will provide some data from two studies that we have conducted that have looked at what teachers are using in classrooms to manage challenging behavior. One study that we did in Head Start looked at changing the teacher's attention to challenging behavior, and seeing if just changing when they attend to the child can influence the child's rate of challenging behavior. How do we define challenging behavior? It is defined as any behavior that is disruptive to the class and harmful to the child, the teacher, the other children. It can also mean being physically disruptive for the child or other children. Challenging behavior involves children who are disruptive, bite, scream, tantrum, kick, run out of the room, and do all kinds of things that immediately draw one's attention to them. It is noticeable, and it is probably something of concern to the teacher, the families, and the other children in the classroom.

There is another part of challenging behavior that oftentimes we do not think about. That is, challenging behavior by children who are socially withdrawn. The issue is that those quiet children, in many instances because of all the other things one is dealing with, are children who are not drawing attention and are sometimes the least likely to get any kind of intervention. The more we know about social and emotional development and the more we know about the importance of interaction, the more important it will be that we notice and attend to those children.

I am going to talk now about those children who act out more, the kinds of children who will do something and immediately draw one's attention. When we talk about challenging behavior, there are two things to think about. One is the form of the behavior. What is the

behavior? What is it that is of concern? When the form of the behavior is identified—crying, biting, screaming, kicking, and so forth—then one has to think about whether it is just one's problem as an adult and one's tolerance level, and if others in the classroom have a problem with this.

The second thing to think about is the cultural relevance of the problem. Much challenging behavior is culturally determined. What is appropriate in Nashville, Tennessee, where I used to live, is not the same as what is appropriate in St. Paul, Minnesota, where I live now, for many different reasons. From whose perspective is this a problem? Is it something that is not appropriate for this community? I have been called in on things and ask, "Is that a problem?" From my perspective, it is not, but for this classroom program, it is a real problem. One has to think about what the problem is, why it is a problem, and whether it is something that needs to be addressed. Then, what can be done? Once the form of the behavior is known, one must ask why the child is engaging in this behavior.

Oftentimes, teachers get stuck at that part because when they think about why; they start thinking about things that surround the child—he is from a disruptive home, he has this problem, there are societal issues—and the problem just becomes bigger. The problem is that a classroom teacher cannot do anything about all the things that go on throughout the child's day. That is why we have collaboration and coordinated services because, hopefully, we are working with people who can address issues that surround the child.

In an early childhood/Head Start classroom, that child is there for a small part of the day, so the importance of that time is increased. We want to provide the safest, most nurturing, positive environment possible. We know, particularly those of us who work with children with disabilities, that children thrive in those kinds of settings and that their behavior is different in those settings than it is in others. The child with whom I work starts the day in family day care, gets on the bus and comes to the Head Start program for a short time, gets on the bus and goes to the early childhood special education program for a short time, gets on the bus and goes to a latchkey, after-school program, and then goes home. The child makes more transitions than I make during my day. The children in those situations learn different rules and expectations in each of those settings.

I work with teachers who say that this child's challenging behavior is gone because they changed their behavior. The teachers have changed what they are doing with the child, and I will see that same child 4 hours later and it will be hell on wheels. Children do learn about the expectations in the classroom. Once it is clear why they are engaging in what they are doing, ask whether the child is engaging in this behavior because she wants attention. Has she learned over a period of time that children who scream, holler, and yell are likely to get teacher attention and get it quickly?

The child does not care if that attention is, "Stop it. Do not do that. I do not like that. You need to quit it. You need to sit down. We do not do that in this classroom." The teacher could also say, "What is wrong? Come here and sit with me. Let's talk about it. Let's discuss this." Children do not care what your attention is. All they know is that they have your attention. It is not wrong to talk positively to children. Why not catch them when they are not engaging in the behavior and ask them how they are doing? Say, "Come sit with me. Let's talk. Let's play together."

The second reason that children engage in challenging behavior is because they want someone to get away from them. They do not want to be in a group activity. They do not want to be in the same activity every single day for 40 minutes. They may think, "Why are we doing this large-group activity that lasts this long?" I would ask the same question, but they do not have the skills, or they do not feel comfortable raising their hands and saying, "Excuse me. This is a boring activity. Could we move on?" Instead, they lash out, roll around, and start being disruptive. Then, a teacher might say, "You are disrupting us right now. You need to go sit, collect your thoughts, and think about what you need to be doing. When you are quiet, you can come back." So the child walks away, sits down, is quiet, comes back, and the teacher says, "I am glad you are

back. You are welcome. You are a part of this. Come sit here." He sits down and a minute later, he is disruptive again.

The intervention that many teachers use is an effective intervention called "time out," but the problem is that there are two other words that follow that term and they are "firm reinforcement." This child is in an activity that he does not like. In essence, what one does is send him to something he does like, taking him out of something he does not like and putting him in a place where he is quiet, sucking his thumb, or looking at a book. Then, when he is quiet, the teacher brings him back to something he does not like. He has figured out: "I can sit here and be bored or I can just hit somebody else and get to leave." What we want to do is not only think about what the behavior is, but also why they are doing it, and try to design interventions that teach children different ways of telling us that they want to leave the activity, without slapping someone.

With this as a premise, we thought about all the different interventions that teachers could use. We were interested in how many of these intervention components they are using before or after challenging behavior occurs. One component is attention. How often do the teachers go up to children and talk to them? How much of that attention is dependent on something the child has done? How much of that is reprimand? We were interested in how many transition cues they give, such as, "That was a good job, you guys. Now you can go play somewhere else." How many times are children given choices? I mean choices before challenging behavior occurs, such as, "Do you want to clean up the block area or do you want to help me clean up the reading area?" Give two choices: "You can either clean up the block area or you can clean up the reading area, but you need to stop that behavior."

Instructions that teachers give to children that can either have positive valance, such as, "Come here, hand me this," or they can be negative valance, such as, "Stop that. Do not do that." I have already mentioned time out. Another component is restitution or overcorrection, such as, "You knocked over all the blocks. You need to pick them up." I have been in classrooms where people have said, "Do you know what? If you want to build the tower up and tear it down, that is fine. We are going to build it up and, then, we are going to tear it down. Build it up and tear it down." They give them multiple opportunities to practice that because they do not want them to do that. That is an enigma to me.

Physical guidance refers to moving children through activities, even holding their hands and moving them somewhere or physically guiding them or picking them up and moving them somewhere. Somebody told me the reason they liked to work with little children is because you could pick them up and move them. They have not seen some of the children I have worked with. Differential reinforcement is a powerful tool. It says, "Look at how nicely you are sitting. I like that. That is good. Whoa, look at you." Then the child who is not sitting appropriately picks up on that and soon they are sitting like one wants them to, hoping for some praise.

There is also general information and talk. How much of a child's day is just things such as, "The sun is shining outside," or "Today we are going to be playing with the play doh"—simply general talk? We were interested in those components. We observed seven early childhood education classrooms that had children with disabilities. Over a 3½-month period, we watched for 100 hours. We observed what the teachers did. Most of the classrooms had a lead teacher as well other support staff in the classroom. We coded those behaviors and whether they occurred before or after challenging behavior. The largest percentage of interventions had to do with talking, that is, the positive mans and the negative mans, the informational talk and the general talk. About 88% of the time, they are talking to children. With that whole menu of other interventions one might use, the intervention that teachers fall back on regardless of whether it is before or after challenging behavior is to talk a lot to children.

I am not saying that talking is bad, but I am going to tell you about a policy implication. It does not matter how much experience one has. If one is a newly trained teacher who is in a professional development program and has picked up on using a variety of interventions, or if

one is a seasoned teacher who has been there a long time, teachers talk to children. In our study, we found that in the absence of challenging behavior, almost all of the attention that children received was positive verbal. There was a little bit of physical, and it was not negative physical. Most of that was holding children by the hands and leading them places. Under the presence of challenging behavior, those are the interventions that teachers use. They use positive verbal, and that meant that challenging behavior had occurred and that is when they attended to the child.

The one I love is when one child slaps another child and hurts them and a teacher tries to use that as a teachable moment where he or she tries to get them to interact. The child who has just been slapped has no interest at all in being anything positive, but the teacher thinks that it is a teachable moment. The teacher says, "Tell him you are sorry. Tell him you will not do it again. Shake hands. Let's be friends." This would be a great thing to do when the children are not engaged in challenging behavior. Then there is negative verbal: "Stop that, do not do that—I do not like that," as well as physical.

The implications of this are that teachers can use a variety of interventions, but they primarily go to verbal. Unfortunately, the high rate of verbal behavior probably will not be what those children will see in kindergarten programs, particularly children with disabilities. We need to figure out a way to get them on a leaner schedule of verbal behavior and use a variety of interventions. Despite the high rate of verbal behavior, there was a low rate of contingence. Most of the verbal behavior was just thrown out for children to pick up on, and there was not much commenting on positive behavior, such as, "I like the way you are sitting," or "Wow, look how well you guys are playing together." It was not pointed out to the children unless they engaged in challenging behavior. So, the teachers need training.

I want to describe quickly the results of a study we did in a Head Start classroom. There were four children: Devon, Todd, Tom, and Quincy, all children with disabilities. However, none of these children had severe challenging behaviors, although they were referred to the study because of their challenging behavior. How much attention did the teachers give the challenging behavior before we did an intervention? How much attention did they give to the challenging behavior after we did the intervention? There was a big difference. There was a lot of attention to challenging behavior before the intervention and little attention to challenging behavior after the intervention. Before the intervention, there were high rates of challenging behavior for all four children; it was much more challenging before we did the intervention than after the intervention.

For the intervention, we simply asked the teachers to stop attending to children when they engage in challenging behavior and boost their attention to what almost feels like an abnormal wait when they are not engaging in challenging behavior. Then we helped the teachers fade the attention. The last time I presented this, someone in the audience raised a hand and said, "I have 25 children. Do you expect me to give that much attention to these children when they are not engaging in challenging behavior?" My response is that that much attention is given to them when they do engage in challenging behavior. The only difference is that they are prompting the teacher for attention.

The difficulty for teachers in giving attention in the absence of challenging behavior is that there is no natural prompt. The child is being quiet and either one wants to let sleeping dogs lie out of fear that they will be reminded to engage in challenging behavior, or one is so busy doing other things that one forgets to do it. It is a simple intervention of manipulating when one gives attention. The teacher has a bowl full of attention. Using that bowl full in the absence of challenging behavior, rather than attending to children when they are engaging in challenging behavior, will go a long way in helping to prevent challenging behavior.

I want to describe another intervention called "tolerance for delay." The child is in circle time. He wants to leave the activity. One can predict that he will be gone after 1 minute. After the circle is engaging and doing all the good stuff, he comes to the circle. At about 30 seconds, one can turn to him and say he can leave. Let him go, because he is going to go anyway and all that

has changed is that the teacher has decided when he leaves rather than him. What about all those other children? Will they want to leave? While doing that activity, every single child in that circle wants to leave anyway. Think about that. From that day forward, when the child comes, systematically increase the amount of time that he has to stay before being released. Release him and then invite him back, knowing he will come back.

He never engages in challenging behavior, because he is always released before starting to engage in the challenging behavior. It is a slow process and it takes awhile. This child has been doing this behavior for a long time so any change is going to take some time. We have seen children that would not stay 1 minute in an activity now staying 4 or 5 minutes. What happens, oftentimes, is that once they stay in the activity, they realize they like it. They just have not experienced it before.

Judy Swett: I am giving a parent perspective, not the parent perspective. I am very uncomfortable speaking on behalf of all parents everywhere, and frequently I am put in that position. I want to make it clear that I am speaking from my heart. I have a 16-year-old daughter who has developmental ataxia, Asberger's Syndrome, Attention Deficit Hyperactivity Disorder (ADHD), and a few other physical disabilities. Joanna was born 10 weeks premature, spent 5 weeks in the neonatal intensive care unit, and came home on a heart monitor. Needless to say, her first year of life was a challenge because at that time, no one offered me any information about the difference between preemies and typical full-term babies. I had already raised a daughter who was 4 years old. I figured I knew what I was doing. Guess what? I did not have a clue, and so that first year brought many challenges.

Finally at 1 year old, she was identified as being in need of early intervention services. She was not sitting up, not doing most things that children do at 3, 4, or 5 months of age, so she entered the early invention system. When Joanna was 2 years of age, we received the diagnosis of damage in her cerebellum attributed to the developmental ataxia. When she was 3 and 4, she was put in a segregated classroom. However, Joanna had speech language goals. She was the only child in the classroom who spoke, and she was not real high on peer reaction; she never learned how to interact with children her own age. She could talk well with the adults in the classroom. In fact, that became her communication style, and it was reinforced because she was the only child in the classroom who communicated.

Joanna was a boon to the morale of the teachers and aides in that classroom, because she could give them constant feedback. She was a smiling child who loved being there. They talked to her and she learned to talk to adults. Joanna was fully mainstreamed in kindergarten and throughout her school years. This year, she finished her sophomore year of high school. Joanna is a highly motivated child. When she was 15 years old, I was surprised to find out that her IQ was somewhere in the range of 78–80, because I thought she was average. When she started junior high, Joanna took higher-level advanced placement classes.

With a lot of support, we do about 3–4 hours of homework a night. She is motivated to do that. Joanna cannot read for content and comprehension, although she can read to herself. It is not that she does not understand the words, but she cannot comprehend what she reads. So, I do all of her reading for her. Joanna is a straight A+ student, and this year she was inducted into the National Honor Society. However, one of my crowning achievements for Joanna recently was when she was in a musical at our church. Three people from school came to watch her in that musical. Then, on the day after school was out, a friend came over and had lunch with her. Joanna's crowning achievement was that she finally had a friend whom she could identify as a friend. Believe me—all the high grades and all her successes in school were nothing compared to the fact that Joanna had a friend come over, have lunch, and spend the afternoon with her. Joanna can now identify her as a friend, and that is so important..

What do families with children with disabilities want for their children? The answer is simple. They want the same things that all parents want. They want the children to be loved and

to learn how to love. They want them to have friends and have opportunities to live, play, learn, and work in their communities. Without opportunities for inclusion at an early age, young children with disabilities will not become accepted members of their neighborhoods and their communities. The central goal in early intervention services is to provide support and training to families, to show them how to provide learning opportunities for their children within the activities of daily life.

The child's family is usually the primary supporter and nurturer for the child's growth and development. When Joanna was 1 and 2 years old, and therapists were coming into our home, if they had told me that I was now responsible for providing occupational, physical, and speech therapy to my daughter, I would have said, "No way. I was not trained to do that." They showed me how to do things in the normal context of my daily activities with her—dressing, changing, feeding, playing—how I could intervene to help improve her development and help her to strengthen her muscles and things like that. I felt competent to do that. I was now adding on 2–3 hours of therapy into an already busy schedule. Oftentimes, when a child is placed in child care, the child care provider also provides crucial support.

Inclusion of the family demands that the team working with the family respect their values, beliefs, concerns, priorities, and routines; and that the services fit the needs of the family and not the other way around. I happened to be a stay-at-home mother, and I considered that a luxury at the time. We had made a conscious decision that we would exist on a lower household income. It was convenient for the therapist to come to my home during the daytime hours. I did not have to worry about taking time off from work to do that. For most families nowadays, it is not convenient to have daytime hours.

The other thing that I will mention is that I felt I had to clean the house 3 days a week for the therapists' visits. For many families, culturally, the need to entertain guests coming into the home gets in the way of these therapists coming into the home. When families seem reluctant to have all of these therapeutic services, oftentimes that is what they are looking at. They are ashamed or embarrassed about their living conditions, or they are overwhelmed by the idea of having to entertain people coming into their home.

If families are indeed the primary caregivers of their children, then services must be delivered in a way that recognizes families as equal members of the team and involves their expertise as parents. Long after the professionals have gone, the family will be there caring for their children. Families are the experts when it comes to determining the needs of the child and the family. If one wants to understand and meet the educational and developmental needs of children with disabilities and their families, one needs to ask them about their experiences and their needs. Listen to what they have to say and act upon that information.

If we truly believe in inclusion, then we must support families in ways that recognize and encourage the development and use of natural supports in the family's cultural and social network. Obviously, we all know there are not financial resources and formal resources available to truly benefit families in all the ways they need support. So, recognizing and encouraging a family's natural supports, and allowing them to be part of the whole package, is beneficial to the family. We must give families the skills and knowledge necessary to allow their participation in community life. This means that family supports and services must always be individualized and based on each family's daily activities, strengths, resources, and needs. Each family has its own structure, roles, values, beliefs, and coping style. Successful inclusion is predicated on respect for and acceptance of this diversity. It must also include respect for the racial, ethnic, and cultural diversity of families. Families must be allowed to be the decision makers regarding services for their child.

Successful inclusive practices should strengthen the competency of families and provide them with the necessary supports and resources to enhance their child's development. This should be done in a way that increases the family's feelings of competence, rather than making the family dependent on the professional. Professionals may have to change how they interact with

families. Rather than fixing the family or acting on behalf of the family, we need to empower the family to act on their own behalf. Building and maintaining collaborative partnerships between families and professionals are often considered the most important factor in successful inclusion of children with disabilities in community settings. This inclusion requires that trusting relationships be established between the families and professionals.

Listening to the family and acknowledging and respecting their insights is critical to this trust relationship. Families should be given opportunities to be involved in all aspects of program development, service delivery, and evaluation. It is critical to recognize that families can be involved in multiple ways, while the limitations of their involvements must be respected. Some families may be able to volunteer in programs during the day. Some may be available to serve on advisory boards or planning committees. Some may be overwhelmed and unable to do anything beyond making sure that their children come to school each day.

Providing multiple ways for families to be involved honors them and demonstrates a desire to work collaboratively with them. It is important to get input from diverse groups of parents. It may be necessary to recruit parents using a variety of methods. It is important to find ways to identify and recruit families to various boards and committees. In order to make participation comfortable for families, always have more than one family involved. No token families, please. No family wants to be considered the token or placed in a position of speaking on behalf of all families in a program.

It will be necessary to remove barriers to participation, such as providing transportation, child care, meals, or stipends. This is why I love to work collaboratively with Head Start, because they have it all. When we cosponsor an event with Head Start, the transportation, the child care, everything is there, and it works well. If one truly believes that parent participation is essential, then one will look for solutions to challenges that occur. Any program that serves young children with disabilities should include parent and professional collaboration in developing program philosophy and practices that work for both parents and professionals. If families are involved and policies and procedures are established, it is more likely that the program will be responsive to the needs of the families. Families are in the position to judge how services are delivered and the extent to which services address their priorities and concerns. They offer authentic experience and fresh insights about their children, and may help to identify inconsistencies in the program or service delivery system.

Parents of young children with disabilities should also be involved in a preservice training. I had the exciting opportunity and honor of coteaching a class for 3 years with McEvoy. Parents can provide valuable insights to students who will be working with families, to help them understand the concerns and perspectives of families on how services should be delivered. Giving students the opportunity to interact with families in an informal way can help break down barriers that could exist when they begin working within programs. I have often experienced professionals acting in ways that are insensitive to the needs of families. They are usually acting out of fear and ignorance rather than intolerance. Including young children with disabilities in community-based programs is an exciting opportunity for the child and the family, as well as other children in the program.

Young children with disabilities learn a great deal from their typically developing peers. Young children without disabilities learn a great deal about acceptance, compassion, and how to deal with differences and diversity of all kinds. Parents have the opportunity to be involved in their child's program, develop leadership skills, and interact with other parents. Professionals in community-based programs can also benefit from the opportunities for consultation with early childhood special education teachers and professionals.

The Individuals with Disabilities Act requires that young children with disabilities be given opportunities to interact with typically developing peers. Additionally, the act calls for services to be delivered in natural environments or the least restrictive environment. This means that young children with disabilities have the right to be included in community-based programs. However,

we philosophically believe that our discussion of inclusion has to go beyond what is simply required by law and what we know to be sound, developmentally appropriate practice.

Young children should not have to earn their way into inclusive programs. They should be included in community-based programs with all necessary supports and services to allow them to be successful in these placements. Inclusion is hard work. It requires the commitment of all individuals involved to make inclusion successful for young children with disabilities, their families, and the professionals who work with them. The long-term benefits for the child, the family, and society as whole far outweigh the cost of time and commitment required to make it happen.

Korey Powell-Hensley: I have never met these other presenters before, and they just played right into my hands. We are doing everything in our program that they have talked about, and it works. I am from Salina, Kansas, a community of about 50,000 people. We also serve two other counties besides our main community. We are in a very rural area.

First, I am going to talk to you about the "BI" period, that is, the period "before inclusion." Head Start in this community operated three different sites at elementary schools. Early childhood special education was in two sites in elementary schools. Head Start was serving children with disabilities. Of course, these had to be mild disabilities, because early childhood special education people would not let us have anyone else.

We have classrooms side by side. The early childhood special education programs said, "We are doing inclusion because our little children will walk over there and your little children will walk over here." Guess what? When they did that, they did not play with each other. They played with their friends who came over there with them; they were just playing beside each other. They did not get to know each other. They segregated themselves. I started to feel badly about self-contained classrooms and started to tell staff that I could no longer buy into this concept. How do children with language delays learn to talk, when the classroom is full of children with language delays?

Finally, I went to the special education coordinators and asked if they had thought about doing something more. We talked and talked, and I would bring it up every time we got together. Soon they started avoiding me. However, they finally got on board and thought, "Do you know what? That might make sense. We should do this." We got together, went to the school board, and said, "This is what we need to do. We need a building just for us, and put all the early childhood programs together." The school board listened and seemed relatively receptive. In 1994, the school board had to make some tough decisions. They had to close two schools because there was not enough operating capital to keep them open. When they closed those schools, we knew that the Head Start classrooms and the early childhood special education classrooms would disappear.

However, because we had planted the seed with the school board, they suggested putting all the early childhood programs into one building. It worked out perfectly. It took 2–3 years of talking about it and planting those seeds; it is not a fast process. We started out with the largest center in Salina, with six classrooms. We have three early childhood special education teachers and three Head Start teachers. In each classroom, we put in one early childhood special education paraprofessional and one Head Start paraprofessional. We purposely mixed up the staff so if a Head Start teacher had a paraprofessional, she would not have that same paraprofessional again.

At the same point, I talked to the early childhood special education director and suggested that we do this with the other centers. They had one center that was inclusive in one county, and we had three centers in another county. They were not sure about it, but eventually I talked them into doing that, too. In those centers, we have a Head Start teacher who is paid by Head Start, one Head Start paraprofessional, and one paraprofessional paid by early childhood special education.

At this point, since they are going to close down the self-contained classrooms, we had to come to an agreement—Head Start will take every child that qualifies for center-based services into the Head Start classrooms. One of the difficult things is that some of our centers have 40–50% children with IEPs. That is not what we want, but we have true inclusion. We have children spread throughout all the centers. They have every disability one could think of, and it is working well. As we have been making the decisions to do this, the first thing in our minds, our vision, has always been what is best for children. We know that this is best for children. One initial problem is the public perspective. Will my child receive good services? A strong community leader, who had had a child in the special education self-contained classroom several years earlier, disagreed with what we did. He was opposed to this move, so we asked him to be on the policy council. Now he is our biggest advocate. One has to involve those people who do not agree with one's philosophy. Bring them in and they will buy into it. They will believe it.

Another initial problem is space, primarily because of equipment. Some children with disabilities need lots of equipment. It is like a roller coaster. They all come at once, and then a couple of years later, there are not so many. Then they all come back again. There is always a lot of equipment. We also had play group space because now we had children with disabilities who only came once or twice a week for a couple of hours, and we needed to find space for that. There was also adaptive equipment.

We also needed to address stigma. We would hear, "I do not want my children to be with all of those poor children. I do not want people to think my children are poor because they are in the Head Start classroom." Other initial problems are the fear of change and of the unknown. We had teachers who were afraid. First of all, they feared losing their identity. We came together and said we were not going to be called Head Start anymore and we were not going to be called the early childhood special education program, whose name was Kid Connection. We talked about it as a large group and came up with a new name. We became Heartland Programs. We both lost identities. Teachers, especially special education teachers, lost the identity of being a special education teacher, because now they also had typically developing children in their classrooms.

There were also feelings of inadequacy, especially among the Head Start teachers. The Head Start teachers have degrees, but they had not had children with significant disabilities in their classrooms up until now. There was also the initial problem of staff with new teams. We mixed them all up because we did not want the Head Start teacher and the Head Start paraprofessional ganging up on the early childhood special education paraprofessional or vice versa. Mixing it up was good. We were not too worried about the teams, because we knew that if they were not out there working hard, they would sink. They knew they could sink, so they worked hard in order to be successful.

One early childhood special education teacher was the most vocally stubborn person we brought aboard. A year later, I videotaped her and asked her how inclusion was going. She responded that in the 15 years that she had taught special education in self-contained classrooms, she had not realized that she was limiting her children. She continued by saying that now that she has had to teach typically developing children, she realizes that she has to challenge her children with disabilities. Before that, she was not challenging them. Hearing that was powerful.

Another issue was collaboration. In the classrooms, we had to work with leadership. One needs to work on building relationships. Once we get to know each other, if we step on each other's toes, we will not hurt each other's feelings. We met regularly and sometimes we did not have much to talk about, but we met anyway. Our purpose was building contact, not just content, relationships. One needs to have realistic expectations. Do not expect a partner to understand your viewpoint. They may not. Do not expect that your partner has the same standards as you. Head Start has very high standards. Do not expect your partners to convey to their staff what was decided. Make memos, take minutes, and make sure to distribute things to

staff, so everybody knows what is going on. Keep a positive attitude. Inclusion takes a long time. It is best for children.

Regarding training, staff must understand the mission. They must know special education regulations, policies, and procedures in order to advocate in the best way for families. Everybody needs to be on the same page. Some of the conflicting questions that we have now are: Where can this child best be served? We do not always agree. Do not expect them to think the way you think. Who is the best teacher for this child? What are the needs of the family? What is the best setting for this child and the family? Head Start makes decisions according to what the family and child needs. Special education works on the child's educational plan.

One current problem is nursing services. We had three children come to one center this year with their own nurses. Midway through the year, they all lost their nurses and wanted Head Start to pick up the slack. We do not have the opportunity, the funds, or the people to pick up the slack. Another problem is language needs. We have a large influx of Latinos into our community. Guess what? We have fewer speech models, and it is difficult to identify children's disabilities when they speak English as a second language. Our special education program did not have interpreters. They always ask Head Start to pick that up as well. Our evaluation team has always tried to put children with significant disabilities in the early childhood special education teacher's classrooms. I am always in there intervening and saying, "Let's talk about how we can spread them out in between all of the classrooms because, otherwise, those rooms will get overloaded with those significant disabilities." Our childhood special education teachers would take them all.

Another current problem is that part-day preschool does not meet the needs of all the students. We have child-care partnerships, so now that is a new battle. We want to place some children with disabilities into our child-care partnerships, but special education does not think that they necessarily have the expertise and training to do that. Elementary settings are not as family-friendly as Heartland.

There was a child with significant disabilities in our program, named Anthony. He is in a wheelchair. We do not know his cognitive ability. One day around Halloween, a typically developing child colored a pumpkin and asked the teacher to help her put it on Anthony's pump stand. The teacher wrapped a piece of tape around it and put it on Anthony's pump, facing out. The child said, "No. Turn it around so Anthony can see." This 4-year-old got it. Why is it so hard for us as adults to get it? After 8 years, we have made tremendous gains, but the work is not over. It is continual work to build bridges and relationships. One might think that the children are the key to inclusion, but they are not. It is all relationships. If we cannot talk about it and continually work on it, it will not work. However, it can work well, as it has in our program.

Mark Innocenti: Let me start with a story. I was in graduate school during the late 1970s. I also worked in a totally segregated program for children with disabilities about 3 to 21 years of age. We were learning traditional special education at that point in time. In 1980 or so, a fellow by the name of Joseph Check was at a conference doing Early Head Start stuff. He came up to me and told me he had just received funding to do a project. He said, "We are going to take preschool age children with disabilities and put them in day-care centers out in the community." At the time, I thought this was a crazy idea, taking children with disabilities and mixing them up with children who do not have disabilities and thinking it would work out just fine. However, I was in grad school and considered myself the budding researcher, so I said, "Sure. I will be on this project. That would be interesting." Sure enough, in some respects, that was one of those life-changing experiences. I got out of the segregated setting and into the regular preschool environment. I worked with regular preschool teachers. I got to see what happened in day care. I saw for myself that inclusion worked—I saw how children with disabilities and children without disabilities could get along and how people could learn in those kinds of settings.

This was the early 1980s. We have heard many good presentations today. Hanson talked about some of the current systematic issues and the complexity of the whole inclusion construct and implementation. McEvoy talked about some of these issues with children who have more challenging kinds of behavior, and I agree with her. When I was doing some of my projects in Head Start, it was more often the children without disabilities whom they came asking advice for regarding what to do with the challenging behaviors. We heard an impassioned plea from a parent perspective and heard how programs have been able to address this issue. I feel frustration about the whole thing, because it still has not caught on. As Rosenkoetter pointed out earlier, we have officially been doing inclusion since 1972, 30 years ago. There is much frustration from people out in the field who have been doing it for a long time, asking, "What is going on? Why isn't it working?" I am not sure if I know all the answers, but I am going to throw out a couple of ideas. Let me share another story.

A colleague of mine teaches the introductory special education class at Utah State University. The students—juniors or seniors in the education program—will be regular education teachers who are about to go out and become teachers. They are relatively well trained in terms of what they are doing, as they have had practicum experiences. Before they graduate, they have to have a dose of special education, so that they know about children with disabilities. They did this class, with a heavy focus on inclusion across the age span.

Where do we go with it? At the end of the class, my friend always asks the class, "Who thinks inclusion is a good thing? Who still has concerns about inclusion?" He says every time he does this, every semester, about half of the people still do not think inclusion is a good thing. People leave the supportive university environment, which is supposed to foster inclusion, and are sent out into the schools and the preschools, which tend not to be as inclusion-friendly overall. Think about how this progresses.

One of the things we need to think about is the way that inclusion is being sold to the public in general. We need to change the minds of people beyond those who come to the conferences. Not that we do not need people to come to this conference to hear this information so they can implement it; but we need to think about how to change the general public's perception of inclusion. It has been done in many areas. For example, people in wheelchairs and with disabilities are now in K-Mart catalogs. There is closed captioning for the hearing impaired on our television sets that can be turned on and turned off. We accept that as the way things should be. How do we get people to accept the idea that inclusion is the way it should be and that people with disabilities deserve to be included in our society?

At a recent Zero to Three scientific meeting, I heard a talk by Frank Gilliam on what he calls cognitive restructuring ideas, or Strategic Frame Analysis. He is looking at how people's opinions are changed from a political science perspective, so he is thinking in terms of major issues out there. He says that people have limited frameworks in terms of where they put information. As a group, we need to change people's frames so that they can see the inclusion. One of the things that we need to do in this area as a research community, and more generally, is see how one can plan. How does one change people's roles? What will make people say that all children should be included?

Although I agree with the fact that we need to look at the best developmentally enhancing experiences, we have to mix the people together before we can look at the developmentally enhancing aspects of it. It is okay in schools? It is okay in preschools? It is okay at the swimming pool. It is okay everywhere. Start focusing on that, or we are never going to get to this idea of how to do it best. How do we do it so that it enhances the developmental outcomes for all children who are involved in this process, which is where we need to be anyway.

Mike Norelnick wrote a book giving an overview of inclusion that is full of information. Norelnick is clearly a leader in the field, and he has some good ideas. However, he has a whole chapter on recommendations that are very top down—things that would come down from a national panel and that we would impart on school districts, impart on people. It is almost

forcing people to get involved. There does need to be some of this upper level activity to support inclusion. However, there also needs to be bottom level activity to support inclusion.

A colleague of mine, Richard Roberts, does a lot of work integrating services within communities. One of the things the research community has accepted is the fact that each community has its own unique strengths and resources. Not all communities are alike. Some communities have good resources while others do not. Some communities have researchers who are willing to go and help in their communities. They are all different. There are many models and training activities out there. There is help available. Each community needs to get together—not only the educational community but the rest of the community as well—to talk about how this is going to happen. What may work in one place may not work in another.

We need ground-level involvement, and we need to support community empowerment. Once that gets started, we can look at some of the models of participatory research and other approaches. We can look at how children with and without disabilities are getting together. What kinds of activities are they engaged in? What are our outcomes? What do we want to look at? When we can get to that point, we will start seeing it happen more and more. I am going to end by encouraging everybody in the audience to take any opportunity they can to support inclusion and to get some of these ideas going. Try to involve people who are potentially opposed to thinking about some of the positive aspects of inclusion, to move them in that direction.

McEvoy: No matter how much one wants things to happen, oftentimes, the systems get in the way, such as the way services are reimbursed, people's philosophies, and so forth. Powell-Hensley has figured out in Kansas how to take funding streams from special education, from Head Start, and from child care—three different worlds with three different regulations. We are going to do what is best for children and quit talking as adults about why we cannot. We are going to figure out why we cannot. We are going to roll up our sleeves and do it. Oftentimes, program administrators will say that they cannot do that, but they do not know that they can. They believe that policies are policies when they are not policies. They will hold that up as a reason. When one actually finds out that it is just some urban myth about the fact that they cannot do this, challenge them.

I am an outcomes-driven person. I believe child outcomes are important, but I totally agree that one can do things that are not directly related to children that drive child outcomes. Coordinated, collaborated services, service planning, and prevention do not directly impact children but impact children's outcomes. Policy makers are increasingly moving towards being bean counters. They want to know how many hours one is with children, what one is doing with children, and they want to account for the dollars we are spending on direct services to children, rather than system support. That is going in the wrong direction. I have a vision of children and families looking up and saying, "Can you just get us the service? Can you just help us?" Meanwhile, we are all doing our programs and following our philosophies. There are barriers, but they are not insurmountable.

Powell-Hensley: That is not an issue with our age 3 to 5 program. With our 0 to 3 program, there is an issue of reimbursability, and that is one of the problems they cite for not doing home visits as often as they should. Clients come into their center because travel time is not reimbursable. It continually makes us battle and let people know that it is critical for us to serve them appropriately.

Innocenti: One might want to look at an award that is given to communities around the country, called Communities Can. There are some excellent examples of how communities work together to change the system within the community. It is one of those that is going to come at the community level. One might read through the examples and say, "Maybe this will work for me. Maybe it will not."

McEvoy: We won that award last summer.

Rosenkoetter: I want to add one more pitch. The Head Start Act is going to be reauthorized, Individuals with Disabilities Education Act (IDEA) is going to be reauthorized, and Temporary Assistance for Needy Families (TANF) has been resolved in some form. So much is happening politically at the national and state levels. We need to have a voice individually, as programs, and through our professional organizations. We need to say what needs to happen. Get the ear of the people who are going to be making those decisions and make your voice heard.

I lived in Kansas years ago when we had two prominent senators, including Bob Dole. At one point, there was some issue related to children with disabilities. A person from Senator Dole's office called the family center in the state. He said, "Call off your people. I got the message. You want this course of action. I hear you." The person there asked, just by chance, "How many calls did you get before you got the message?" He said, "Three." We think it has to be tens of thousands. Sometimes a few voices to the right people at the right time can make a difference.

Comment: I have worked at the assessment of behavioral problems in children. I was struck by the number of children who have underlying communication problems. We have the research base and the knowledge base to go forward in assessing children on an individual basis. I do not follow a formula for assessment. Is there more acceptance that challenging behaviors may sometimes be typical childhood behavior? Where is that in addressing challenging behaviors?

McEvoy: That is a great question. The research is there and while we know it, I am not sure that we do a good job imparting it as part of our professional programs. Maybe it is done in the areas of occupational therapy, particularly with the sensory integration, but not in the general early education field. Underlying challenging behavior is communication. It could be communicative intent where the child does not have the words or the process to communicate, or he or she has learned that challenging behavior is a way to communicate a want or a need.

I also believe that one of the first interventions to look at for a child with challenging behavior is the sensory consequence of that behavior. Oftentimes, people will say it is a sensory issue and that nothing can be done about it. We have ways of determining whether or not it is sensory-motivated behavior or learned behavior. Even though they have been doing it for so long, the issue can be addressed. It is extremely difficult to deal with, since sensory-motivated behavior is hard. The interventions are difficult to implement and require expertise. Even after the sensory problem has been eliminated, the challenging behavior continues because while it perhaps started as a sensory issue, the behavior has now been used effectively so many times that the child continues to use it.

I did not talk about sensory-motivated behavior. There is a portion of behavior that is that way for whatever reason; it is a sensory-processing issue where children do not have the underlying communication skills. It is true that that does happen. However, teachers often want to move to that instead of saying, "Wait a minute. Maybe there is something I can change in my behavior in order to change the child's behavior, instead of focusing specifically on the child." Those two things have to go hand-in-hand.

Question: Would you address the difference in philosophies in education as a barrier? In our school system, we have some inclusive classes and some classes side by side. The barrier to combining the classes is not ours. We consider the special education class next door sterile and uninteresting. Likewise, they have certain ideas about our classroom and do not want anything to do with it.

Powell-Hensley: The philosophical backgrounds certainly are different. We need to return to the universities and the 3-hour course that is taught on the elementary years before early

childhood teachers go out into the real world. States need to make some difficult changes. We probably need to have one certification for early childhood special education from 0 to 8 years of age. Those are the types of differences that we have to make to ensure those things happen.

In local areas where there are side-by-side classrooms and they are not working together or being included, it is important that those people who disagree with the philosophy start talking about it. If we talk about it repeatedly, eventually some ideas will be swayed and some people will change and be able to make some differences. In our case, it went from the top down. I do not know if that would happen in your case, but it can also go from the bottom up. There are teachers who believe strongly in this. If you are a coordinator or in a leadership position, make sure that your staff have opportunities to learn about inclusion, and visit programs where it is working successfully. Look at where the program is and start getting people to open their minds to see that self-contained classrooms are wrong. They are not best for any children—not best for typical children and not best for children with disabilities. If opportunities are given to them to see that, they will start changing some of their philosophies.

Hanson: I agree. I also want to acknowledge that it is not easy. For those combined philosophies—the early childhood educators and the special educators—to come together, it takes a commitment to planning and co-ownership. We found that where there was a courageous person thinking outside the box, willing to put people together in both communities, there was the opportunity to make decisions about the goals for their programs. However, that collaborative, joint decision making and joint ownership of the children in those cases worked because they had a communal goal. It takes a commitment. It is not going to happen without the planning and administrative time to work together.

Powell-Hensley: The federal government came together with the Hilton Corporation to create Special Quest, a 4-year program where five people from a community commit to participate for all 4 years. Early Head Start and Part C partners come together for a week-long training. That has made such a huge difference across the nation in those programs that were able to participate. We were fortunate when we started—at least we knew each other. I was amazed the first time we went. There were people that did not even know the Part C people and the Part C people did not know the people from Early Head Start. Or, we knew each other but came from different philosophical backgrounds. After 4 years, we have made wonderful strides. We do Individual Family Service Plans (IFSPs) together. We go on home visits together. We refer each other. We have made tremendous gains, and this was a planned situation in which to do it. If any one has any influence with the federal government, I suggest encouraging them to continue the Special Quest opportunity, because it made a huge difference.

Comment: I wanted to comment on the training approach by the Hilton Corporation. People come together as teams. However, it is also structured to include planning time and time with a learning coach, to check in with people and see how they are moving along with the plan that they have made. It is a useful model, but it is not unique in terms of training and technical assistance. It certainly is a model that can be replicated whether or not we have special classes. They hope it gets funded, but that should not discourage the replication of that model. When one has an opportunity to think through change, one should ask who needs to be involved as well as how much time is needed before the change is implemented. Do we know exactly what works, what does not work, and what else needs to be done to keep moving forward? Again, an important component will be training, but I want to make clear that the model can be replicated.

Comment: It is important to support inclusion for research as well as developmental outcomes. There are many conflicting findings in the research. We surveyed 250 parents of preschoolers with and without disabilities. One key finding was that support for inclusion was overwhelming. However, when we later asked whether their support depended on the severity of the children included—mild, moderate, or severe—inclusion was not strong for children with severe disabilities. The study support was overwhelming though, with 94% of parents saying that they would place their child into the inclusion program again. That was an interesting finding. A study is currently under review following 100 children over the course of 1 year in terms of their language development, social competencies, and problem behaviors. Most of the research since 1985 has done that. However, there was an interesting finding regarding behavioral problems.

Rosenkoetter: Was it linked to adequacy of services?

Comment: They were smaller classes, more structured. Special education teachers started all the classes.

Comment: In this particular analysis, children were evaluated according to Ridley's scores below a certain level.

Comment: I wear a couple of hats. I am a professional, but I am also the parent of a child with a disability. Depending on the persons who come in contact with my daughter, they may see her as having a severe disability. She is an individual and has done well in an inclusive setting. My concern is that it could be used to individualize the issue and start looking at it by diagnosis as opposed to the individual child and what he or she brings to the table.

Consequences of Welfare Reform

Welfare Reform and Its Impact on Families

CHAIR: Gloria Johnson-Powell
PRESENTERS: Barbara Wolfe, Kathy Thornburg, Constance Williams

Gloria Johnson-Powell: Welcome to this afternoon's presentation on welfare reform and its impact on families. We will begin our panel with Barbara Wolfe.

Barbara Wolfe: I am an economist from the University of Wisconsin at Madison. I recently served as Director of the Institute for Research on Poverty, so I have been involved in analyzing and evaluating welfare reform in the state of Wisconsin. We have long-term experience to aid evaluation of welfare reform.

It would be useful to broadly describe welfare reform and how it was implemented in Wisconsin. In many ways, Wisconsin was the prototype for the broad scale Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), and Temporary Assistance for Needy Families (TANF) legislation in 1996. It was the first state to eliminate cash assistance before PRWORA was passed.

Under welfare reform, states are able to design programs within broad boundaries. Aspects of welfare reform that are relevant to today's presentations include: elimination of entitlements to cash assistance, time limits on eligibility, eligibility for cash assistance not automatically linked to receipt of benefits in kind, such as food stamps and medical assistance, and an emphasis on encouraging work.

Individuals are required to put in 30 to 35 hours per week in one of four tiers. The first tier is the private sector; the second is subsidized private sector work. The third tier is public employment, which frequently means created jobs. The last tier, called "transitions", allows individuals who are unable to join the regular workforce, for example those with significant disability in the home, to fill their productive requirements. In the third and fourth tiers, individuals are still considered to be receiving assistance. Their income is viewed as a grant; earnings do not receive the earned income tax credit.

There is extensive assistance to support individuals from welfare to work in the state of Wisconsin. A good deal is spent on child care and on counseling of individuals. Uniquely, the State Children's Health Insurance Program (SCHIP) includes parents. There is an extensive child support experiment, taking place in Wisconsin, which is also relevant. Most individuals receive 100% of child support; the state does not take any, as is common in nearly all other states.

We have been conducting an evaluation of what the receipt of child support means for the well-being of children, an issue I will cover later.

The topic of this talk is the well-being of children whose mothers have been recipients of cash assistance but who have then left assistance. In cooperation with state officials we have gathered administrative data on virtually everyone. We have not analyzed a subsample of the individuals I am describing; we have data on everyone in these classes in the state.

The first cohort was identified using data from the summer of 1995. Using data from the next quarter, we identified anyone who did not receive cash assistance for 2 months and called them a "leaver", in the sense that they had left cash assistance for at least 2 months. We then followed them and their family members as far as we could.

The second cohort was similar, but we found them in the summer of 1997. Again, 100% of this sample were people who had been on cash assistance in the summer and then left for at least 2 months. We also had information on people who stayed, but they will not be discussed today.

We collected administrative data on these individuals, including use of cash assistance and associated benefits: when they received food stamps, the value of the food stamps, when they were on medical assistance, and their actual use of medical assistance. We collected additional information, including where they lived, and the characteristics of their family units. We merged this data with information from the unemployment insurance system, so we also had individual earnings histories. We conducted a number of studies looking at their success in the labor market.

Over time, there was increased dispersion in earnings. Some women started doing fairly well and improved over time. A relatively small proportion of people was doing extremely well. We also observed individuals who were not doing well. Under cash assistance, the amount that these families received depended on their family size. Now that their income depended primarily on their own earnings, there was increasing inequality among this population. Yet the average was not much different from what they were getting before we had this reform.

The later cohort showed a similar pattern over 2 years. However, "leavers" in the second cohort had less education, so their average earnings were expectedly lower.

With that background, I want to move to the main substance. We were interested in whether these families, with incomes low enough to make them eligible for food stamps, made use of the available in-kind benefits. Most families remained eligible for food stamps. Remember that these people left cash assistance. If they had a higher family income, because they were successful or got married, they would not be eligible. The vast majority of these families remained eligible. Some had increased employment success over time, but after 4 years more than 70% of these families remained eligible.

Within that population we wanted to find the proportion receiving benefits for which they were eligible. I would suggest that a low proportion was receiving these benefits. Looking at the 1995 cohort, by the third year, less than one third were receiving benefits. The majority of studies have looked at a whole cohort of people who have left welfare; they do not adjust for eligibility. We adjusted for eligibility, and the take-up rate was quite low. The take-up rate in Wisconsin was higher than most other states. Yet, many of these families were not taking advantage, or they were not been properly informed, or the transaction cost of all they were required to do to receive benefits was too high, so they did not go through the process.

We did the same thing for each child in the family. Looking at Medicaid eligibility, we took into account the child's age, the family's income, and all the eligibility rolls. Once Badger Care (our SCHIP plan) began, nearly all these children became eligible, but how many received coverage? The 1995 cohort showed a pattern similar to that of food stamps. It was somewhat higher, but three years out, slightly more than 50% of children who were eligible for Medicaid were enrolled. The 1997 cohort appeared to have a higher proportion of individuals who took up the benefit to which they were entitled. However, even for this group, more than 20% of the families who were eligible were not covered by Medicaid.

We did some analyses of when people discontinued receipt of Medicaid. Children were differentiated by various characteristics. For example, location characteristics showed that people in smaller cities were more likely to have exited, but there were not substantial differences. Race was probably the most interesting characteristic. In Wisconsin, Latino children were most likely to leave and least likely to receive Medicaid over time. Alternatively, the African American population of children was the most likely to continue to receive Medicaid. We considered why some children who were eligible received Medicaid, and others did not.

Children less than 1 year old tended to always be enrolled because they were enrolled in the hospital at birth. There were two other items that were worthy of note. First, one would expect mothers who worked for a year at a firm that offered health insurance to be eligible for the insurance, but they were far more likely to have their children enrolled in Medicaid than other children. Also, families were sensitive to required co-payments or premium payments. They had children who were eligible, but were far less likely to receive it, perhaps because of these payments.

One caveat: we are using administrative data to get income information. We believe that we capture most people in the household, but there are reasons we might miss income: someone we are unaware of could be earning for the household, or someone could be working "off the books." People could also be working in other states. In these cases, we would be underestimating household income. However, we think we are accurate in our estimates.

Constance Williams: I am an associate professor of social policy at the Heller School for Social Policy and Management at Brandeis University. I would like to introduce my colleague, Judy Francis, the director of the research project for which I am lead ethnographer. We had many collaborators on the study, including the principal investigators and the lead ethnographers.

The Welfare Children and Families Study has three parts. There is a survey, of which one wave of data collection has been completed and analyzed, and a second wave completed but not yet analyzed. There is an imbedded study of cognitive development, observing a subset of families through home visits and videotapes. P. Lindsay Chase-Lansdale at Northwestern University is heading up that part of the study. The final part is a neighborhood ethnography component that complements the family ethnography and was conducted in the same neighborhoods.

For the family ethnography, about 215 African American, Mexican American, Puerto Rican and White families were interviewed over 18-24 months. The interviews were intensive, starting with questions regarding a typical day for the mother, the family's healthcare, their welfare experiences, family support, and so forth. We went back to see the family 6-8 months later, to see how they were doing, and what changes had taken place. We hope to return and do an additional follow-up with these families.

All together, we had 2,400 families. In each of the cities, 15 families with a disabled child were also.been followed. When we recruited the sample, half were on Temporary Assistance for Needy Families (TANF) and half were not. Our original idea was that the lives of families on TANF were similar to those of families in the low-income job market. However, we found that people who moved from welfare to work were changing categories entirely.

You probably know that the lives of these families are anything but static. A family on TANF that we recruited might be off after 2 months and back on 6 months later. A person could have a job at one point, and shortly after not have a job. Ethnography is useful in this aspect because we can get a sense of the dynamic issues in the lives of the families; surveys cannot do this.

The recruited families had to have a child between 2 and 4 years of age, or between 0 and 8 years in the disability group. We wanted to include the three ethnic groups in all three cities. We had more success in recruiting Latino families than African American families, but we did well in including both groups. We had more difficulty in getting White families to participate.

Caregivers in all three cities were analyzed. By caregiver, we mostly mean the mother, but it could be a grandmother, foster parent, or someone else. Of the primary caregivers, 43% had less than a high-school diploma. This impacts their skills and the kinds of jobs they can get. A large proportion of caregivers, around 26%, had a GED. Of our sample, 31% had some college or trade school experience.

In the Boston sample, we considered the number of children for whom caregivers were responsible. Many people think low-income families are huge. We know this is not true; most of these families are similar to the rest of the population in terms of number of children.

The public transportation system, or the "T", in Boston is symbolic of a number of things. Family members take the "T" to a variety of jobs. Food service jobs are common among low-income families. Other jobs include child care (which is a low-income job even though it is an important responsibility), and housekeeping or cleaning. We also had individuals who were working as bank tellers, bookkeepers, and so forth. The range of hourly wages for the majority of our participants was $5.50-$9.25. Some families in our sample were doing better than that. Some people had moved up to $13 per hour after a couple of years on the job, or by changing jobs. Typically, these people were women with education beyond high school and they had only one child.

Information about the typical day is important because one of the big issues for these families is time. People have to take time off work to have their eligibility determined. One of the reasons that take-up rates are low for food stamps, and other assistance, is that low-income people do not have much flexibility. Their days are packed.

The kinds of work schedules people had are relevant for child care. Many of the child care centers did not operate in the off-hours, during weekends and evenings. We are learning a great deal about the daily lives of our families. Sleep takes a big hit. Time for parenting can be limited. Parents must cope with a variety of schedule conflicts, including illness, accidents, school schedules, and appointments. We are not implying that middle-income or upper-income families do not face these challenges, but lower-income families have less flexibility and fewer resources to cope with these sorts of issues, and these schedule conflicts may be barriers to keeping a job.

Regarding the kinds of child care that our families depended upon, we found a large number of children in unregulated, unlicensed care, in part because the primary caregivers' jobs may have necessitated availability during off-hours. Participants sometimes provided care for other children as well as their own. Some sent their children to live with relatives, near or far. Some families in the Boston study sent their children to the Caribbean to be with the grandmother so that they could keep their jobs, housing, and make ends meet. It was not atypical for families to send their children south to their grandmothers.

Kathy Thornburg: I am from the University of Missouri at Columbia. The research I will describe today was part of the Early Head Start Research Consortium. The study looked at various perspectives of welfare reform implementation. I will talk briefly about the full study, then about some of the services that the families and children use.

Seven states were involved in the project. In each state, we purposefully studied at least one urban and one rural site, or one metro and one nonmetro site. In some states, we did a couple nonmetro sites, because the rural communities were so diverse. Over 600 interviews were conducted over a 2-year period. We started in late 1998 and early 1999, and went back approximately 1 year later and interviewed either the same people or a person in the same position.

We organized the study on five different levels. We wanted to look at families and their perspectives, but we also wanted to look at similarities or differences among state administrators. We often went to the top at the state level, to the person in charge of welfare reform. And we interviewed people in charge of child care subsidies, job training, or employment. We interviewed approximately 25 state administrators during each of the 2 time periods.

We also looked at local administrators in both metro and nonmetro communities. We spoke with the local social services director, perhaps an economic development director, or a person providing child care or early childhood programs in the community. We also took referrals from the community, for experts in particular topics.

In addition, we spoke to people working with families. We interviewed social services workers and in some cases, people in the field of Women, Infants and Children, public health, job training, and so forth. Approximately 40 professionals in this category were interviewed each year.

Because it was part of Early Head Start and Head Start, we interviewed the professionals—home visitors or teachers—in the Early Head Start programs. Approximately 80 Early Head Start or Head Start professionals were interviewed each year.

We interviewed approximately 120 parents each year. To find the parents, we used either Early Head Start or Head Start families with younger siblings. Each parent we interviewed had at least one child between 12 and 36 months of age. They each had the support of either Early Head Start or Head Start.

Approximately half of the families were on cash assistance when we started, and half had been on but were off at the time of the first interview. We wanted to look at the community context, resources, and barriers, and understand the similarities or differences between metro and nonmetro areas.

We encountered some people with positive changes in their lives, but this was not always the case. It was good for communities because there was increased collaboration between government and community agencies. For many of the families, there was a sense of hope and optimism. However, some of the people we interviewed described how, after welfare reform, their families were under more stress and put more demands on the system in their communities. In the nonmetro areas especially, where fewer services exist, it was more difficult for many families.

Families held five subgroups of attitudes. Two subgroups belonged to people who were working—previous welfare recipients, if you will. One group we called "reform advocates." This group said, "This was the thing to do, right on target." We called another group the "compassionate reformers." They felt that people with low incomes who made the effort to work should still receive some support, and not have to go on and off assistance so often, but in general they were supportive of the overall effort.

Three of the subgroups belonged to people who were not working at the time of the interviews. Some were optimistic, and we called these the "welfare planners." They said that they just needed enough time, but it was a good thing. In some of these states, July was the 5-year time limit. It would be interesting to go back; perhaps different attitudes would emerge.

The two most worrisome groups we called the "demoralized participants", who had lost hope and felt defeated by the system, and the "systemic victims", who thought the system was unfair and in need of change. They saw reform as a personal attack: the system was out to get them. These two groups were smaller than the three groups with more optimistic views. Nonetheless, there were enough of them to form a group. They are the ones we worry about. Many people in these two groups will probably continue to get support.

There were several broad research objectives, including analyzing the effects of welfare reform, and other policy changes, on children, families, and communities.

Stable child care was a support in place for some families who were successful in making the transition to full-time employment. In some cases, Early Head Start was a home visiting program; other cases were associated with a good early childhood program. The Early Head Start and Head Start staff helped the families set goals, prioritize their needs, access resources, and stay connected to their children. They were a big support for these families. Trying to move families too quickly was a concern in the rural communities. The pressures on families encouraged us to start looking at different ways to serve families. Some Early Head Starts, for example, needed to move from a home visiting model to a program model, partially because of welfare reform.

Supportive and knowledgeable case workers helped link parents to education, and worked with them on life skills or soft skills training, GEDs, college or employment, and resources. When this approach worked, people responded positively to the local family service workers who provided strong support for these families. An Early Head Start home visitor in a metropolitan area said that she served a teenage mother in the welfare-to-work program, and it had been wonderful. The mother was great, had child care, was going to school for her GED, and was already taking a certified nursing assistant course so that she could get a decent job with

benefits. One sees optimism in people at various levels. An Early Head Start specialist said that the emphasis on strengths and needs assessments made a great impact on her.

Other important supports included mentoring, flexible work schedules, health insurance, and family-friendly environments. Many people in the system do not need much employment training and can get a fairly decent job with upward mobility available. Another state administrator commented that in many cases people are not ready for this. To throw them into just any job does not make sense. They cycle back into the welfare system or they get stuck in a dead-end job.

Overall, we felt that people at all different levels, including the state administrators, were concerned, and wanted to be supportive. It varied by state, but in general the state administrators interviewed were compassionate toward the recipients, and in some cases wanted better policies. We were not sure whether they were hiding behind some legislative requirements or current policies that they could not affect. Other support systems came from faith-based organizations, treatment programs, domestic violence shelters, food pantries, and so forth. What was needed in many instances, as demonstrated by the families who successfully obtained full-time employment, was a year of preparation and work. Some of the programs did not give them that much.

Informal supports such as relatives, neighbors, and friends were important. I could not complete this presentation without talking about the "T" word (both public and private transportation). A lack of "T" systems is influential in rural communities and urban areas. People also need stable housing arrangements, low rent, safe neighborhoods, job retention services, and jobs that pay above minimum wage.

Most of the people are still eligible for, but do not get, food stamps, Medicaid, and other subsidies. It is something we must talk about on Capitol Hill to make sure that the re-authorization they are discussing today can deal with some of these issues. They need to balance work and parenting. In summary, we need to look at the transition into employment. So many of these states just say "Go to work."

I have some final policy recommendations: Ensure the availability of job retention services and training. Reinvest TANF savings into these services, including transportation and child care. Help these families maintain services; even if they are not eligible for cash assistance, most are eligible for food stamps, Medicaid, child care subsidy and so forth—we need to support them in that effort.

Anthony Salandy: I work for Congressman Charles Rangel, who is the ranking member of the Ways and Means Committee, one of the committees that oversees the TANF legislation. I wanted to talk about TANF, which was passed in 1996 but is due to expire September 30. That is one of the reasons why the House and Senate are marking up the bill. Congress is in the process of re-authorizing TANF.

TANF eliminated entitlements and put in place a philosophy of welfare-to-work. A lot of people over the course of the past year have been up to Capitol Hill to talk about the "success of welfare reform." The House passed the re-authorization bill sponsored by Representative Herger a couple months ago. There were three parts to the bill. One part came out of the Ways and Means Committee, re-authorizing the main money for TANF. The child care part came out of the Education and Workforce Committee. Energy and Commerce dealt with the abstinence education part in the marriage promotion.

I want to talk about some of the issues and politics surrounding TANF legislation, the Herger bill in more detail, and the Democratic substitute, offered by Representative Cardin, which failed. We sit here saying "Put money into child care or helping low-income families, and it will get fixed." Unfortunately, there is a great deal of politics in policy. Finally, I want to talk about the Senate bill, offered by Senators Hatch, Breaux, and Jeffords.

Basically, the Herger bill established level funding for the next 5 years, at $16.7 billion. Level funding presents some problems. In the out years, there will be increases in inflation, but this

bill does not adjust for that, resulting in a decreased spending capacity of the TANF dollar. The Democrat bill asked for more money but it failed.

The Republican bill changed the work requirement rules from 30 to 40 hours per week, with 24 of those hours spent in work-related activities. The Democrats wanted to keep 30 hours of work and 20 hours of work-related activities. The Republican proposal excluded vocational education and job search activities from work-related activities. There is a difficulty in trying to get good jobs for people in poverty without providing educational opportunities.

They also maintained that legal immigrants are not eligible for TANF dollars, which is a huge problem, especially in New York, California, Texas, and Florida. They kept the transitional medical assistance program for infants aged 6 to 12 months; the Democrats wanted to extend it for just one year without having to go back and reapply. Again, the Democratic substitute failed.

Speaking candidly, not as a representative for Congressman Rangel but as Anthony Salandy: The bad luck for TANF re-authorization is that it came up during an election year. People politicize the issues of TANF. Some Democrats who did not want to appear soft on work voted for the Herger bill. Some Republicans felt that we needed more money for child care, but could not go on record voting for something that seemed tough on work. The Republican bill proposed a woeful $1 billion increase in child care. When the bill was marked up in Ways and Means, many people were screaming that we needed more money for child care.

Chairman Thomas said that when they created the rules they were going to put more money into child care. They said that they increased it for $3 billion over the course of 5 years; however, it is contingent on appropriations. That means that they have to wait for the budget process to allocate that $3 billion. They do not have to allocate that money in the future if they do not want to.

The bottom line is that there is only $1 billion extra in the bill coming out, about $200 million increase in child care per year. The Congressional Budget Office said that over the next 5 years, if the 40 hours per week rules were instituted, it would cost $8 to $11 billion dollars for child care. Even without the 40 hours, if TANF were level-funded, it would cost $7 billion in child care.

The House passed the bill. The minority House report had some instructive comments attached to the bill, and hopefully the Senate will pick that up. I've compared all of these: current law, the Herger bill, the Cardin proposal, the Carper-Bayh bill, and the Hatch, Breaux, and Jeffords position. The latter one should be voted out of committee today.

Johnson-Powell: I want to identify myself as a former welfare child. My family was put on welfare in 1939, at a time when less than 3% of people receiving it were African Americans. We will now have questions.

Greg Eberhart: With regards to the differentiation of welfare recipients into categories of "welfare planners," "demoralized participants," and "systemic victims," could you put those groups in context? Are those attitudes in response to resources, or do other historical characteristics differentiate them?

Thornburg: Those labels were based on more than the support part of the data. They were overall labels. We asked questions about everything. Some of these interviews lasted an hour, and they looked at supports, attitudes, and the way people were treated in a variety of places. The labels were created by looking at their general attitudes and responses to receiving welfare.

Jessica Sowa: I would like to hear an explanation of the relationship between private insurance and Medicaid.

Wolfe: There are reasons we see large numbers of women, whom one would expect to be eligible for private insurance, with children enrolled in Medicaid. The women are likely to work for a firm with human resources staff who are aware of Badger Care (SCHIP in Wisconsin), and may be assisting the employee with information about eligibility and the application process.

It is in the firm's interest to have the employee enrolled in Badger Care rather than their own insurance package. Presumably the employee is advantaged by getting better insurance at a lower cost sooner—because there is no 6 month waiting period—than with the employer's plan. The firm saves money, so there is a mutuality of interests.

We have put this research into the hands of policy makers because research into policy is what we are all about. We have policy briefs and so forth. I am concerned about the re-authorization. We should not be here; we should all be on Capitol Hill. Before we leave town, we should go to the Hill.

My understanding is that in some of these various versions of the bill there are great implications for every one of our states. I understand that they took the state match away, which would further decrease some of these billions they are adding. So overall it could be worse than you described. Is that right?

Salandy: Yes. The rationale was that there are fewer people on the caseload, so more can be done with less money. The Democrats are arguing that individuals who are not on the caseload are marginally poor; they are living either right at the poverty line or a little bit above it. They too need support services for which states might use TANF dollars.

Your first comment is extremely important, because individuals who come to Washington for annual meetings often set aside a congressional day or morning, to meet with their congressperson to tell them about issues important to them.

Individuals who know the research and can articulate it are seen in briefings, but too often they do not talk to legislative assistants who deal with the issue. Other times, advocacy agents give only anecdotal evidence that something is important. We have thousands of students coming up to Washington to discuss environmental issues. Few students, particularly graduate students, come to advocate for funding issues dealing with children and families. Faculty comes to ask for science and research funding. We need to make a push to be advocates for families and children, especially considering the research that we do.

Thornburg: The week that the bill was being considered in the House, a group of us from the Poverty Institute were here. Virtually three times a day, there was a briefing going on that attempted to get legislative assistants into the room to talk about research. It seemed to me that much of that was going on, so maybe you can share with us how it might be more useful.

Salandy: There are many people doing briefings and bringing people up to talk about these issues. However, the week that the bill was in the House, many legislative assistants addressing this issue did not know what TANF stood for. They were trying to get a grip on what this meant, all the aspects of the bill, and so on. Sometimes, one finds a political science major, and TANF is not the only issue that they address.

TANF is not the only issue I work on. I also look at environmental issues, crime, drugs, and HIV/AIDS. The person assigned to an issue may be 24 years of age and overloaded with work. I barely understood everything, and I come from a psychology/social policy background. Some people come to the briefings, get the information, and buy into it; some come to the briefings, buy into it, try to sell it to their boss, and their boss will not buy into it. Those are the politics in the policy.

Williams: For those of us who do research, it can be discouraging sometimes because we relay the policy implications and we do not see it making much difference. You hit the nail on the head when you said that this issue is coming up in a re-election year. The ideology and the polls have driven much of this.

One of the striking things about the 40-hour workweek proposal is that governors, both Republican and Democrat, are adamantly against it. They know that it means they would have to create jobs. It takes away an incredible amount of flexibility. It is interesting that even the governors from both parties could not carry the day on that. People's beliefs and ideologies about work are playing a huge part in this, no matter how much information is passed on to them.

Salandy: There was some discussion about extending TANF, as it is right now, for one more year and taking up the issue next year in the 108th Congress. I do not think that will happen. I do not think the bill will be conferenced in July; they may attempt to conference it in July, but I think it will be conferenced when they come back from summer recess in September. If that is the case, it will be close to the September 30 deadline.

Carla Patterson: In any of these surveys, or other studies, did you pick up anything about how or if these families use information technology (IT) to gain information or skills that they need? It was indicated that they were not accessing services because they were too poor. Are there any interactive IT ways for them to access some of the services?

Williams: Early in our study, we visited one of the large welfare offices that was beginning to try to help people on TANF in the transition to work. They had screens and other resources that women were supposed to be able to use to get information. Nobody used them. When we tried to use them, they were not working. That is at the systems level and would have been in 1999 or 2000.

For our parents, they are not buying computers; they can hardly buy food. They do not have access to information technology. We must remember that this is one of the issues that is prevalent when people talk about growing inequality. There is an incredible gap between the poor, the middle-class, and the well off, in terms of their knowledge about information technology. It is another indicator of the growing gap between the rich and the poor.

Judith Francis: Our families do not use word processing. Even the ones who are in college do not know much about word processing. Out of the 71 families we have for the ethnography, only 3 have ever used the Internet. They also do not use the library services, which are excellent. Some of the children use computers minimally, and we are in the midst of interviewing some of the teenagers. I am interested in who brings information into the family.

We have 26 Latino families, and language is a major issue. Interestingly enough, one of the families is online all the time; one person we know uses the Internet a lot, and she met a gentleman on the Internet. She has gone to Texas to visit him, and they are in a relationship that may have a bright future.

Francis: We are looking at where people get access to information. I am concerned with the gap between those who use technology and those who do not.

Patterson: Are there programs being initiated to address that gap?

Francis: No.

Williams: Cable TV also costs people an incredible amount in terms of their budget so, if they had a telephone line and went online, their monthly costs would skyrocket.

Patterson: I was not thinking of them using IT in their own home; I was thinking of them using it in some kind of community facility. I take your point about it not being user-friendly.

Williams: This system was in the welfare office that had supposedly set it up so that families could research the steps they needed to take for employment and training. It was not working.

Wolfe: In some of the communities in Wisconsin, they have set up some programs using IT, particularly the job bank. My impression is that in several of those communities it is quite successful, in the sense that people can access the information.

Carol McAllister: Thornburg mentioned that I was at the Pittsburgh site, which is one of the nine states involved in the study. The other part of my work life is as an anthropologist. My original work was in developing countries, including Malaysia and Nicaragua. My focus has been on economic change, particularly its impact on women and families. The similarities between places struck me more forcefully than usual.

One thing we often look at is impacts of structural adjustment policies, which are imposed by the World Bank in many developing countries. One of the main impacts of these policies is a downturn in the public sector, when people move from all sorts of public sector involvement, or support, into the private sector, and their income goes down. One of the findings we heard today is that people move off TANF into low-wage jobs and are still living in poverty. If they are also not accessing benefits like food stamps and Medicaid, then their actual resources are going down. The other thing we need to think about is that TANF was implemented in a time of economic upturn. Another major finding involves time for women. The number of women in the workforce has increased significantly and has many implications: work in the family, work outside the family, lack of time to rest, lack of time to sleep, and health consequences.

It seems to me that you all are saying the same things, such as "Who is going to care for children?" In the developing world, child care is not often formalized. What that means is that the child is sent elsewhere, or the mother or father migrates elsewhere, and the families are separated.

It seems to me that the situation is complicated, but I would like to ask you to briefly synthesize what you see as the most serious concern. What would you focus on if you had to say one thing to policy makers? What is your most serious concern, and what is the most important step we need to take before this becomes a disaster?

Thornburg: I will offer an answer, though I am not going to say it is the most important. When I look at the full set of programs we have in place, including assistance and incentives, I see that we have created a system that makes it difficult to be successful, in terms of moving to a job that provides sufficient income for one's family. So many of our programs are income-conditioned that we have taken away the incentive for people to work harder, to put more effort in, and to be successful.

I do not have a simple solution for this problem. We must have a support system that combines making work worthwhile—through the earned income tax, food stamps, and child care—with a full package of assistance and medical assistance. A support system that is "target-efficient" (according to economists) gives a lot of assistance to people who need it, and then takes it away, because we are unwilling to make some programs universal. We put people in the position where, if they get paid more, they will have less income for their families. That is a fundamental flaw in the way we have designed the programs.

Williams: We need to acknowledge that the TANF program has helped some families, but it was not intended to be an anti-poverty program. It was intended to get people off the welfare rolls. In the re-authorization discussion many people tried to put that on the table. We have many families who are working but they are still poor. We have done a bad job overall in making sure that people can still get the things for which they are eligible, like food stamps.

If I had to do one thing, I would try to make sure that everybody in this room who is working has some security, and that they be honest with themselves about our welfare. I work at a university. I am a professor. They match my health insurance so that I have a good health insurance policy. I do not have to pay to park when I drive my car to work. I get a lot of welfare because I am employed full-time. My pension is matched by the university, which gives me some security.

If I had to make it just on my salary, and had to then figure out how to pay full coverage for my health insurance, my life would not be as secure. We have not been open with ourselves as a country about that. We link everything to work and think that those of us who are working and have this level of security deserve it, and that others who are not do not deserve it. This way of thinking can only be changed by people like you and me. In part, we are talking about a values question. We have to decide what is important in this country.

If I were going to make one program universal, it would be healthcare, in order to provide a safety net for people. In the state of Massachusetts, we have done well with healthcare coverage for children. It is up to 93%. Everyone we interviewed for our study has had covered children, and that makes a world of difference. Most of the parents are also covered. Their stories are a little different in that sometimes they are off for a few months because they are in between welfare and a job, or they move from one job to another, but they are also savvy about free care and other things because of the state medical system. That makes a world of difference in putting a floor under parents. Parents, while they may not take care of themselves, will take advantage of MassHealth, our program for children. It is in high use. We worry that the program may become less generous.

Wolfe: Since Williams discussed health care, I need to tell a story about one of our interviews: A Head Start child from a half-day program was on the bus with a teacher who also rides that bus. After lunch the bus started out, and this little girl clung to her teacher, not wanting to go to the place where she would have to be from 1:00 until 7:00 that evening while her mother was working in a pig processing plant.

Her Head Start experience was wonderful for 16 hours a week, but then she went to this place and kept saying, "I do not want to go. I do not want to go." She started talking about the mosquitoes. In fact, she was put in a room for the rest of the day with dogs and had fleabites every single day. The Head Start teacher was almost crying as she was telling this story, saying, "I really hate taking her off the bus, to have her go there for the rest of the day."

Full-day or extended-hour Head Start for working families is an example of something consistent and high quality that is needed for the children. We have to remember that most of these families, whether they are in rural or urban communities, are living with violence and/or drugs in their neighborhoods. It is difficult to think of one thing to do because the whole system needs to change. We need to look at these children in total, and that includes their neighborhoods, the violence, the healthcare, and the full-day programs that these children attend.

In terms of the re-authorization, we have to look at what counts as work. Some state administrators and others note that some families are not ready to work in the workforce as we see it, even with two years of support. We have to talk about child care and transportation. We are talking about one re-authorization now. Head Start re-authorization is going to come on its heels, and that will be an issue. Ted Kennedy has introduced a bill now where some people are suggesting taking funding off the top of TANF or child care reauthorization to pay for this bill.

We are so fragmented. When we look at TANF, the Child Care Development Fund, Head Start, and all of the re-authorizations, everybody wants their piece of the pie to do something a little bit differently. We have to start thinking in a more cohesive way, not only cohesive for the child and the family, but also cohesive in our policy making.

Francis: If you notice, people have been talking about getting married. The question is, "Who are people going to marry?" One poor income plus one poor income equals one poor family income. We also need to ask what jobs and education opportunities exist for men, to enable them to contribute to household income. Child support is not the answer; families need to have the fathers involved with the children, and fathers need to have a feeling of pride in being able to support their families. We have little talk or action in place to train and support young boys and men in becoming family providers and parents. For anyone interested in that, a big study called The Fragile Families and Child Wellbeing Study pays attention to the opportunities for fathers.

Salandy: One good thing about the House bill was that they had $1 billion over the next 5 years for father initiative programs. There is more proposed money in the Hatch, Breaux, and Jeffords legislation that is in the Finance Committee. There is more money in other places that states and community organizations can use to create and develop fatherhood initiative programs.

Johnson-Powell: I began this session by telling you all that I was a welfare child. My mother had migrated from rural Virginia to Boston, and in 1939, when I was 3 years old, she could not find a job. A social worker came to our house at least twice a month and sat down with my mother for more than an hour. I know that it was more than an hour, because they gave us tea (a little bit of tea with a lot of water in it) and some cookies. We used to beg for her to come because of the cookies. She was a real friend of the family and directed my mother towards many resources for all of us.

I grew up in Boston. I never went a day without clothes, without warmth, or without food. My brother and I went to summer camp every single summer. We all had music and piano lessons. I graduated from Girls' Latin School, Mount Holyoke College, and Meharry Medical College, and I have spent my life as a child psychiatrist. I was the first African American to train in child psychiatry or psychiatry at the University of California at Los Angeles (UCLA) and the first African American woman to become a full tenured professor at Harvard Medical School.

I have often talked about being a welfare child, because as I went through the process of education I began to understand the disdain of many people towards families and children who received public assistance. I never felt as though I was poor. That system allowed my mother to raise us. It allowed her to come up to school to see how we were doing. It allowed her to provide the recreational opportunities that she felt we needed. It allowed her to watch over us and to nurture us so that we could all get an education and give back to this country. That was in 1939. It is a pity to see what has happened today.

Finally, there are many things about this country that we all love. This is a country that spends more on healthcare than any other country in the world. It spends more on medical research, and other kinds of research, than any other country in the world. Yet some of its health indices are as poor as that in Afghanistan, especially infant mortality. For those of us who are professionals, those of us who are not professionals, and all of us who care, we have to make our country accountable to the rights of all its citizens.

The Use of Head Start for Families in Experimental Welfare and Antipoverty Polices and Effects on Child Well-Being

CHAIR: Linda Scheer
PRESENTERS: Lisa Gennetian, Martha Zaslow, Hirokazu Yoshikawa, C. Cybele Raver

Linda Scheer: This session presents four research studies related to the effects of the welfare reform legislation on children and on programs for children.

Lisa Gennetian: Data for these studies are, for the most part, random assignment studies of pilot welfare and employment programs prior to 1996; thus it is important to keep in mind that these studies do not reflect current conditions under welfare reform. However, these studies provide the best evidence to date on the kinds of policies that are currently tested and being implemented in many states. Most of the data for these studies are from the National Evaluation of Welfare-to-Work Strategies (NEWWS), a multiyear study whose final report was just released in February 2002. The report is available on the Health and Human Services website, at Child Trends, or at Manpower Demonstration Research Corporation (MDRC).

One program evaluated in this effort was a mandatory employment services program, requiring mothers with young children to participate in an employment-related activity such as job training, employment, or job search. This presentation will examine findings from three sites where there were head-to-head tests of labor force attachment models and human capital development models.

Other programs that were studied provided earning supplements for welfare recipients moving from welfare to work, by either allowing them to keep more of their welfare income as their earnings increased, or by supplementing their earnings outside the welfare system. The third model examined, called New Chance, was a program for young mothers on welfare who had not completed their high school degree.

It is important to note that all Head Start information is based on survey reports of Head Start use from mothers, usually elicited in response to questions about child care. Keep in mind that Head Start is a program targeting low-income children. We want to ensure that the mothers on welfare who are trying to work, meet welfare requirements, or take advantage of benefits, are also maximizing the use of any services that are directly targeted to them.

We need to consider whether we are measuring the use of Head Start adequately from a research perspective and how we can improve or change our measurement of Head Start in future research efforts. We also need to determine how Head Start programs are accommodating the work schedules and requirements that many single mothers face in entering the workforce.

Martha Zaslow: I am from Child Trends. We have asked Rachel Cohen to join us, to comment on findings in Early Head Start for children in families with a history of welfare receipt. The NEWWS study was the test case that piloted and refined our measurement strategies. Within this study, there is a substudy of children who are 3 to 5 years old at baseline. We looked at issues of child care and early development in the context of a mandatory employment-focused program.

Our study tracked the full sample of children in follow-ups at 2 years and at 5 years. For one of the samples, we did more in-depth work close to the time of random assignment in a descriptive study. We also examined an observational study focusing intensively on mother-child interaction, to determine whether there were impacts and what those impacts might mean in terms of the outcomes we found for the children. Let me set the context of findings related to child care use, and determine whether there is a missed opportunity in welfare-to-work programs in terms of complementing mothers' work transitions with early childhood programming.

In this study, we developed a detailed child care participation calendar and looked at the nature of child care experiences of the children in the control and two experimental groups. The members of one experimental group were participants in a quick, work-oriented, immediate transition to work group; the others were participants in an education first group. In both of these experiments, from 2 months before random assignment to 2 months after, there was a slow and steady increase in the control group's participation in child care, with a fair proportion of children participating in child care on a regular basis. In the two experimental groups, 2 months after random assignment, there was an increase from about 40% to about 70% of the children participating in a child care arrangement on a regular basis.

Interestingly, when the families were tracked over time at the 2-year and 5-year follow-up, there was not marked evidence of concurrent child care participation in most of the sites. By the 5-year point in one of the study sites, there was still evidence of impacts on child care use as well as concurrent impact on employment of the mothers. For the control group, as employment increased, the employment impacts became less marked as did child care impacts. In addition, we found that traditional measures of child care were no longer as useful for 8-, 9- and 10-year olds. Asking about time use and who the child was with turned out to be much more useful for detecting impacts.

Related to our question of missed opportunity, at one site where more intensive data was collected, we examined the characteristics of families participating in formal early childhood programs based on a wide array of background characteristics collected at baseline. We also examined data from the descriptive study done 3 to 5 months after random assignment, controlling for the background characteristics that predicted use of formal care, to determine whether there were concurrent associations with child outcomes.

Results mirrored the National Institute of Child Health and Human Development (NICHD) study, with concurrent associations of participation in formal early childhood programs for the children's cognitive development but not for their social development. This is significant because the NICHD study is often critiqued for not including a substantial sample of low-income minority families. NICHD is much richer in terms of longitudinal data. Our data from welfare and minority families indicated that participation in formal early childhood programs was associated with better cognitive outcomes, in congruence with NICHD.

Our examination of Head Start use was limited by having a very small subsample. We found that the predictors of Head Start use differed. Children were in Head Start for fewer hours, and mothers were less likely to be employed. Controlling for all background characteristics that predicted use of Head Start, we found that even though the children were in Head Start for fewer hours than children in other child care programs, they showed better cognitive development.

Our methodology involved traditional regression analyses, controlling for an array of observable background characteristics, such as observations of cognitive stimulation and emotional support in the home, which predict use of a formal program and Head Start. Even controlling for those characteristics, we found enhanced child outcomes.

In conclusion, there is some indication of a missed opportunity. If one couples a welfare-to-work program with participation in a formal early childhood program and/or with Head Start, there seems to be enhanced cognitive development in the children. However, this is a preliminary finding, and we have to determine if there is other evidence available and what further research is needed.

Young Chang: Our study examined the effects of welfare and employment programs on children's participation in Head Start. New welfare policies strongly encourage parents on welfare to be employed. As these policies increase employment rates of parents with young children, we might expect an increase in parents' needs for child care.

As a free center-based program for young children, famous for its beneficial effects on developmental outcomes for children in poverty, we thought Head Start could be one of the

choices parents consider as a child care setting while they work. Based on this, we developed three research questions: (a) whether welfare programs have any effects, positive or negative, on the use of Head Start by low-income single mothers; (b) whether the changes in Head Start use in the program groups are similar to the changes in the use of other types of child care, such as home-based child care or center-based child care; and (c) whether the program impacts a mother's employment and income, and whether these are related to use of Head Start.

Data came from 10 welfare and employment programs from four random assignment studies. The studies were New Hope, New Chance, AMFIB, and NEWWS. All have a common goal of moving low-income families and families on welfare into work, but each program has a different approach in terms of managing employment services, earning supplements, and child care services.

Child care use was assessed for 5,107 3- or 4-year-old children of single mothers. At the time of the follow-up survey, we asked the mothers whether they had ever used Head Start, home-based, or center-based child care. In this study, program impacts means the differences in outcomes between the program group and the control group. This straightforward comparison between the two groups was possible because the sample members were randomly assigned to the program and control group. Thus, the only systematic difference between the two groups is the assignment for the program group.

Significance of the program impact was tested using regression, controlling for baseline characteristics of families collected at the random assignments, such as family structure, community type, mother's education, and number of children in the household. To chart differences, we also calculated and tested simple weighted means of the program impact of 10 programs.

For example, the weighted mean of center-based child care is 7.63. This is the average difference between program groups and control groups in the percentage of mothers who ever used center-based care. Our impact analysis revealed that there were no program impacts on Head Start use except for one program, Atlanta Labor Force Attachment (LFA), where there was a decreased use of Head Start in the program group by about 9.11%, and the weighted mean of the program impacts show that there was no significant overall increase or decrease in the use of Head Start in program groups. Many programs significantly increased the use of center care and home-based child care.

Looking at program impacts on employment and income, mothers in program groups were more likely than mothers in control groups to be employed, to be working full-time, and to have more family income. However, the magnitude of program impacts on employment and family income does not appear to be related to the size of program control differences in Head Start use. We can conclude that even though these programs increased the mother's employment, family income, and use of center-based and home-based child care, they did not produce an impact on Head Start use. That is, mothers in the program groups did not use Head Start more or less, compared to mothers in the control group.

Mothers did not use Head Start to satisfy their child care needs while at work—especially mothers working full-time—perhaps because they needed reliable and extensive child care. Many of the Head Start programs at that time operated half-day classes on the school-year schedule. Thus, employed mothers using Head Start would probably need to find additional child care arrangements covering full-day, summer, and school holidays, to cater to their needs.

In addition, mothers may have preferred a single child-care arrangement that covered their work schedule instead of combining multiple settings that required transportation and other logistical challenges. Many women in low-wage jobs worked irregular and nontraditional hours, making it more difficult to have child care only available on weekdays during the school year. Other mothers may have had free and/or more flexible child-care options such as family members, especially if transportation was unavailable to get to a Head Start program. It is also possible that working full-time increased family income to the point where they lost eligibility for Head Start.

In conclusion, we find that the two sets of policies for low-income families—welfare policy and child care or early childhood intervention policy—are operating independently and possibly in conflict. Continuing efforts to make Head Start a full-day, full-year program may help more low-income families achieve their dual goals of economic self-sufficiency and educational enrichment for their children.

C. Cybele Raver: Our study team is particularly interested in barriers to families' use of services, looking at higher risk versus lower risk for use of Head Start and for employment, and examining how these interrelate.

Investigators have recently identified a combination of family risks that appear to substantially increase the odds that low-income mothers of young children will have difficulty finding and keeping a job. The new generation of welfare reform research is focusing on barriers to employment that make it particularly difficult for some families to comply with time limits and employment mandates. We were interested in determining if the same "psychological and human capital barriers" that make it difficult for families to work may also make it difficult for families to enroll their children in Head Start. Conversely, does a single set of family skills or strengths predict both employment and family's use of early educational services?

This question is important for early educational policy because of the mixed results of early findings from evaluation research suggesting that we are not getting as large a set of program impacts from early educational intervention as we would like. One explanation has been that potential benefits of these programs may be truncated by underenrollment of the most hard-to-serve families, so that families who are competent or doing well are enrolling their children in Head Start; and that results would not have looked much different had they enrolled their children in other forms of center-based care. Head Start may have difficulty recruiting and retaining a given community's most disadvantaged families.

We first examined a common set of demographic characteristics and psychosocial barriers predicting mother's use of both adult-focused employment-related services and her use of child-focused early educational services, with the expectation that the families who are least likely to enroll are the most disadvantaged.

Our second research question, building on work by Hirokazu Yoshikawa and his colleagues, was to determine whether experimental welfare-to-work programs have a measurably positive or negative impact on the likelihood of families enrolling their children in Head Start, based on whether they fall into lower risk or higher risk groups. We used the exact same NEWWS data, dividing the families into four different groups of risk. We considered both factors within the family and factors outside the family.

We also took a brief look at families' reports of sanctioning. This was not experimentally induced. Families were not randomly assigned to a sanctioned group, but this provided a preliminary opportunity to examine whether there were any associations between families who have extremely negative experiences in welfare reform and their avoidance of using educational services.

In determining barriers, we emphasized the human capital factors, such as lack of a high school diploma, low literacy skills, mothers' mental health or depressive symptoms, as well as mothers' attitudes and values regarding the benefits of center-based care. This was not nationally representative of all children enrolled in Head Start; it was specific to welfare-receiving Head Start enrollees. I want to point out a few characteristics as a descriptive snapshot of Head Start-enrolled children in the NEWWS data set from two of the sites. Mothers with a low reading score ranged from as low as 7% to as high as 41% of Head Start-enrolled families in this sample. About 50% of mothers in one site, and a little less than half in the other, had no high school diploma. Over a third in both sites had depressive symptoms. We found that Head Start mothers were working, both across control and experimental groups, and that between 12% and 26% of Head Start families receiving welfare were experiencing sanctioning.

Related to the propensity to be employed, use training, and use Head Start, we used multiple regression to examine whether a common set of risks predict propensity of service use. We used

involvement in training because potential differences in local labor markets or persistent employment discrimination might affect actual employment. Therefore, we also looked at parents' participation in job-related training as an index of adult-focused services.

We found that African American identity, being a long-term recipient of Aid to Families with Dependent Children (AFDC), or Temporary Assistance for Needy Families (TANF), having earnings, and opinion of the usefulness of child care were predictive of employment, but were not predictive of Head Start use. Different variables were predictive of service use across the different domains. The only factor predictive of Head Start use in this case was mother's low literacy, and the data suggests that mothers with lower literacy levels were more likely to use Head Start, that is, the more disadvantaged rather than less disadvantaged.

Overall, however, we found little similarity across the two or three forms of service use. Families experiencing more barriers to participation in Head Start were more likely to use Head Start rather than those with fewer barriers, so we have very few variables that predict Head Start use overall. Furthermore, those variables that predict employment are not the same variables that predict Head Start use.

In summary, there is no evidence from our analyses that the same psychosocial stressors that predict employment are barriers to Head Start enrollment. If anything, Head Start families seem to be less advantaged rather than more advantaged, and there appears to be no overlap of factors predicting employment and Head Start use.

When we examined high risk and low risk families, we used Yoshikawa and colleagues' strategies to assess risk by determining how relatively burdensome those risks were. Using those weighted coefficients, families were assigned to different groups, higher risk or lower risk, in terms of their likelihood of service use and employment. We have modest evidence that, for the highest risk groups only, there is a slight increase in Head Start use for the experimentally assigned families. We found no association with sanctioning. We found very little overall.

Hirokazu Yoshikawa: I am from New York University. The question that motivated our study was to examine the combined effect of public policies in child development programs on children. The developmental pathways that are targeted by welfare and antipoverty initiatives and child development programs, such as Head Start, can be pretty distinct. For example, welfare and antipoverty policies primarily target what are called human capital pathways, like employment, earnings, and welfare receipt. Head Start, as a comprehensive child development program, targets family processes and child development directly and, to some extent, those human capital pathways, but not as intensively as welfare and antipoverty policies.

We know from the developmental literature that these different pathways, such as human capital, parenting, and child focus pathways, do not completely overlap. They explain different amounts of variance in children's cognitive and behavioral outcomes, and these pathways can have additive or even more than additive effects on later child development. The question arises: If programs like Head Start are targeting one group of developmental pathways, and welfare and antipoverty policies are targeting human capital pathways, would the combination of these two kinds of social interventions have more impact on children's development than either of those alone?

We also used data from the NEWWS programs, which are mandatory welfare policy programs that primarily aim to increase employment but not necessarily to increase income at the same time through earning supplements. We examined a cumulative developmental pathway hypothesis that the combination of welfare policy and Head Start use might be associated with more positive child development outcomes in middle childhood than the effect of welfare policy alone.

The data from the human capital development and labor force attachment programs were kept separate in our analyses. One of the methodological difficulties was that, in these experiments, only welfare policy was randomized. Families were not randomized to Head Start versus no Head Start use. So, across these two sets of studies, we had two halves of the equation randomized, but not the full picture.

We used propensity score analysis to equate propensity to use Head Start across the experimental and control groups of these programs, to find families in the experimental and control groups of these policy interventions that show the same range of propensity to use Head Start. We would then rerun experimental impact so we would end up with, for instance, an experimental impact on child development among families who are more likely versus less likely to use Head Start. Our human capital variables included whether the mother had a high school diploma at baseline, her earnings in the prior year, employment behavior, some measures of her cognitive skills, whether she was a long-term welfare recipient, some indicators of family structure, her depressive symptoms at baseline, and her extent of work search effort.

We also used some attitudinal measures, such as mother's preference for going to school rather than looking for a job, belief that children who go to day care learn more than children who stay home, whether the mother liked or disliked going to school herself, and whether the mother perceived that the cost of child care is a barrier to participation in employment-related activities.

Using the whole set of baseline characteristics to model the propensity to use Head Start, we also had fairly slim findings; however, in three of the four programs examined, we found significant levels of prediction for Head Start use. Similar to the other studies, we found that the more disadvantaged families at baseline appeared to be using Head Start more. One explanation for this might be that the more disadvantaged parents at baseline engaged in employment at lower intensity and had more flexibility in their schedules to use Head Start, which was a part-day program at most of the sites studied. It could have also been related to the characteristics of the Head Start program itself, specifically that Head Start staff must enroll needier or higher risk families first.

In programs where we were able to significantly predict Head Start use, we divided the samples into high and low propensity to use Head Start groups, basically splitting at the 50th percentile on the propensity score. We were interested primarily in parents' reports of behavior problems, both externalizing and internalizing, using the Behavior Problems Index, Bracken Basic Concept Scale, and School Readiness Composite.

Anna Gassman-Pines: We found that among the families with a high propensity to use Head Start, those assigned to the program group, had increased Bracken scores; and we saw a small effect in the opposite direction for the families with a low propensity to use Head Start. We found no differences in high and low propensity families on any of the other measures that we looked at, and we did not see any differences in maternal reports of behavior problems.

These results suggest that exposure to the LFA policy environment, or exposure to a policy which really encourages mothers to look for work, quickly combined with Head Start, is associated with higher levels of middle childhood cognitive ability.

Interestingly, programs found that while maternal employment increased, the percentage of enrolled families living in poverty also increased. A caution to share is that our sample size was small, and so our ability to look at a fine grain level of likelihood or propensity to use Head Start was limited. We plan to pool some of the data, to increase our power, and conduct similar analyses to determine those with the highest propensity to use Head Start.

Rachel Cohen: I am from the Administration on Children and Families. I have been working over the last few years on the Early Head Start Research and Evaluation project. This impact study was mandated when the program was funded in 1995. Early Head Start is a diverse program, with home-based, center-based, and combination option services. Seventeen of the first programs from across the country were selected to participate in the evaluation, reflecting the diversity of the program at that time; the evaluation reflects center-based, home-based, and some combination programs, urban and rural populations served, and so forth.

The study followed 3,000 children and families, half of whom were randomly assigned to Early Head Start; the other half could avail themselves of any other services in the community, but not Early Head Start. The study collected national findings across all 17 sites on children

and families, and site-specific data collected by university-based local researchers. Nationally, we found a pattern of modest positive impacts on a broad array of child and family outcomes.

We found some interesting patterns when examining the group of families who were receiving cash assistance when they enrolled in the study. We found that across the entire study, families receiving cash assistance who were enrolled in Early Head Start received significantly more services and more types of services than the control families. These services included home visits, center-based care, child development services, case management, education-related services, employment-related services, and transportation. One exception was for health and mental health services. Basically, 100% of the families were receiving the basic health care coverage, but very few families were receiving mental health services.

Many of the families receiving cash assistance at enrollment tended to be in home-based programs. Interestingly, we found a different pattern of home visiting service. The group initially receiving cash assistance started off with a high level of intensity of home-based services, and then there was diminishment over time. Enrollment in Early Head Start increased the use of center-based care for that group; however, overall it appears that the families receiving cash assistance tended to use less formal types of care and less center-based care than those who were not receiving cash assistance, and were also using child care for fewer hours.

Turning to the child and family outcomes, at age 2 we saw a pattern of strong impacts on child language, sustained attention, and play with parents. At age 3, we saw no pattern of findings for child impacts. In terms of parents, at age 2, we saw positive impacts on emotional supportiveness of the child, support for language and literacy in the home environment, reading to the child daily, and daily routines in the house. By age 3, many of those had disappeared. We had some remaining impacts on daily routines, and some impacts emerged on use of mild discipline strategies. However, the pattern that we saw at age 2 just seemed to be disappearing.

In terms of self-sufficiency, we saw impacts on education and training and no clear pattern on employment, but it is also important to note that employment was initially about 80% in both groups. There was also a reduction in repeat births. About 21% of the program group experienced a repeat birth versus 34% of the control group. Perhaps the strong impacts were dropping off because of the intensity of the services that the families were getting.

Question: Has anyone considered using recruitment and enrollment factors for different Head Start programs as a variable in the analysis?

Raver: Many of us tend to take family-focused or individually-focused approaches, and we are remiss in that. We think that we have the story covered when we actually do not. We need to think about important agency and location variables. It is clear that there are serious site differences indicating that programs operate differently.

Stephanie Jones: I agree. Perhaps we need to rethink about data collection in the future.

Yoshikawa: It is something we have discussed: going back to the counties and the neighborhoods and finding out about specific Head Start programs and then trying to link to Program Information Report (PIR) data. There are many other factors around Head Start that we would want to look at as factors that affect our results.

Scheer: As we do research with Head Start, we must remember that each program designs, within parameters, how they provide services to their communities, and there is great variation that will affect outcomes, based on where the research is done.

Comment: Head Start is a national program, but it allows local design. In contrast, the national welfare-to-work program is a national initiative with federal requirements. We expect Head Start to move into more full-day, full-year programming.

Comment: Listening to all the study results, there is a consistent theme of inherent conflict between these welfare reform programs, requirements of those programs and participation in Head Start. It has to do with some of the structural features in Head Start. It may also have to do with some of the requirements of Head Start, such as parent involvement. There are a variety of things we could talk about in how to integrate these two programs in a more useful way.

Naomi Goldstein: Although the welfare-to-work program is federal, TANF has great flexibility at the state and sometimes local level. There are examples of collaboration between TANF and Head Start. As an encouraging note for the future, ACF has contracted with MDRC and a couple of collaborating organizations to evaluate welfare-to-work approaches for hard-to-employ families. We hope to develop some two-generation approaches that would combine welfare-to-work services for parents with appropriate developmental services for children.

Comment: One difference that we have seen across Head Start programs is how well they meet the performance standards, which are similar to the National Association for the Education of Young Children (NAEYC) accreditation standards for the child care sites. There are different results from children's development if they are in a program that meets all of those criteria. This program characteristic will impact child outcomes. I think even more than the part-day or full-day program issue is quality of care, interactions with the caregiver, and other services in the organization, like mental health services or special services for children with socioemotional issues.

Cohen: In the Early Head Start study, we had an implementation study to look at how well programs were implementing the performance standards and we found a much stronger pattern of impacts when programs were implementing those standards. We also found a stronger pattern of impact with children and families in the mixed approach program. Those programs that had the flexibility to provide both home-based and center-based care to either the same family over time, or to different families, was important. There is a message here: the needs of families are changing, and those programs that can flexibly meet those needs are going to best succeed.

Constance Williams: I am on the next panel that is in this room. Our study interviewed parents. We found a high level of depression among parents, which is an incredible barrier to work and is sometimes not visible to case workers and others working with the family. We also found a high level of domestic violence. Has anyone found impacts of these two issues on child outcomes?

Zaslow: We will present a paper later on in the week about depression and illiteracy as they relate to children's outcomes and the role of parenting, and whether those things form a particular pattern when they co-occur. We are beginning to think that we need to look at bundles of things. People looking at the data are taken aback by the rates of depression and domestic violence. They are disturbing and alarming. We have looked at depression, but we have not looked at domestic violence in relation to the child outcomes.

Comment: For the depression and domestic violence as outcomes, they have been looked at in the context of these welfare and employment programs, and we have not generally found consistent effects on depression, at least for the mothers who are enrolled in these programs compared to mothers who were not. We are finding some scattered evidence that the mothers who are in these programs, who largely have increased their employment and sometimes their income, have reported reduced domestic abuse.

Yoshikawa: We looked at how effects on depression varied by the employability of families. For the 25% hardest-to-employ families in earning supplement programs, there were some small increases in maternal depression, whereas in the lower 75%, there were small increases in terms of their risk. Overall, there was no big impact, but for the hardest-to-employ families, there was some suggestion that when they increased their employment substantially, their rates of depression went up a bit.

Scheer: I also think that the use of mental health services is impacted by the availability of mental health services. There are not enough mental health services out there for the children or the parents. Use is probably low for all of the subjects.

Zaslow: For the decrement in service use that Cohen documented, was that specific to the families receiving cash assistance, so the other families in the experimental group sustained a higher level of service use and the impacts on the children and families at the 3-year point were also sustained?

Cohen: Yes, that is what I intended to say.

Comment: In considering maternal depression, I can see much higher levels of stress as mothers enter the workforce, because of child care scheduling and other stressors. Perhaps this is part of what we are seeing. In addition, as a parent becomes employed, is there a decrease in the services that they are eligible to receive?

Raver: Yes, families often lose their eligibility for Head Start and other early childhood programs as well as family services. On the other hand, a lot of these programs are not showing increases of earnings that parallel increases in employment, so families are, in fact, working but not earning more than they would have on AFDC or TANF. That whole notion about being at low risk, meaning that one is employed more, does not necessarily mean that one has higher income.

Comment: I am concerned about the accuracy and thoroughness of the family information we are getting. Are we asking families about their perspective?

Yoshikawa: Our Next Generation project identifies the clustering factors, like the difficulty in making ends meet and balancing family, work, and in some instances child problems. Families with children who have higher levels of problems have a much harder time balancing those multiple stressors. They address the kinds of chronic low level depressive symptoms that these parents face. It is hard to determine causality, but these things do seem to go together.

Comment: The data we all used in today's presentations were pre-1996 welfare reform data, so we are hearing a mix of what people know about today versus the data we have. Do our findings agree with what you are seeing happening out there today in Head Start use? Are you seeing similar conflicts or complementarities that occur in families satisfying work requirements, managing their work schedules, and using Head Start?

Comment: Parents are anxious, because many of them would like to use Head Start or Early Head Start and there are not enough openings. The ability of the systems to understand each other is a real issue. We ought to look carefully at the people who are talking to the families and who are trying to help people meet their requirements. Another issue is individuals who have disabilities. People call them hard-to-employ or hardship cases. We have a segment of the

population who are disabled, are caring for a child with special needs, or caring for adults in their family with special needs; and we have to carefully look at what their needs are.

Robert O'Brien: The Family and Child Experiences Survey (FACES) study has results that address a number of the issues that have been raised. In a substudy, we went back to about nine or 10 of the sites of our original study and did focus groups on outreach and recruitment with Head Start. We interviewed administrators, Head Start field staff, and families who were eligible for, but not attending, Head Start. We also looked at program records and reports about the community.

Scheer: I want to go back to the comment about disabilities. Research informs us that poverty is a predictor of disability in children, meaning that more children with disabilities are in poverty than in the typical population, so parents caring for children with disabilities are certainly an issue. We also need to consider, especially with our group of families who are most difficult to move into the workplace, that some of the parents may have diagnosed or undiagnosed disabilities.

Yoshikawa: I am interested in hearing about innovative program strategies that Head Start is using as parents engage in higher levels of work effort. Goldstein mentioned some TANF- Head Start partnerships. For the practitioners, what are some ways that you are responding to families who are facing these higher stressors, possibly from the combination of work and program responses?

Comment: I am a mental health worker, and for about 5 years, two of us have implemented a mental health onsite service doing outreach for about 400 families, including home visiting, onsite classroom work with children, and referring them to links with the system, but the system is inadequate.

Scheer: Another issue raised in the literature is the policies of employers of our families, as well as the policies of the entities that are implementing this welfare-to-work program. We talked about sanctioning and how so many parents are sanctioned because of family obligations. These are not always family-friendly policies. Employers that are employing our most hard-to-employ families do not usually have family-friendly policies for their employees. This is extremely significant as we look at these programs, and it may be why we have families that either drop out of the welfare-to-work initiative or move from employer to employer, in and out of the system.

Raver: It also brings to mind children who are "sanctioned," specifically children who are having behavioral and emotional difficulty, and the ways in which Head Start parents are told that their children are having a difficult time. Head Start is mandated to serve these children, but other center-based care providers are not. I am particularly concerned about the impact of being a "hard to serve" child on both child outcomes and on family self-sufficiency.

Comment: We have an Alternative Learning Program (ALP) that serves about 1,000 children. Based on tab scores, staff referrals, and observations by our psychologist, children are placed in a therapeutic classroom onsite during the day. The statistics for the behavioral changes of these children is amazing, as well as the support for the teachers in the classrooms to continue the strategies with children with extreme emotional behaviors. We have done it with blended funding, and we are trying to figure out a way to connect to the HMOs, to somehow pay for some of this.

Scheer: It makes sense, anecdotally, having families in stress, many mothers in depression, higher and higher expectations, more pressure to get into the job market in jobs that are often not enjoyable; but they just have to go and get a paycheck. We know that family conditions affect children and thus we are seeing children in stress. We have certainly heard many thought-provoking ideas, new directions for research, and modifications of current research, to inform subsequent studies.

Conversations With the Masters

MASTER LECTURE

History of Research and Practice in Head Start

CHAIR: Ann Bardwell
LECTURER: Edward Zigler

Edward Zigler: We started planning Head Start in the fall of 1964 and got serious in the spring of 1965. Just imagine thinking through a national program that you are going to put into place the following summer. We kept arguing about the number of children to serve. We agreed that 25,000 would be a good number, then it became 100,000, then 200,000. Then the applications kept pouring in and to make a long story short we put 560,000 children into Head Start that first summer in 1965. Nobody knew what Head Start was, what it was supposed to do. There were no performance standards for the first 5 years of Head Start until I took over and ran Head Start in the early 1970s with the help of my Deputy, Sal Rosoff. But this is not a story of my life, this is the story of Head Start. It is not even the story of Head Start. It is the story of research in Head Start, which is not a terribly happy story for me to tell with the retrospective of all these years.

Many of us write a variety of books and sometimes these books make a difference in the world, sometimes for the better, sometimes for the worse. I have written more than any one person should have to on Head Start. I wrote the first book, *Head Start: The Legacy of the War on Poverty*. If you want to know the archival history, who the founders were, and what they thought, that is the book to read. I also wrote *Head Start: The Inside Story*, which is still a pretty good overview. Then I wrote *Head Start and Beyond*, because from Day 1 I knew that we were not going to get very far with 1 year in the life of the child. It is like telling a mother, if you are a terrific mother for 1 year you do not have to mother anymore. You have done it. That message has been a hard one to sell. I am finishing a book this summer called, *The Head Start Debate*, and it has chapters by people who love Head Start and people who hate Head Start and there are plenty out there. It should be an interesting book because people are essentially having their own say and it actually is a series of debates. Some of them make interesting reading, including the chapter that tells the world that I destroyed Head Start all by myself. But it has been an interesting journey.

I was the youngest member of the planning committee for Head Start. Now I am the oldest member of most groups, but I learned a lot over the years. I started as a standard experimental child psychologist. I did studies, I tested hypotheses like we were taught to do, and I knew little about policy. Therefore, being on the planning committee was very exciting for me. There was a senior research psychologist with whom I studied in graduate school. Urie Bronfenbrenner and I hit it off very well. I also was the noisiest by far on the planning committee. I had very firm views because the whole concept, quite frankly, left me a bit cold, but not cold enough to say I did not want to do it.

The initial plans for the program were not what we would plan for now. Today, if we were going to start a program for poor children in our rural slums, Appalachia, and our inner city

slums, how many of us would say, "Let's have a 6-week summer program?" However, in fairness to those early planners, of which I was one, we also had 8-week programs. It was called Head Start plus. I had worked with and studied disabled children so I knew about children, their growth, and development. I knew it was unrealistic to think you are going to make any difference in the life of a child in just a few weeks. Think of the hills these children have to climb. It is probably a little worse today than it was back then. We did not have the huge drug problem and we did not have so much of the violence in neighborhoods that comes with the drugs. So, I believe it was easier to be poor in 1965 than it is in 2002. How could a group of hand-selected experts from a variety of fields—pediatrics, social work, education, early education, nursing, child psychiatry—come up with such an idea?

We read books on the subject. There were two famous books that set the zeitgeist for the 1960s and were the seeds of Head Start, seeds of its glory and some of its failures. By far the most important book of the two was Joseph Hunt's book, which was standard reading in the 1960s, *Intelligence and Experience*. Hunt was absolutely convinced that very small changes in your experience would have huge changes in your growth trajectory. Which particular part of your growth trajectory? Cognitive development, that is intelligence. It was not accidental that right after Head Start hit the scene, everyone was investigating IQ changes as the ultimate criteria for the success of Head Start. We got that from Joe Hunt. I remember one of his articles that was published in that most sacrosanct of scientific journals at the time, *The Reader's Digest*. They did not just have his article in it, there was also *How to Raise Your Child's IQ 20 Points*. There was nothing to it. We don't know to this day how to make children a hell of a lot smarter. We have some rough ideas. We know that the name of the game is not just cognition or IQ. Americans have had a love affair with IQ way back to the 1920s. This morning we heard from a Nobel Laureate that it is not just a matter of teaching literacy and numeracy. We need to rediscover the whole child. The second book that was also famous at the time was Benjamin Bloom's *Stability and Change in Human Characteristics*. He was telling the world that half the learning of the child is over by the age of 4. That is where that notion came from. The same message as Hunt's, the critical importance of the first years, but again the emphasis was on the change in intelligence.

We were actually hoisted on our own petard and, despite the fact that there were naysayers on that planning committee including myself, after that first summer everyone wanted to give it a try. Leon Eisenberg, a famous child psychiatrist at Harvard, did a study in one of those 6-week centers and, lo and behold, discovered that in that center they raised the IQ of the children 12 points. So everyone said if we could do that, let us sell that. Harvard psychiatrists are telling us this, as well as *New York Post* articles. This one particular article described a program that predated Head Start where they were raising IQs by a point a month. I remember reading *The Post* and thinking I would send my 2-year-old child down for 40 months' worth. That was the thinking of that period. I knew better at the time.

I did a study around 1968 with Earl Butterfield where we tried to examine how you can possibly get these kinds of IQ changes. The fallacious notion was that when you get an IQ score for a child you have got an inexorable readout of that child's intellectual endowment. That is not it at all. When you do an IQ test you are measuring three things: The first is formal cognition in the Piagetian sense. The next thing that is measured is achievement, what experiences the child has had. For example, one of the items on the vocabulary test is what is a gown. If you have never heard the word "gown" you fail that item. That is not intelligence. That is what we call achievement. That is the content of the system, not the formal structure of the system. Another example, you go into any inner city slum and ask a 4-year-old what a wino is, he could tell you. He walks over them all the time. My son could not tell you, but my son is not penalized for not knowing because the word is not on the test. That is the cultural unfairness issue that Jerry Kagan and others have written about.

You also are measuring motivation and emotion, the third factor. I did a series of studies to show that these programs were evaluating, not changing IQ at all. You were changing the third

factor, motivation and emotion. I have tested many poor children where no matter what you ask them, they say "I don't know." They do not even try. That has nothing to do with their intelligence. It has to do with their self-image, whether they even want to play your silly game with you. Some children just want to turn off the experience, and the easiest way to do that is to say, "I don't know." Say that four or five times and the test is over. So I demonstrated that. All we were doing was assessing that the child, at the end of 6 weeks, was no longer scared to death when he came into the testing situation. The whole difference was in his/her motivation and his/her test-taking behavior, and none of it was related to improvement in basic cognitive abilities.

Let us go back to the beginning to tell you one of the most surprising stories of Head Start that is still not known. Here is this huge program we are going to launch for 550,000 children. All of these bright men and women were sitting around the table devising Head Start and Julius Richmond was not in the planning committee. He came on after we had made the plan for him to become Head Start's first director. So I was alone in saying to the committee that we should have an evaluation. We should find out if Head Start is making a difference. We could not get a control group, but we could certainly do a pre-post quasi-experimental design to at least demonstrate that these children are different at the end as compared to the beginning. There had been absolute silence.

"Ed, what's to evaluate? We're going to give these children a big lunch, a snack, medical care, and we are going to get their parents involved. It has to be good. Why bother evaluating?"

I kept arguing but we were making no progress. Do you know what Head Start was called back then? Project Rush Rush. We used to keep files in bathtubs in the old Colonial hotel. The people who were sending out the money never saw any programs. None were reviewed. If your proposal described five components, you would get a check and start a Head Start. Julie Richmond was the intellectual leader of Head Start at that time and Jules Sugarman was the administrative leader, but it was the administration that distributed the money. Jules told me that we were going to fund the programs and then visit them. The ones that were good would continue to get their grants. The ones that were bad would be closed down. Five years later I was responsible for Head Start. There were no performance standards. The programs were doing anything they wanted. Some of it was good and some of it was lousy because the way we started guaranteed heterogeneity in quality. However, the efficacy of a program depends essentially on two factors. The first and most important factor is the quality of the program. You do not change children by waving the Head Start flag over their heads. You have to have experiences that change the developmental trajectory, and that is hard to do. The second is the intensity of your program. That's why I never believed that we were going to get that much bang out of a 1-year program. What we really needed was a high quality program from birth to 3 followed by a good preschool program for 2 more years and then 4 years of a good program in elementary school. They should all be dovetailed and flow together. This is written about in Chapter 5 of *Head Start and Beyond*. We have Head Start and Early Head Start now, but we are still having a heck of a time with the transition into schooling.

Back to 1964 when Jules Richmond was watching all of this. I was outvoted in the committee but Jules told me I was right about wanting an evaluation of Head Start, so he told me to go back to Yale and make up an evaluation for Head Start. I went back and rounded up all my graduate students and exploited the hell out of them. I made them steal this item from that measure, construct this, construct that, make questionnaires. We had a whole battery. Was the battery any good? It was terrible, but it was the best we could do. We only had weeks. Then I discovered one of the first great truths of Head Start. I love those expressions "from practice to research" or "research to practice" because it could go in either direction as far as I am concerned. I discovered that the program people all over the country hated the measures. They hated giving them; they hated doing them; they could not understand why we needed to do it. So I saw then a huge chasm between practitioners and researchers. Researchers are egocentric,

including myself. What made me think that people who are busy trying to get a new program off the ground wanted more work to do? Research was important to me. Evaluation was important to me. Therefore, it must be important to everybody. I learned why it was so important for us to develop close partnerships with the practitioners to allow them to have a say in what you are trying to accomplish. They too want evidence that what they are doing is worthwhile, but it should be a cooperative venture, and we did not engage in that back then. The data were frankly useless. They were not that good even if they had been gathered perfectly well. However, it was still a victory for Head Start, because what happened as a result of that research became an integral part of Head Start, and from that day on Head Start has always had a research division. As I will point out to you later, we never had the money to do as much as we should have done, but at least we established the precedent.

Practitioners think that sometimes what the researchers do is going to destroy Head Start, and it almost did. This is a story about a certain crisis, the role that research played in it, and why practitioners suspect us. I took over Head Start in 1970 and was met with two important publications. The first was *The Jensen Report.* I am an old behavior geneticist and if Jensen had taken out the nonsense about the intellectual inferiority of Blacks it would have just been one more demonstration of the genetic factor that goes into an intelligence score, which we all knew and still know. But he decided for some awful reason to start that with "Compensatory education has been tried and it has failed."

Then we got the second blow with *The Westinghouse Report* from 1969. It was Head Start's absolutely darkest hour. I was a perfectly happy young professor at Yale, just beginning to build a solid career, and I was asked to come to Washington and become the head of what is now the Administration for Children, Youth and Families (ACYF) and chief of the Children's Bureau. Part of my job was going to be to run Head Start. They recruited me, and for about 3 months nobody said anything to me. They said they were going to move Head Start out of The Office of Economic Opportunity and into Health, Education, and Welfare (HEW). In 2 weeks I was called to a meeting. I didn't know then that the Office of Management and Budget (OMB) really runs Washington. At the meeting, the OMG puts a sheet of paper on the board and says here is the plan. We are going to phase out one third of Head Start in 1 year, then we will phase out a second third in year 2, then we will phase out the last third in year 3, and in 3 years we will be through with Head Start. Those were my orders.

This is an involved story with some big names included. To do justice, however, I must give an oral history from a major layer from that period. The White House and HEW were on different tracks. I wanted Head Start to have a chance. I thought I could make it better but I was totally appalled and went directly to a great hero in this country who has never received the credit he deserves, a man named Elliott Richardson. He was the Secretary of HEW, a liberal Republican, a very smart man with a good head, and a good heart. I told him that nobody mentioned this plan to me, and if this is the plan, I will resign today, and not only will I resign if this is the plan, I will resign at the moment I hear so much as one dollar being cut from the Head Start budget.

He said, "Well, let me go to the White House, Ed. You just go back to your office and do your work." He cleared up the situation. He is the hero and I know now who the villain was. It was all due to *The Westinghouse Report.* It was a very shoddy study. Head Start, in the interim, had developed a research committee consisting of Ed Gordon, Urie Bronfenbrenner, and Ed Zigler. When we heard about *The Westinghouse Report,* we were able to say all the things that were methodologically problematic. You can never be in a position to say you do not want to be evaluated. I would be the last person to say that. I was the one that was fighting for evaluation. But you should have a good evaluation, not a lousy one. What we recommended was to let us do a good longitudinal study with a proper comparison group. We could not have pulled off a random assignment experiment study back then, but we could certainly use a solid quasi-experimental design. They said *The Westinghouse Report* was done in 3 months and how long would ours take?

Originally we approached Educational Testing Service (ETS) to produce the study. We wanted to assess Head Start up to the second grade or so, do it with a well-designed study, and complete it in 4 years. Ultimately the study was not produced by ETS; Jeannie Brooks-Gunn published it 25 years later when the data were worthless. They found that Head Start had positive effects, so ETS simply let us down back then.

I will share with you one experience about how this town works, why people like me have a hard time in a place like Washington, so it may help those of you who might embark on similar endeavors. I tend to be an overly honest person and part of that comes with our trade—we want to see what the data say. If you are not honest, you are not going to last long in our field. So I went to testify before a very powerful chairman of the House, Labor, and Education committee, Carl Perkins. I went there, a babe in the woods, and he was very pro-Head Start. *The Westinghouse Report* is out in the public domain, I am defending Head Start to keep it alive, the Secretary got us through, I am going ahead with the Performance Standards, and I am starting the National Lab concept in Head Start. Nonetheless, I am testifying. Perhaps you have seen a testimony on TV. They sit way up high and you sit way down low at a table in a well. You know right away what the power structure is. Carl Perkins starts asking me some friendly questions.

Perkins loved Head Start but when he mentioned *The Westinghouse Report*, I said, "Mister Chairman, . . . " and I laid out the reasons why I would not take this report seriously and why we have to do better research than that. He was happy as he could be and he was so friendly and warm.

Nonetheless I continued, "Mister Chairman, there is one thing we should learn from *The Westinghouse Report*." [This is all in testimony, so it can be read.] Perkins became more tentative. I told him the report showed some small gains for the full year—by then we had both full-year and summer programs—but I said it showed that for the summer programs you get no effect. You are essentially wasting your money. I included everything I know about what human development tells me, that these summer programs are tokenistic and that what we should do is take that money and turn it into more full-year programs. You would be able to serve fewer children, but at least you would give them something of value for your money. Perkins became very angry.

Shaking his finger at me, he said, "Dr. Zigler, if you close one summer program, I will subpoena you and have you back here so fast it will make your head swim."

I thought, "My God, what is a subpoena? Am I going to go to jail? I could not understand what he was so mad about. What had I said? I went to see John Brademas, one smart person I had met in Washington who later became President of NYU and was on the committee at the time. I asked him, "What made Perkins so mad? What is wrong with closing programs that are worthless?" At first he did not want to talk about it. It was like MD's who do not want to tell on each other. Congressmen do not want to do that either.

He said, "The Chairman has his views, Ed." He took some pity on me because I was a pitiful creature at that point. He would not actually tell me, but he played Socrates and Plato, with questions and dialogue. So he asks what district is he from? I said he was from Kentucky.

His next question was, "When he runs for election, who mans the phones to get out the vote so that he gets reelected?"

I said, "Teachers. We all know that."

He said, "Who works in the Head Start programs in the summertime?" I told him teachers. He finally made it clear. Perkins wanted to get reelected and to serve his constituents. Jobs for his people—not whether Head Start was good or not, nor was it your tax dollars or mine—it had nothing to do with research or science.

I went back about my business. I lasted a little longer; I did not go to jail. He did make me continue the summer programs so I decided to start a new summer program. It was probably one of the worst programs in the history of man. My idea was to round up children in the summertime and get them into a physical and mental health care system. It lasted about 2 years until the evidence convinced me that we ought not to have the program. But I was more

successful with other projects like the National Laboratory concept. I felt that we couldn't just do Head Start. Some of these other projects are still in operation, like the Home Start program. Now they call it Home-Based Head Start.

I started that program and the very first family support program in which the notion of the importance of birth to 8 was stressed. It was the Child and Family Resource Program, and it was a very good program. It was the first in this country. I also invented the Child Development Associate certificate and several other things. Early Head Start is simply the latest in this mine of National Lab experiments. But the IQ issue was killing us because at that time everybody, not just *The Westinghouse Report,* was coming up with the idea of the fadeout. Everything I knew about intelligence told me that you could not give a child a program for a year and get huge changes in IQ. In the history of the field of psychology, IQ is largely the most stable measure past the age of 8. Yet everybody was reporting fadeout. There are some fluctuations, but they are not huge. Why would anybody want to take the psychology's most stable measure and take changes on that measure as the criterion for the success of a program?

I went around the country trying to explain away these fadeouts of IQs. That is what was fading out, the IQ. I said the goal of Head Start is not IQ. Why would you want to take somebody who is an awful human being and raise their IQ 10 points? You would only wind up with smarter criminals. The problem with the planners, including myself, was that we had too many goals for Head Start, even though IQ change wasn't one of them. There are about 13 or 14 goals in our proposal and nobody could understand them. Many groups, such as ETS and Mathematica, worked on how to promote the development of children. Then I came up with the goal of Head Start, something we called social competence. The federal government spent tens of millions of dollars trying to get the scientific community to operationalize the construct. I finally got tired of it all and wrote a paper with a colleague that was published in *American Psychologist.* It is called "IQ Versus Social Competence and the Assessment of Early Intervention Programs." It was not a complicated concept to me then. I do not think it is complicated today.

The first side of social competence is meeting social expectancies, like school readiness. For example, when you turn 5, it is expected to be optimally ready to go to school and stay out of trouble, and there are developmental tasks for the period. It had four concrete measures that could be administered fairly easily. The first was health. Health is an area that we still don't get enough credit for in Head Start. How much has Head Start done to improve the health of America's poor children? I put it first because the people who do evaluation studies tend not to be pediatricians or health-related professionals. They tend to be psychologists, and they keep acting like health is somebody else's area to study. However, it is ours and it is measurable. The second was achievement. The third was cognition. I am not against making a child as smart as we can make him or for developing literacy. But even though I am for cognition, the fourth measure, emotion and motivation, doesn't get emphasized enough, which I have been doing in my own work for well over 40 years now. This is what I meant, these aspects of social competence can be operationalized.

A dark period in this history occurred when Urie Bronfenbrenner, a close friend of mine, supported the fadeout notion and said that Head Start was essentially useless, that there were no long-term effects of programs like Head Start. At the beginning he played a constructive role as one of the planners. He is an icon in my field. His ecological model has changed the nature of how we think about human development. Therefore, I am the last person that would ever belittle him. He is a great man and a great thinker. But that 2-year period where he supported the idea of fadeout was almost more damaging to Head Start than *The Westinghouse Report* was; so this was a problem caused by a close friend.

Fadeout is still out there. I was invited by the National Association for the Education for Young Children (NAEYC) to give a keynote address, and I decided to use that podium to make a point. I said that I would quit saying that Head Start has long-term effects but suggested we put together an empirical effort to answer the question the way it should be answered, with data. Through Cornell Consortium, we found about 12 studies around the country that had been

following children involved with good intervention programs. If you want to know all of it, there is a book called *As the Twig is Bent*. If you just want to read an article, there is a piece on the Cornell Consortium called "Work in Science." The studies were analyzed very conservatively, and it was shown that at least in these programs, two of which were Head Start, they did indeed have long-term effects. It was at that point in time that Head Start began getting its first major increase, and that is the flip side of where research has helped practitioners and people running Head Start to prosper. This was better research than what was in *The Westinghouse Report*.

I am going to quickly run through the rest of this long history. ACYF had a Blue Ribbon Panel that Donald Campbell headed. Donald Campbell, who is no longer with us, has to be the premier methodologist of my lifetime. His advice was never to do a large-scale random assignment study of Head Start. Though he had alternatives for evaluation, they never went anywhere. Yet ACYF went ahead and created the Head Start Research Roundtable on which I sat, Jeff White chaired, and Deborah Phillips, one of my students, staffed. The roundtable came out with a report that concluded we needed more research.

One of the sad stories of Head Start has been that in our research agenda we tend to be reactive. For example, we recently responded to Congress with a huge impact study, which is the opposite of what Donald Campbell would have recommended. But Congress wanted it and they got it. I was on the experts panel that supported and designed the study because we should never be in a defensive position where we are afraid to evaluate. Then ACYF conducted the Family and Child Experiences Survey (FACES) effort whose second cohort already indicates Head Start is looking better. But it has a weak design, no comparison group, and is based on standardized tests. That is not going to satisfy anybody, although when you talk about the FACES, the Head Start people love it and praise it. It is a half-full, half-empty set of findings. People who love Head Start see all the positives, the higher Peabody Picture Vocabulary Test (PPVT) scores. Other people see the lack of literacy advances, letter recognition. It was not the salvation of Head Start that they thought it would be. These are examples of the problem with being reactive.

We were a high-powered team in those first days. Along with me, we had Ed Gorton and Urie Bronfenbrenner, two of the best minds in our country. We must know something about research, and we were essentially advising Head Start on what to do in the research shop. But the research shop never had the money. There is no parallel to that kind of a committee telling young people who are running Head Start research to see the bigger picture. They are always reactive.

A friend, Jim Gallagher, once said, "If we acted like business does, we would give 5% of the Head Start budget to research each year to improve our product." The research budget is so small, less than 1%. It is an infinitesimal amount of money compared to a program that spends 6,000,000,000. This problem in research has never been corrected, and I do not know if it ever will be corrected. What precipitated the impact study was a report. But this argument about whether Head Start works or not has been going on for 37 years from the first summer on. There has never been total consensus. In Washington, when Congress has a question and they want an objective answer, they call on the Government Accounting Office (GAO). They are decent and nice people, but hardheaded. Congress asked them a simple question before the 1998 Reauthorization of Head Start. Does Head Start work? We have been studying that since 1965. We have thousands of pieces of work, for example the Synthesis Report or Steve Barnett's review. We have got a lot of positives, and we have a few negatives. On balance, it looked to me (they had asked me to consult to the GAO) that there was positive evidence. At the 1998 hearings, I sat beside their representative and I could not take issue. Their testimony states that the findings were either old or methodologically weak, that you could not conclude whether it worked or not. That led the Congress to demand a random assignment, impact study, which is being run now.

We have gone from 1964 to today. Those of us trained in methodology were all trained in random assignment study experiments. This is a Cadillac design, but as people begin thinking about it, they see problems with random design. Literature exists today that questions the value

of random assignment studies. There are also ethics issues, especially in the Head Start community. Researchers like James Heckman, a Nobel Laureate, Larry Hedges, and Robert McCall have all now written papers questioning the value of random assignment. First of all, you do not know what is happening to the comparison group when you randomly assign. It is not like the medical model where you can give them a placebo or if it is a rat, you just leave it in the cage and it does not get the treatment. Children are doing something in your control group, and often with all the state programs, they may be getting better services than the children in a poor Head Start center because they still do not have the money to get the quality up to the place where I would like to see it be. So that is the research story from the inside, from a player who was there.

Susan Longcor: I am from a Head Start program in New Jersey. I find health to be a nonentity sometimes in the Head Start program because of the lack of participation of health professionals in some areas of research. Do you have suggestions as to how to get them back as partners?

Zigler: They were partners early in Head Start and, of course, Julius Richmond is himself a pediatrician. The American Academy of Pediatrics worked side by side with Head Start, but they were primarily interested in services. I think it behooves those of us in psychology and sociology, people who actually do Head Start research, to become acquainted with simple, straightforward health measures. It is not rocket science. It has just seemed to us like it is not our field. I reviewed the role of Head Start in health in the *Annual Review of Public Health* because I believed their efforts would go on unrewarded. It has never received the credit it deserves because psychologists and other behavioral scientists do not study it. We could team up with MDs to do this work if we are more comfortable. We should become more interdisciplinary. There are many psychologists today who do use health measures like testing a child's size for his age. I would like to make one other comment because it is something I have never said to an audience before. We have always known the link between health and development. A sick child cannot learn or do much of anything. But a colleague of mine many years ago coined the term, "sleeper effects." The Clarks in England, who were no friends to early intervention or Head Start, wrote the book, *The Myth of Early Childhood*, not unlike that recent, *The Myth of the First Three Years*. So I have seen this before.

Toni Ledet: I was wondering if you would comment on whether you have any opinion about the possibility of Head Start being moved to the Department of Education?

Zigler: I have strong views on this, and they are public. I fought this fight with the Carter Administration years ago. We have been down that road before. What some of us should do is tell the world what really needs to be said. When the President of the United States, be it Carter or Bush, says that they are going to send Head Start to the Department of Education, to the man on the street, what difference does it make? What the man on the street does not know is that the Department of Education does not run programs the way Head Start is run. Right now DHHS is the only program in the federal government, and it has always been the only one, that goes directly from the federal government, bypassing the states, to local grantees. The Department of Education does not do that. They will block grant this program and send it to the states. If that is what they mean to do, and there are people like Doug Besharov who have been arguing for that, then this would be destructive to the Head Start that all of us have built and understand.

There are only two new ingredients that went into Head Start at that first planning, but they were revolutionary at the time. Before Head Start, there were only small education programs in early intervention. What the Head Start Planning Committee did, and this is where I think we showed wisdom, is introduce comprehensive services. The interdisciplinary nature of the Planning Committee guaranteed that we would have health, both physical and mental, social services for families, nutrition, and other services, all the components of Head Start—compre-

hensive services. The Department of Education does education, so this program will go back to being an education program, only with a heavy emphasis on literacy, and maybe numeracy might be squeezed in.

The second great loss would probably be one of the most successful aspects of Head Start. Before me, all they talked about was "maximum feasible participation of the poor" in their programs. That was the rhetoric of the war on poverty. It was not until 5 years later when I was running Head Start that I invented and put into place the Parent Policy Councils, which have to be made up of 51% parents. This is the only program in America where parents really have the last word, and education hates that. Title I is evidence of that. They have gone up and down on parent involvement, their track record is pathetic. I am not a politician. I do not love the federal government any more or less than I love the state government, but I do insist upon the quality of Head Start with those two ingredients. I want a high-quality program. Anytime I become convinced that the states will do this program better than the federal government, I will myself argue to transfer it.

I am an empiricist, so I'd like to conclude with a piece of research. I was trying to get out ahead of the curve and some colleagues of mine, under the direction of Carol Ripple, wrote an article in the *American Psychologist* called "Will 50 Cooks Spoil the Broth?" It is an honest analysis. Right now as we speak, 42 states have some kind of state program for at-risk children, often the same children as in Head Start. Therefore, we looked at those programs and compared each one of them with what Head Start delivers. In fairness to the states, there were two points in which they performed better than Head Start, and Head Start should learn something from that. They paid their teachers better than Head Start does, and they did not stop at the poverty line. It doesn't make sense to admit children from families that make $5.00 under the poverty line and to not do so for children whose families make $5.00 more than the poverty line. States know better than that, so if a child is in that region they can still attend their programs. But on everything else, including parent involvement and comprehensive services, Head Start was far superior. So on balance, right now if this were a horse race, in my honest opinion, the feds mount better programs through Head Start than the states are doing through their state programs.

I just looked at an article with Walter Gillian where we took 10 or 11 of the state programs and examined them for their efficacy. It is going to be a continuing battle to assess these issues. I am going to be spending the rest of my life, whatever life I have left, looking at whether Head Start is the answer. This is difficult to say at a Head Start conference, but it is honest and people should know my views because I have supported Head Start my whole life, but Head Start is not the answer to the needs of poor children. We have to learn the lessons of Head Start. I have been at this 37 years. In 37 years we are serving approximately half the children that are eligible. Poor children do not have 37 more years for it to be fully funded. Furthermore, there is something that I complained about loudly from the beginning. I do not believe in segregating children by race, and I am opposed to segregating children by class. Everything I know about pedagogy and human development in this age of diversity says that we should have children of different socioeconomic classes together to learn from each other and to know each other. Schools are not perfect, but I think the solution may well be to build universal preschool education beginning at 3 and make that universal preschool education look a lot like Head Start for all children. We would have to do it with that $6,000,000,000.

They are touching an infinitesimal part of the 0 to 3 population. Schools are never going to get 0 to 3 money beyond home visitation, like Parents as Teachers in the state of Missouri. But we could take that whole $6,000,000,000 and do a number of things with it. I would spend a lot more money on Early Head Start and do something about 0 to 3 in a big way instead of the kind of small National Lab way we are doing now. I would hate to tell you how many children are now showing up in Head Start already emotionally disturbed. Some of you are nodding. You know yourself that if you have two of those children in your Head Start class, they are impossible and nobody else in the class can learn anything either. We need early screening and

therapeutic nursery schools for some of the children that we are now encountering in our inner cities. So I would not have any trouble coming up with a good agenda for the Head Start money to continue Head Start in its tradition of trying new things.

Where is the power? The fact is, government at every level does not care that much about poor children because poor children are not powerful. They do not pay taxes; they do not vote. We have good idealistic people, like Senator Kennedy and Senator Dodd. There are a lot of decent, good people on both sides of the aisle. I am not saying nobody cares. I am just saying look at the record. Why are we 37 years down the track with only half the children served when in the campaign in 1992, both Bush (the father) and Clinton promised us full funding for Head Start if they were elected. We never got it. We never have gotten it.

I think that the only time poor children will have high-quality preschool education in this country is when all children have preschool education in this country. We could build in a fee system so that we do not have to subsidize people with a lot of money, especially if we made the day as long as mothers and fathers' workdays. So the preschool would provide both a good quality preschool program and a child-care experience for children. If you want to see a model that is already working, look at the Schools of the 21st Century that we invented and now have 1,300 around the country. Kentucky's are statewide. You call them Family Resource Centers in Kentucky. They are working fine. So mine has been a long journey. Some of you are young people, and you are just starting. The work is great. I would not have done anything else with my life.

Carl Baskerville: I am a graduate student from Maryland, and I would like to get some more information about the randomized study. In particular, regarding the issue of validity, how this new study can validly test the outcomes that Head Start is designed to achieve because you talked about more than just the academic achievement, which has been the focus of a lot of studies.

Zigler: You are asking for a book instead of an answer. The fact is, Congress ordered a group of experts, and I was one of them—they essentially gave us our marching orders—to come up with a random assignment impact study. We talked a lot about the outcome measures. It is always an issue. What you were going to have to do, and I'll be doing it right along side of you, is watching the progress. They are field testing the measures now. I am sure they are using a lot of the same measures that are in FACES, but they may not. How good the study is going to be is an open question. There was no question in my mind that we had to do it. We are doing this study about 30 years too late.

When Head Start was about 10 years old, Donald Campbell said a very smart thing. He said to only look at the outcome of a program when that program is proud. We were proud about 10 years ago. We had the Performance Standards in place for 5 years. They were updated in the Clinton years. But back then we did not have all these state programs and a thousand other services. What is going to muddy the waters is what the control children are doing. Like the Comprehensive Child Development Program evaluation, some of the children in the control group got a lot better services than the children in the experimental group, and that may happen again. Head Start has improved in quality thanks primarily to the Clinton years. We had a great period in Head Start with Helen Taylor. She was magnificent. She gave us the new Performance Standards, she gave us higher quality; she was a great woman and I miss her greatly. It is simply tougher and tougher to do random assignment studies. They have four different organizations trying to work together to do this large study which Donald Campbell told us not to do 20 years ago. He said we would be a lot better off doing some well-controlled small studies and building up to some conclusions and replication. He had a pretty good strategy, but we are doing exactly what he told us not to do. He is turning over in his grave. The answer to your question is playing itself out right now in this study. My advice to you is, if you care, track it closely as it unfolds.

CONVERSATION WITH ANN BARDWELL, BARBARA BOWMAN, ROSS THOMPSON, SUSAN H. LANDRY, AND RON HERNDON

Facilitating Young Children's Enthusiasm for Learning

Arcenia Pickett: I am from the Head Start Neighborhood Centers Association, in Cleveland, Ohio. I am the Chairperson of their policy committee, and we have 517 families in our program. With all of the research on the children and our attempts to increase their readiness for school and the world, is there research underway on those who must accept our children once they are out in the world? We are doing what we are supposed to do, and we raise our children according to society, our surroundings, and our community. They are just as ready as everyone else, if they are not taken outside of their environment. But anyone taken out of their environment will clearly not compare to someone who is already in that environment. My child went from Head Start to kindergarten. She was 4 years old during the first part of the year. Head Start enforced literacy and enhanced the program to get children developmentally ready for school in order to succeed in the future, but our children had a 4-month gap, so basically, it wasted their Head Start learning time.

Barbara Bowman: The first part of the question was, is anyone studying the teachers, and indeed we are. We are trying to devise strategies and experiences for teachers that sensitize them to the different communities with whom they work. When people go through teacher education, particularly at the bachelor's level, they get a certificate to practice, but it does not say that they can only practice in one community. Indeed, many young teachers find themselves in communities where they have had very little experience. We work hard to create experiences that will sensitize teachers to the differences in communities and on ways to capitalize and build on children's prior knowledge. Children have an enormous amount of knowledge that they bring to their preschool or school experience. How to take advantage of that knowledge is not easy.

Let me assure you that teaching teachers to do this is not an easy task. We are studying it, and there is research on teacher attitudes and on some of the reasons why children do not fare as well as they ought to in classrooms. For example, some issues include teachers calling on boys more than they call on girls, and teachers' differing expectations for certain children. I mentioned earlier today that parents see their children as more persistent then teachers do. Teachers have different standards and expectations than parents. Where are these kinds of studies? I am not sure that they are good enough yet. As long as children are not achieving in their communities and in school, we are failures.

Texas Instruments has funded some nice work in this field. Some Head Starts in Dallas worked hard to put together the strongest program they could, and when they followed the children into school, they found that their strong readiness disappeared by kindergarten, first grade, and second grade. Instead of quitting, they put a solid collaboration transition program in place to support the children. It also helped teachers in the elementary schools to understand the children's backgrounds and skills, and to promote those and effectively challenge them. When that was in place, the gains were sustained, and they actually increased over time. Evidence shows that it is critically important to not stop at the end of prekindergarten, but to make connections, collaborations, and enhancements to our early elementary program.

John Webb: I am from Community Action Agency Head Start in Cincinnati, Ohio. Is there a study of the two environments—the preschool Head Start environment and the kindergarten environment? It is a simple point, but the average Head Start classroom has 17 children, which is different from a regular public kindergarten class, where there is not a comprehensive pro-

gram that looks at all aspects of the child. It is a narrowly focused program. Has there been a study to look at how these two environments are compatible? We have heard about environments and relationships, and maybe we need to look at the compatibility of these two environments, and how we can make them more compatible.

Bowman: There have been many studies. The relationship studies are probably the most important. Carollee Howes and Bob Pianta have done these studies at both the preschool and kindergarten levels. They have pointed out that the quality of the relationship is a strong predictor of how well children do the next year. It is not just how well they do in the year that they have that person, but also how they do in the following years. Those are probably the most important studies around the transition period. I also have personal experience of going between preschools and the local school, particularly Head Start. I am appalled by the number of preschool teachers who have never been to the local kindergarten. I am equally appalled at the number of principals who do not even know the preschools in their neighborhoods and what kinds of experiences the children have had. There is some research, but I am not sure that in practice we are implementing what we know.

Ross Thompson: I concur with that. It is interesting to look at the sociology of this phenomenon, because the early childhood community operates with different ways of thinking about children. It looks at different issues concerning early childhood education, compared to the educational community, who thinks about kindergarten and first grade. The transition from one institution to another can be quite a jarring transition for a child.

My wife is an early childhood educator, and she is the source of my most important credentials for being here. She points out a phenomenon that I think you all would understand. She works hard with her children to develop their sense of curiosity, excitement, self-esteem, self-confidence, and enthusiasm for school. When she runs into these children 8 months later, they are all different, usually in ways that discourage her. Sometimes they have lost their confidence or enthusiasm, or they are discouraged and are no longer excited about school. Her belief is that it stems partly from a rough transition. There have been few bridges to help children negotiate between a developmentally appropriate environment in preschool and an academically oriented environment in kindergarten.

If relationships are so important, and part of the transition for children from preschool to kindergarten is the loss of some relationships, as well as having to establish new ones, then perhaps relationships can be used to help bridge the transition in more constructive and productive ways. But to answer your question most directly, the different worlds of early childhood education and the primary grades establishment is also mirrored in the research communities. There are researchers who focus primarily on early childhood development, and there are others who begin with the school transition and then follow children as they get older. That is part of the reason why there has not been as much work focusing on the connection or disconnection between the two.

Ron Herndon: Our Head Start program has gone against the grain for years and made every effort to teach children to read. In addition, all of children are introduced to Spanish and to computers. The child of one of our most active parents, who was also a member of the Parent Policy Committee, went into kindergarten already knowing how to read. The parent asked the teacher, "How will you build upon those reading skills?" The teacher replied, "I am not, we do not stress that here." The parent then said, "In Head Start, my child had simple homework. Are you going to have some homework?" The teacher again replied in the negative. "Do you have any materials that I can use to build upon my child's Head Start experience?" asked the parent. The teacher directed her to pick up some dittos from the table if she wished.

After a month, this child was labeled a behavior problem. She was fortunate, because her

mother's aunt ran a Montessori School in Sacramento. The Head Start is in Portland. The mother said, "I am leaving, because I will not let them do this to my child." That hurt me. I thought about all the other parents who cannot leave, who may not be as smart as she is, or who do not have the confidence to know what their child is capable of. There are parents who have not been in a classroom to see that their children can learn to read, speak Spanish, and do many other things. One of the frequent expectations is the perception that the children come from certain backgrounds and cannot do well.

Bowman: A positive thing to be said is that 20 states have changed their 4-year college teacher education certificates, to go from prekindergarten through third grade or birth through third grade, so that teachers are beginning to get a better picture of what children can and should be doing during those early years.

Ann Bardwell: Sharon and Craig Ramey did a presentation yesterday on the Transition Project. I am the Director of a Transition Project in Columbus, Ohio. Those projects ran from Head Start through the third grade. Some of these data are significant in looking at some of those processes. It does require building bridges between Head Start and kindergarten, first, second and third grade teachers, and principals. Obviously, class size will not change. We will likely be unable to convince public school districts that 20 children per class would be wonderful, and that two teachers per classroom would be even better. But, some conversation and collaboration can take place between the two groups. We built significant collaborations in Columbus through the Transition Project.

Patricia Horne McGee: My question is about building bridges between the researchers and those researched, and about how one does that in the Head Start community.

Bardwell: The question is how to build a bridge between the researcher and the practitioner. What are both of their roles in translating research into practice? That is an eternally asked question, but certainly one that we need to address.

Thompson: I am doing research with the Early Head Start Program in the Lincoln, Nebraska area. It has proven to be a fruitful collaboration for us, in part, because the research itself is designed to address some of the questions that the Early Head Start personnel are wondering about, particularly on the impact of economic and psychological stresses on mothers, and the impact on relationships with their children. At the same time, we are asking questions that are relevant to the broader questions concerning the impact of developmental relationships on social and emotional functioning.

The collaboration is also deepened because the grant makes it possible for us to hire some Early Head Start staff to work in our data collection efforts. The partnership helps us to be more sensitive to the families and to the issues they face, while also assisting the research effort by putting the families in contact with people whom they are already in touch with for other elements of the Early Head Start Program.

It has been a fruitful collaboration, in part because the research questions arose out of the Early Head Start evaluation studies that we were already involved with. And in other cases, and with other projects, it has not been quite so smooth, in part because it has not arisen from the Early Head Start program itself.

McGee: For the Head Start communities on which you base your data, or whose practice and policy you are meant to influence, how were the bridges built between yourselves and those communities who would be most affected by this body of work?

Bardwell: In our case, we have worked with programs that initiated research by putting in proposals, or we have gone to them, asking them to participate. Both ways can work, but efforts are most likely to succeed when the programs initiate the involvement by saying what they want to do or what they want help with. Then it takes working closely with them and meeting on a regular basis, with them implementing much of it. We met monthly with large numbers of program coordinators, to keep the research on track and to be sure it was sensitive to program challenges.

Comment: As a participant in that program, the key word that made it unique is "relationship." We began by meeting with parents on the Policy Committee, and we interviewed parents about their wishes and desires in terms of literacy. That was one set of relationships. We then continued by having huge parent involvement meetings throughout the years. The other set of relationships were between the mentors and teachers, which I would be curious to hear more about.

I cannot express how important this is in terms of a training model. A trusting relationship was built over a couple of years by visiting the classroom every week and observing classrooms. There were days when the parents hung out in the parent room and had meetings, and one becomes part of it all. This may sound cliché, but one becomes part of a Head Start family. One gets to know the parents of the children. The teacher/mentor relationship was significant, as was the mentor relationship to the group. Your research is on families and relationships, but the training model was on how our relationship was built. Without different sets of relationships, there would be no point to the program.

JoAnn Williams: I am Director of Child Development, Inc. from Russellville, Arkansas. I am also Region IX President of the Head Start Association. There are many things that we in Head Start can do on our own to provide sound documentation about what happens to children after they leave Head Start. We work in a 13-county area across rural Arkansas, so we are broadly based. In our area, we still have weekly newspapers that carry school honor rolls and other accomplishments. Teachers and directors are paid well at our 25 centers and 14 units of home-based and migrant Early Head Starts, and they stay with us. Therefore, the director or teachers have likely been there since the beginning.

The other key is that we have a Transition Coordinator and written agreements with 43 elementary public schools. The Transition Coordinator goes into every one of the schools in the fall, after our ongoing assessment and the children's health records have been passed on to the school with the parent's permission. The Transition Coordinator meets with every set of school people, or with whomever the superintendent decides. We have noticed in the last few years, since early childhood has been in the forefront, that Superintendents and principals attend these meetings. Many times, kindergarten teachers also attend. Some of the schools have more than one kindergarten, or there may be more than one elementary school, so it may entail several meetings.

There is a definite relationship between Head Start and the schools. They even have copies of our ongoing assessment, which is done on the children three times a year. They know what we are doing; we know what they are doing, and we all discuss it. Our staff watches the newspapers for accomplishments of any children who have ever been in Head Start. We get the newspapers into our central office, and we follow the children's progress.

We take the clippings and underline the children's names who make the honor roll or accomplish other things. For instance, Williams with the Detroit Pistons graduated from the Head Start program based on the campus of Arkansas Tech University. Naturally, we followed him and some others on our governing board. The Speaker of the House of Representatives in Arkansas was a former Head Start child. We do not stop, we follow those who accomplish things in kindergarten, first grade, and all the way through life. We receive funding from 15 different sources, so it is important to track our success.

It does not require extra money within a program to do that, but it does require staff commitment and retention. It also takes relationships and transition between Head Start and the public school. It also probably depends on the part of the country. I realize that if I lived in Dallas, I would not get a newspaper that listed honor roll students in kindergarten. However, there are many rural programs where they still do that, and so it is right there in one's hands to track.

I will use an example from a clipping I saw a few days ago. In the eighth grade, there were eight children who made straight As. All eight of those children's names were underlined as having been a Head Start child in a rural Arkansas town. In meetings with the schools, we ask about how children did at the end of kindergarten when they enter first grade. If names are not provided in the newspaper, the schools release the names to us. The relationships one establishes with schools will affect the information one can get and how to track it.

Bardwell: One of our transition schools in Columbus has the highest mobility rate of any other school in the district. It is unlikely that any one of our Head Start children who entered kindergarten in the fall will still be there in June.

Kere Hughes: I am from the University of Kansas. I have a couple of comments, one relating to transition. There is a large body of literature in the field of special education for children with disabilities, on what kinds of strategies can be used to make transitions between Part C Programs and Part B Programs. That might be one place to draw on for information. The other comment has to do with an earlier question about relationships. I have recently been involved in two different studies. One is with our local Part C Program, and the other is with our local Early Head Start Program. They were generated in two very different ways, as Landry described: one where we approached them with a proposal, and one where we had an ongoing relationship and they approached us with a proposal.

We had completely different experiences with each approach. In the study where we approached them, we did not have a relationship in place and the research was difficult to complete. The families were fine, but the relationship with the program and with the interventionist made it difficult to complete. On the other hand, our relationship with the other agency has been an ongoing one where we provide the data to their program to inform their growth and change model. They then inform us about their next goals and where they want to go with their program. Being in a relationship makes the research much easier to complete. We also attend all of their Parent Policy meetings and develop relationships with the parents and the community, so that our research organization is grounded within the needs of the community and not just what we think we should be doing or what is interesting to us.

Webb: I am from Cincinnati, Ohio. One thing that I was trying to get at in my earlier question was pedagogical differences. We had two examples here of children coming in ready and reading, then being told "we do not do that here." Morrison spoke yesterday about when the child comes in with high vocabulary and high phonemic awareness and the teacher-directed pedagogue is used, and the child's skill level goes down. When a child-centered pedagogue is used, that child's skill level goes up. So, when we are talking about transition, it is not just the transition activity, or the relationships, because many of us do that. It is also what the pedagogy differences are between kindergarten, public school, and Head Start. Head Start standards require individualization. I do not know if that is required by the standards in public schools.

Bowman: One of the things we did in *Eager to Learn* was to take a look at all the curricula we could get our hands on, and the one thing I can tell you is that they all work for somebody, and none of them work for everybody. The end result is that one has to find the match between what works for a particular group of children and the curriculum that is offered. There is no magic bullet out there, and it has to be adjusted both individually and for the group.

Anita Varme: I am from the Collaboration Office in Iowa. The research I am hearing says that Head Start is doing something right. Ramey's research says that children who had been in Head Start continue to show growth through third grade. We believe that the reason for that is the comprehensive services provided. I am concerned about emphasis being placed primarily on the cognitive literacy development of young children. I would like to hear some responses to reassure me that this is not going to be the case, that the whole child is still going to be considered to be just as important. There is going to be a tremendous amount of time spent training Head Start teachers to focus on literacy, and I am afraid the other developmental domains of the child will get lost.

Herndon: Oftentimes, people will use the word "research,"and everyone is supposed to genuflect. Research has shown anything that people have wanted it to show. There has been much discussion with the current administration about Head Start not doing enough in the area of literacy, based upon research. When pressed, what is the research? Then one finds that this becomes an agreed-upon myth, and there is no specific research. We hear claims that Head Start has not done enough in the area of reading. A high-ranking government official said that the documentation for that claim is The Deficit Study, which was apparently released in 1997. A child coming into Head Start knows one letter of the alphabet and when he leaves, he knows two. This has been accepted at face value, without debate. There was no mention of the instrument used, who did the testing, or what outcome variables were used. What they did not say is that prior to 1997, every administration regional training office had always said to not teach children to read in Head Start, that it is not developmentally appropriate. Even when people came in to do reviews, reviewers told Head Start staff to take down the alphabet on the wall.

Not everyone is telling the truth when they say Head Start is not doing what it is supposed to do in the area of reading. Every administration, Republican and Democrat, made this statement. I had fun talking to Wade Horn a couple of months ago. I said that if people are going to criticize Head Start about this issue, why not have everyone sit down and say that it was an agreed-upon myth. It was national policy, and let's see what has happened since the 1998 reauthorization bill, when Congress challenged us to have children be able to identify ten letters. We set these high standards. What has happened since then? Apparently, from what I understand of federal initiative, the new research shows something different. When people say "research," the question is by whom, for what? If I already have a political agenda, I can find research that shows that the moon rises in the west. If I have enough money, I can get it. We need to be careful and humble when we begin to say what Head Start cannot do and has not done, and begin to say that we can all do something together about the issue, rather than saying it has not occurred and blaming Head Start.

Last year, the gentleman who was a former Governor of our state, sent an article to us from the National Bureau of Economic Research Review. They are the ones who talk about the gross national product and make economic predictions for the country. He also sent the article to the head of Nike, Phil Knight, because our Head Start program convinced Nike to get involved in making computers available to Head Start children. He said, "Neither of you have probably seen this. You should look at it." There was an article last August in this economics publication that talked about all of the benefits of Head Start. Not only did it say that the benefits happen for the children, but it talked about lessening the involvement in crime, and that their siblings who had never been involved in Head Start also had benefits that were far greater then siblings of the peer group who had not attended Head Start. When people begin to say, it does not work in this one area, and it is based upon research, what is the research? Who did it? When? Why and what were the politics behind it?

Susan Landry: I certainly agree that one needs to watch research. I wrote an article once that said research is only one source of knowledge. There are many others, and one needs to negoti-

ate how to balance those sources of knowledge. But, it is one source of knowledge. Over the last 35 to 40 years, I have observed the marvelous job that Head Start has done in establishing what I call the developmental supports for children. But, these children are not doing as well in school as we would like, and there are ways Head Start can improve. One ought to look at some of the research and decide whether it is a useful tool for one's program. It ought to be based on developmental competence, and then one can begin to layer on it more and more educationally.

Kathryn Barnard: I am from the University of Washington. I have been involved in the Early Head Start National Evaluation, tracking a number of other studies and the National Institute of Child Health and Human Development (NICHD) Child Care Study, including the Transition Study. One of the things I would like to mention that the research seems to bear out is that family conditions explain more of the variance in developmental outcomes than any education program. My particular passion is for parents who have essentially had rotten lives full of trauma and posttraumatic stress, and their children carry these anxieties. I have a theory that some children are exposed to so much trauma, crisis, and stress that they need even better environments and curricula than the average child. I wonder how educators address the probability that 25% of Head Start children may need much more intensive, thoughtful, and educational support to withstand the trauma of their environments. Is anybody thinking about that?

Bowman: I often think about that issue. I like your figure of 25%, because it means that 75% of Head Start children are doing their tasks developmentally, even if they have not learned all the things that schools want them to know before they come in. That 25% is a hard nut to crack. The families often need such extensive help that children will be grown before one can get the family well. We need to do much more Early Head Start, of having programs available to take pressure off of parents so they do not have to do everything themselves. The Ounce of Prevention Program teachers with whom I have contact found that once they get the children to be smiling and responsive, the parent tends to respond better than when the children are depressed. Caregivers can do things to both bridge that period for the child and at the same time get the child to help elicit from the parent the kind of parenting they need. But, it is a complex and difficult process.

Landry: I agree with Bowman that Head Start is doing an excellent job in most areas. But, this effort to focus on stronger language support and early literacy in the classroom is being done by almost everyone. They are working hard at it in the spirit of trying to figure out how to prepare children to be confident when they enter school. We need to focus on how to do that in ways that support and facilitate social and emotional development. We need to stop fighting about how one gets left behind if the other one gets attention, and work hard to understand how research on children's development may be applied to the program activities we need to develop for young children, to enhance both areas of development.

Lisa Klein: I am from the Ewing Marion Kauffman Foundation. I hope that the rest of the panel will also address this issue. One of the things we are increasingly aware of is the divide between those who support the literacy movement and those who support a social emotional movement. It is happening in all areas that we see, including the research, program, practice, and policy levels. All of us understand that all areas of development interact for the best school success and growth throughout life. Could you speak in a practical way about how we can stop talking about this as either/or and talk about what we consider to be key, which is that there is a link between them without which we cannot develop effective programs for children. We need you all to make those links so it does not look like it is this person against this person.

Landry: The research tells us we can support both of these perspectives. It has been examined, described, and reinforced with new research. I am personally not sure how to stop this split. My efforts are to continue testing models that attempt to bring the two together, and show that one perspective need not get lost for another. We have to keep working with people to see if we can put those types of programs in place and get the best outcomes in both, rather than argue about it at conferences.

Bowman: I would like to respond to that, because in some ways I was partially responsible for the current controversy. The first intervention of developmentally appropriate practice said what we knew at that time, that children are not ready to learn to read and write at that age, and they do not need to learn letters. The second intervention, which I do not think anyone has ever read, was stated by Sue Bradycamp who said that it is not either/or; it is "and." We can do them both. This is the message you all should take back to the field. The research community is clear about this now. Unfortunately, we did a wonderful job educating everyone on the first intervention, but we have not done a good job of getting out the additional message.

Thompson: Your question probably has as much to do with rhetoric as it does science. It is a question of how one provides images and models that have a compelling effect. Part of the reason that the divide occurs is because we begin with an academic mindset. After all, we are talking about school readiness, in which we are accustomed to thinking that one can educate minds apart from the emotional connections. But, if one starts at the opposite end of the developmental spectrum and thinks about the enormous growth of the mind in infancy, it is inconceivable that one could tutor a baby outside of the relationships that make social interaction such a profound catalyst for all sorts of growth, including the growth of the mind.

From my point of view, part of the way to convince external audiences is to compare a young child's learning to what we see early in life, and to argue that part of what opens up the mind as a catalyst are the relationships that the children find so compelling. In a sense, the human connection the children make provides the bridge, the gateway, to all sorts of intellectual catalysts. That weans us away from the academic model that has been so unproductive.

Herndon: One of the problems is that this is not just an academic discussion. Most Head Start programs have probably never seen the dichotomy in what they have been doing. The problem that we have now is that an administration has come in saying that we are not doing enough in the area of literacy. As a matter of fact, to help us, they have decided to move us to the Department of Education. The administration made up its mind, without doing any research or finding out about the practice or lack of practice in the Head Start community, and then set policy based upon faulty mythological assumptions. Therefore, if one hears Head Start staff sound almost fanatical about the literacy issue, it is not just about literacy; it is because they have been convicted and sentenced already, before the academic discussion about literacy. It is hard to do it in that environment. We have a President who stands up and says that if we do not improve literacy quickly enough, then we might lose our funding. When that comes out of a President's mouth, it is no longer an academic discussion. People from the highest levels of political office in the country have made assumptions about our professionalism, livelihood, and body of work, and they have already decided how this issue should be resolved.

In our program, we stressed teaching children to read when it was not popular, and we were criticized. Interestingly, some of these companies that sell products sent me personal letters after a national presentation about teaching children to read in Head Start, saying I should not do that. I see that they now have new products and new chapters in their books. Many Head Start programs have done a great deal of work, and no one has ever asked them what they have done, what their experiences are, and how to replicate the best known practices. No one has posed these questions to the field.

Lastly, Head Start does not toot its horn enough for the ways in which it helps different ethnic groups preserve their culture and language, especially in Indian Head Start programs. They have said that were it not for Head Start, they would not have had a way to preserve their native languages in their communities. Also, there are some communities who have not only done that, but have come up with excellent materials. The most troubling part for most Head Start people is that no one ever asked. We are talking about research, the most basic thing one can do. What is occurring? Before one comes up with the solution, ask what has happened in the field. If we sound passionate about this subject, it is because of erroneous assumptions that have been made at the highest levels of government about what the problem is and, most certainly, what the possible solutions are.

Mary Kay Smith: I am a Head Start Director in Bryan, Texas. I would like to clarify something that I heard Landry say at the Midwinter Management Conference in Dallas this year. I wrote it down, because I had hoped to dialogue with you to see if I misunderstood or misheard your comments. You were responding to the child measures and the indicators that we had focused on during that conference. I heard you say that these things will not be achieved through the current types of curricula used in Head Start, and that only by using a literacy-based curriculum will positive child outcomes result. Then you referred us to several specific curricula that would work, which were on your website. Is it still your stance that the type of curriculum used by many Head Start programs will not affect this change or achieve good literacy outcomes for children?

Landry: Take the High Scope or Creative Curriculum, for example. When we look at a large number of programs that do independent assessment of language development and preliteracy development, the programs are using child-centered but focused approaches to language and literacy. The children were significantly more likely to show greater gains across the year. There were 4,000 children tested in 20 large Head Start grantees. If there is good curriculum that gives teachers materials, books, and ideas on how to enhance vocabulary, and studies show they are based on research and can be effective, then it makes good sense to encourage their use. It does not have to be one or the other. Teachers often want to put things together that enhance different areas of development. In many ways, I see High Scope as a strong, positive, philosophical approach, but teachers often say that they need more things to work with, like books and ideas about how to put things in centers that relate to literacy. It is harder for a teacher when they do not have the tools. It is not impossible, but it is more difficult.

Smith: I have another question about your study on the 360 families. How were those families selected? What were the social and economic levels, and the ethnic groupings? Who comprised the sample?

Landry: A large goal of that project was to better understand literacy and the needs of healthy, full-term, children from low-income families, compared to biologically high-risk children, like those with very low birth weight. Because it is much more difficult to recruit large numbers of very low birth weight children in a short amount of time, the very low birth weight children were recruited from three large county and state hospitals. Full-term children were carefully matched so that we did not have social, economic, or family background differences among those groups of children.

There were approximately 60% African American families, and a much smaller proportion of Latinos, because when we started this research about 12 years ago, the National Institutes of Health (NIH) required us to have families with English as their home language because of the types of measurements. It was not a random sample.

Kelly Williams: I am an Education and Early Intervention Manager in Pennsylvania. My question pertains more to the teachers and the transition issues that we have been discussing. My hurdle is keeping teachers' morale up when it comes to believing in what they are doing, in comparison to what the public school teachers are doing. We have a difficult time getting the public schools to treat us like professionals, even though they know what we are doing. We are attempting to establish a rapport with them, but teachers repeatedly come to me and question what we are doing. I keep encouraging them to believe in what we are doing; we are doing it right. I present them with the research, but I would like to hear if anyone has any experience in how to continue to support teachers.

Bowman: It is a tough issue. I am not quite sure I know which people you are talking about, who are so discouraged. Is it the classroom teachers or the specialists who are coming in to help the classroom teachers? The classroom teachers are discouraged because they do not know how to do it. It is difficult for them to have expectations laid upon them, and they feel like they do not have the skills or the knowledge to handle children with special needs.

Williams: The difficulty is that teachers do feel good about what they are doing. The problem is that when children transition to kindergarten, they seem to regress. The teachers question what they might have done wrong. Would you have any suggestions for how to convince them that they are doing well?

Bowman: My answer stands, because the kindergarten teacher is the teacher with many children and little understanding. Most of them have had no courses or experience with special needs children, and suddenly they are being asked to integrate all these children into their classrooms. They often feel overwhelmed and unsupported. Frankly, they are often not supportive of the children because it is so stressful for them. More help for the kindergarten teacher is probably the best way to maintain the growth of the preschool children.

Bardwell: We have been working in Columbus, Ohio, on this issue for some time now. We have a collaboration between our County Board of Mental Retardation and Developmental Disabilities and our Head Start Program, where we have shared teaching between Head Start and the Early Intervention teachers. We are moving toward the transition into the public schools, where the issue exists. Bowman is saying that those teachers who inherit these children are scared. The numbers of children in their classes are probably larger than the classes where the children came from, so it is an issue of helping those teachers gain the skills to be as prepared as your teachers.

Comment: I remember the first year we integrated children with disabilities into Head Start classrooms. The panic. The horror. "We cannot do it." "What are you asking us to do?" "You are crazy." I directed the Transition Project for Region V, and I remember our work with regular Head Start teachers, because it was a shock. All kinds of bad things were said about those children.

Valerie Arnquist: When I heard your question, I thought it was referring to the credibility of Head Start as a program. As Head Start teachers, we struggle with that all the time. Every Head Start does. I have been with Head Start for 17 years. We are always working at not being "dissed," and being on an equal plane with so-called "real teachers," the K-12 teachers. That is the issue. It is not about special needs. We have enrolled special needs children for years, and we have done well. It is a difficult journey. It is hard to take research back and translate it into practice. It is nice to know all this information, but all we can really do is go back to our neighborhoods and our books, and hold our heads up high and do what we can. It is always about relationship building. Everytime one turns around, it is always about relationships. If we

get up each day and continue doing the right thing, pretty soon we earn credibility in our program. Tell your teachers to stand proud, by getting educated and using research.

McGee: That goes back to my question regarding relationships, and of researchers understanding the nuances of the community.

Pickett: In Cuyahoga County, Ohio, we serve about 8,000 families. This comment is on the curriculum. You said that you have been in Head Start since 1975?

Herndon: Yes.

Pickett: What curriculum were they using then? Or was there a curriculum?

Landry: There was no curriculum.

Herndon: If one had money, there was a curriculum. For literacy, there was not anything specific because early child education programs were told not to "literally" teach phonics and reading in those days.

Pickett: I graduated from Head Start in 1974. There was no actual literacy curriculum, but I graduated from Head Start knowing how to read. Socially, I got to first grade and was telling my teacher how to teach reading to the other children. I was put in the corner almost everyday, but I continued to be ahead of my class. Now, my own child is transitioning from Head Start, knowing how to read with a high score, using the curriculum that Head Start uses with nothing else added. What is so broken with Head Start now that it needs to be fixed? Many children in Head Start are reading, but families have the option of whether or not to be included in the different research projects that look at this issue. Many low-income families do not like to be put constantly in the public eye. When is the research going to stop? Twenty years ago, the issue was drugs in low-income, African American families. Ten or 15 years ago, all eyes were on pregnancy and STDs, and just 7 years ago it was lead levels in low-income families. Now, the problem is us not being able to read when the government wants us to read. The research is still not complete.

Landry: How many people in this room feel that Head Start has no improvements to make?

Pickett: Everything needs improvement.

Landry: Right. Are we going to get anywhere by being defensive? When one is already very strong, why not work with that strength and get even better?

Pickett: Head Start as a family has no problem with growing, but I never hear about all the good things Head Start does, about research on the good things. It is always "they are not doing this and not going to be able to do that."

Greg Powell: I am from National Head Start Association. First of all, I want to react to a couple of the comments that were made earlier, and come back to where we are at now. My understanding from the presentation is that Head Start children are currently able to identify eight to nine letters, so we are falling short of the expectation. We have always focused on making children ready for school. One of the things I was impressed with about Bowman's presentation was her focus on what environments make children ready to learn, not ready for school, but eager to learn.

Landry: The question is, what are they learning? Developmentally competent children are learning all the time, and if one wants them to learn things for a specific social context, one has to give them the opportunity to learn it.

Powell: That is correct. I certainly concur with that. I studied anthropology, and I can offer a quick example. There are two Olympic sprinters. One was raised in an environment where it was a practice to hold the child up and let him pretend to walk, beginning in the first couple of days of life; so he was getting exercise in his legs. In the other environment, the child was strapped to the mother's back for the first year of life. Both of them learned to walk very well, and actually ended up running quite fast at the Olympic level.

The problem has been in the rhetoric. Nobody here believes that Head Start does not have room for improvement, but the language that has come out more recently is that it is broken and needs fixing, which is a different angle than believing that it simply needs improvement. It is insulting to many people like yourself who have worked in the Head Start field for close to 30 years. I have watched how we get new requirements and complain about them, but we implement the requirements the best possible way we can with the resources that we have. One of the things that I have not heard from this panel is the reiteration of the fact that it is not so much the curriculum that works, but it is how the curriculum is used in a particular community. A strength of Head Start has always been its ability to adapt a curriculum to a community.

Blanca Quiroz: I am a student. I want to offer some examples that I have witnessed while doing research on language development with mothers in their homes. Language is important, because it impacts how we construct ourselves, learn about our emotions, and express our experiences of the world, including our pain, sorrows, and happiness. A curriculum allows us to learn to be literate. When we go to homes and ask the parents what they expect from Head Start, they have a very specific spectrum of expectations. "I expected my child to learn to tell what she feels, to express herself." Some say to be independent. Some say to feel proud of themselves. Some say to learn the letters.

In almost all cases, the parents are happy that their children have learned it. In almost all cases, they have expressed having strong relationships with the teachers. These are parents that are probably from other cultures, who are minorities and who do not speak English as their first language. We have gone to classrooms and were amazed by the amount of Spanish that non-Spanish speaking teachers are using in the classrooms. The fact that that experience does not continue in public school is not a failure on Head Start's part. Head Start should be very proud of what they do.

Jeanie Carpenter: I am an Administrative Director from a primary care practice in the inner city of Philadelphia. I am here because we are starting a partnership spearheaded by the United Way, to bring together key stakeholders to look at school readiness. It is predominantly geared toward those children who are in child-care centers. I actually work at the Children's Hospital in Philadelphia and am responsible for what we call School Readiness Specialists. These Head Start agencies are going to be involved with parent education and parenting skills education. Head Start and Early Head Start have done a lot of work in that area. I have not heard anything so far about parent involvement and what is expected of parents in terms of getting their children ready for school. I cannot stress enough the importance of the relationship between parent and teacher and for teachers to be role models for parents.

Specifically, my question is whether there are any good, useful, and simple tools to assess parent involvement or parent engagement. We are targeting children from birth to 5 years of age. We are trying to teach parents in different settings such as health care centers, physician offices, early child-care centers, and so forth. The unique component of this initiative is to create or adapt a curriculum for parents at larger early child-care centers. We are struggling with how to

gauge a baseline for parent engagement or involvement. We are doing needs assessments as we go out and actually talk to some of the parents. In reaction to some of the discussions this morning, I have not heard about how the parents should be involved.

Bowman: There are an endless array of parent education models out there. The problem with parent education, which has been researched endlessly, is that it tells people how to raise their children. If they want to change how they raise their children, then they are perfectly good models. But most people raise their children the way they do because it is personally meaningful to them. It makes sense to them, so asking them to behave in a different way, when nothing else has changed in their lives, is probably asking them to be a little crazy. One is asking them to accept on faith that what one is telling them about how to raise children is valid, even though it may not fit anything else that their neighbors do or anything else that makes sense in their own life. Should they change how they treat their children on that basis? Obviously, relationships make a difference, but we have to be extremely conservative about what to expect from didactic education of adults who are living in an enclave that does not support what we are trying to promote.

Bardwell: The Children's Hospital in Columbus, Ohio, with the American Academy of Pediatrics, has begun a program. They are called Close To Home Centers. It works through pediatricians' offices and those kinds of sites, with the same kind of goal and the same kind of principle. The program is called Reach Out and Read.

Webb: Herndon explained the high stakes, and that is what this is about. Out of 13 mandated indicators, 12 are in language and literacy and one is in early math. Therefore, when one is told that they will be judged on those items, and on those alone, the Head Start community looks to the public school community and all the failed attempts of teaching to the test. That is where this "or" comes in. We believe in the "and," and always have believed in the "and." But, I am not tracking or mandated to track and combine 5,000 children's social and emotional development. We do that domain on every child, but I am not mandated to track it. I do not know what will get reported to Washington; yet philosophically, many Head Start people believe that the social and emotional aspects of relationships will have a greater impact on language development and literacy then anything else.

I am interested in Landry's research on the amount of words spoken by children. I do not know if the issue to focus on is the amount of words spoken by children, or the relationship between the adult and child, because I think building relationships improves language.

Landry: It is both.

Webb: However, language and literacy areas were highlighted much more than social and emotional development.

Landry: There are six areas that need to be attended to. Language is the content, and the way language is engaged with the child involves sensitivity to their signals, building on their interests, and not restricting or stopping them from expressing themselves. That is the style with which the language and cognitive activities, whether science or math, can be child-centered, engaging and effective.

Webb: But we are not mandated to collect information on those topics, and that is where the point lies. I might do a good job in those areas, but I will not get judged on it. That is where we are. Head Start has instead been put through the situation exemplified by "put the letters up and take the letters down." When I first came to Head Start in 1995, I told the teachers to put up the

alphabet. I was in public education before that time. The Head Start teachers told me that I was going to get into trouble for having the alphabet in the classroom, and I said to let me worry about that.

Landry: One was supposed to have a literacy rich environment, but no letters.

Webb: We are having a back and forth conversation, but if the stakes were "and," we probably would not be in this debate.

Landry: Here are the stakes. One takes the relationship, that set of behaviors that are critically important as scaffolding support, and puts those in place to ensure that content in the classroom provides children with knowledge and concepts. It will all fall into place. One will get scores or reports on children's outcomes where they need to be because one has put social and emotional relationships as the support and foundation for all the rest.

Webb: I still think that when we have a set number of domains, and we are only going to measure one or two of them, there is a high stakes aspect to it. People focus on teaching to the test. That is what has happened in public school education for years.

Comment: I have so much more concern for the child then I do for the program. Bowman shared how some children are going to learn all about letters and some children are going to learn all about trees. My concern is about the children who want to learn all about trees. What about the children who are not motivated, with no interest in letters. What happens to their self-concept, when there is so much emphasis on literacy and letters? That is my concern.

Landry: Those children can learn four or five letters out of trees.

Bowman: All of the vocabulary that goes with trees is where the emphasis should be. The point is not to just learn some letters; it is to build a strong language base that gives children cognitive readiness.

Conversation With Julius B. Richmond, Edward Zigler, Judith Palfrey and John Pascoe

John Pascoe: This is a conversation hour with Julius Richmond, Ed Zigler, Judith Palfrey, and myself. Dr. Richmond has a few comments, and then we will open the discussion with questions and comments from the audience.

Julius Richmond: Judy Palfrey made some comments earlier about some early work that Bettye Caldwell and I had done on the development of children growing up in environments of poverty. We, for somewhat different reasons, were not studying children growing up in poverty. We wanted to look at the development of children over a period of time. However, the medical school, the State University of New York in Syracuse, was located, as many medical schools were in that era, in a very low-income area. So we recruited families from that area.

As we began studying these children, we began to see what we came to call developmental attrition. Judy had referred to this as gradual developmental decline. One might say, why was that so novel in the early 1960s? The fact was that we had had many studies on the development of young children, but most of them were conducted on university campuses by faculty members in child development. Usually they ended up studying the children of other faculty members who were enrolled in the campus preschools. Those children, of course, did not show any development decline. We published our findings showing this developmental attrition over the first year in the *Yale Journal of Biology and Medicine.* Dr. Zigler, over the years, has been critical of us for having published it in this journal because he said, "you know, that journal does not have a wide enough circulation." Coming from Yale, he knows.

Our first thinking was about how we could prevent this kind of developmental attrition, so we instituted an intervention program we had developed. With this intervention, we essentially prevented the development decline. The intervention was basically a comprehensive early childhood program. We were doing this work at about the time that the war on poverty came along, and at that time we had the political will and the resources to make a national commitment to try to do something like this on a larger scale.

When students ask about how policy is affected, I tell them that the important thing is to first try to develop the skills to further the knowledge base. Then when the opportunity comes along to apply the knowledge that we have, it will be done on the basis of sound knowledge. When Mr. Shriver asked me to come to Washington, to see if we could implement this intervention on a larger scale, we basically knew what would work. It was perhaps somewhat risky to think that we could do it in 2,700 communities simultaneously, but at any rate, we knew what the ingredients were. We thought that people in their local communities could respond and develop the kinds of programs that would make a difference with their children.

I do not think I would have had the courage to say to Mr. Shriver, "yes, I think we can do it," if Bettye Caldwell and I had not had the direct experience, in smaller numbers, of demonstrating what it takes to prevent this attrition and to try to enhance the development of children.

Edward Zigler: I have to point out something that Julius left out that historically, is very important. He talked about other people's courage. We should all know, because history has not forgotten this, but the times have changed. This was the first research of its kind ever done, and it took great courage and confidence to do it, because both Julius and Bettye Caldwell could have been pilloried if this did not work. At that time in this country we had the Child Welfare League of America. When this research was being done, the Child Welfare League believed that no child, during the first year of life, should ever be anywhere but with their mothers and fathers, which meant, primarily, with their mothers. They continued to hold that position long

after this work had been done. What Julius Richmond and Bettye Caldwell showed is that it is not so much who you are with, but the quality of the environment.

This problem is back with us in the scientific arena. In each of their last books two renowned pediatricians, T. Berry Brazleton and Stanley Greenspan, both proclaimed that no child in the first year of life should be in child care. I can empathize, because we have from a cost/quality outcome study done in Connecticut, Colorado, North Carolina, and California that looked at infant/toddler centers with young children from birth to 3. In 40% percent of those centers, the quality of care was so poor as to put the children's health and safety at risk. Combine that with the demographics that today, in the United States, 55% of mothers with babies under 1 year of age are in the out-of-home work force. For college-educated mothers, that number is 68%. When great pediatricians tell mothers they are doing a great disservice to their children, we know that many of these mothers have no choice but to work. That is especially true if one is a poor mother on welfare.

My own position is, of course, we have to tell what our science shows, which is why people like me keep saying women ought to be able to decide what they want to do with their lives. Our responsibility is to make sure that the quality of care is as close to the care that Julius Richmond and Bettye Caldwell gave children decades ago. We have to know that these children are going to have the normal growth development that we want to see. I decided to take my own stand, fighting for high quality programs instead of telling mothers that they are damaging their child. Most mothers have no choice. It is not just Welfare mothers. Many families in this country live from paycheck to paycheck. They need those two incomes to function. While this work was classic, wherever it was published, I just want it in a broader arena. I never criticized Julius, he is my mentor, and I announce that publicly. Julius never gives up and I have never heard him raise his voice. I have never seen him get sad. He is always upbeat and optimistic. He is waiting for that next great period.

I want to share a short piece written by Joan Lombardi, entitled *Opening a New Window on Day Care*. She talks about a study of day care and family day care done in 1970 by the National Council of Jewish Women and then repeated 30 years later. The story is all in one table—what they found in 1970, what they found in 2000, the same, the same, the same, the same. All the data I have read say to me that in over 30 years, during which many of us have spent a lifetime trying to improve the quality of child care in the United States, it is exactly the same mediocre to poor quality, particularly for infants and toddlers.

We have yet to learn the lesson of Julius Richmond. Julius, he is like that Energizer bunny that keeps going and going and going. Some of us have the weakness of getting tired, and it is pretty tough to live with 30 plus years of failure about what we have been able to accomplish in day care, and the lessons Julius and Bettye Caldwell taught us almost 4 decades ago. It is not rocket science. I have been studying human growth and development for about 50 years, and the quality of the environment is the critical aspect for helping children grow and develop properly, whether it is at the cellular brain level, or at the level of their everyday behavior. Bad environments do not help children; they might not hurt the most resilient of them, those who have protective factors, but they can be bad enough to be damaging to children. We saw this in the declines that Julius spotted almost 40 years ago.

Judith Palfrey: Ed, can I take you on a little bit about that rocket science issue? I have been so moved by watching Julius's neuroscience slide used in certain ways back in the '60s and losing its potency, and then in the '90s, the brain has arrived. People now know more about the data than 60 years ago, and stating the premise in a way that caught the public's eye and caught maybe that latent interest that was there is amazing to me. Every time that we say it is not rocket science about children's development, we shoot ourselves in the foot. I have started saying the exact opposite, that the kinds of things that you and Julius have done over the years is absolutely rocket science, and that it absolutely requires the same level of commitment of intellect,

resources, time, and energy as sending a man to the moon. One can actually think about it in the same terms if you ask this question: What makes rocket science? One of the things that makes rocket science is that one has to put multidisciplinary teams together, one has to have chemists, one has to have people who know something about astronomy, and one has to know people who know geology, who know about jet propulsion, and so forth. That, in fact, is the same deal for child development. One needs educators and public health people and dentists and social workers, and they each have to have a knowledge base, and so forth.

However, it seems to me that the difference between rocket science and child development involves two things. One, when sending a man to the moon, you know exactly where you are going; you are sending a man to the moon. It always helps me to talk to Julius, because I can always hear where the moon is, in his view. I am not sure that all of us really agree, and I think that is what you were talking about with the Child Welfare League, that that is the place where we are going. There is the debate about whether home environment versus center environment matters.

The second thing is this issue of maybe not knowing the target exactly. I am not sure that we articulate the urgency in the way that Sputnik articulated it; that this has got to be done now. If we can somehow grab that Yogi Berra thing about knowing which way to go and take the fork in the road, and go with clear articulation and urgency, than we should use the rocket science metaphor in a different way and say that this is rocket science.

Virginia Rauh: I am struck by new vocabulary—one is "exposures" and "susceptibilities" and the other is individual versus community effects. The issue of children has not changed. Those who are most exposed to risk have the lease effective child care. What are some of the things that suggest susceptibility? Poverty is an exposure paradigm. These are useful terms in the intervention field.

Edward Zigler: I think there are two things that have happened in the field of human development. One has been we have had our own tremendous paradigmatic shift over the 50 years that I have been in the field. Of course our new paradigm is Urie Bronfenbrenner's bioecological model. That has given rise to something that is both old and new that can be traced all the way back 35 or 40 years, but now has new saliency—a systems approach to human development in which all the disciplines make a contribution. When thinking about the organism, one has to start dealing on multiple levels: biological, epidemiological, and so on. There is something practical in what you say, and that is that words are important. This is a fact of life, because whether you look at Urie's ecological approach or the systems approach, there are a multitude of levels one has to worry about: the neighborhood, the family, the society, the laws made in Washington, and so forth. It is an interdisciplinary task. Unfortunately, we are still relatively weak at talking across disciplines.

Many people are still not comfortable with the concept "at risk." This morning we heard Ron Herndon talk about respecting people. To many people, that still "smells" like the old deficit model—there is something wrong with these people, they are at risk. In fact, there is a new book out challenging that whole approach called *Children of Promise*.

Theorists, for better or worse, develop their own lingo; they have their own terms, their own constructs, and even though they are trying to fit themselves somewhere into this systematic approach, they still use their own language. That is because exposure and susceptibility are words that have a common vocabulary meaning, and anybody who understands the English language can understand them. However, they are not terms that are bandied about in psychology. The point that I am making is that we are making progress, but it has been slow; it has taken a long time. It has been 50 years, and we are still not great at using each other's language. It just does not sound right to us. We get back to that reductionism argument of which level is the right level. However, it is not important because they are all the right levels if you take a

systems approach. These are translation problems, and I believe that as this model becomes more and more pervasive, we will get better at talking to each other. We still have trouble talking across disciplines, even though we now know we have to.

Richmond: The issues you have raised in the use of language is important, but I think that we need to develop and continue to develop strategies for a large population. That is where epidemiological approaches become so meaningful. Lacking that, in terms of exposures or susceptibility, what we tend to do is to rely on anecdotes. An interdisciplinary approach is important, because one can put these types of questions to the test, through population-based studies, which is the stomping ground of epidemiology. I would emphasize that, whether we are talking about individuals or communities. In my introduction to Judy's book, I said that this is a "seminal book for pediatrics," because it turned what is traditionally a discipline that faces inward to the hospital outward to the community to tackle complex and difficult intellectual problems.

We need to understand the use of those words, but still try to interpret them. There are translation problems, but we have to try to interpret them in relationship to determining if they apply to large numbers, or if we are dealing only with individual, largely idiosyncratic phenomena. If we are really interested in larger populations and the larger public good, then I think we do, ultimately, get to population-based sciences.

When we were developing Head Start, we thought about our knowledge base, which was more than adequate to proceed. The knowledge base helped generate the political will, by which we mean resources—that is basically what political will is. Where we as professionals, both from the research side and the applied side, are the weakest is at social strategy. If there are the resources and the knowledge, there is still the question of how to put it all together to make it happen for the larger population. That is how I have tried to deal with some of the issues you are raising.

Palfrey: I might just comment on the theme about mentorship. Julius taught me to ask the questions, "Do I have the knowledge base, in other words have I developed the model for protecting children from child abuse? Do I have the political will? Do I have the resources?" If you have answered these questions and you can meet those tests, your chance of success is much better. You have to have all three. This is the lesson that Dr. Richmond has taught so many people over the years.

His other quality is not just to say the words "social strategy," but to demonstrate, in elegant terms, how you translate that strategy into action. One needs to ask, "What are the components I am going to need, what is the timeline, how do I go after it, how do I plan for it?" That is the social strategy piece that we frequently do not put to the test. Julius will be remembered for this particular way of thinking. As an intellectual contribution it is just stunning, and I hope everyone is taking notes and uses his method.

Diane Langkamp: How can we move child-care policy forward at this time, with Welfare Reform, and so forth?

Richmond: Earlier I made reference to the fact that we have not manifested as much creative leadership as is needed. We have not identified a way to focus the public's attention on what the next steps are that will work. Let me explain that by indicating that you cannot go to a legislature or to people in a position of large-scale administrative responsibility and suggest that you want to do a little bit of everything at once. When I say we have not manifested creative leadership, I mean that we have not extrapolated from our experience and research data, the issues needed to mobilize the political will.

We merely let it play out in a pluralistic way and say the research is out there, make up your mind. In terms of policy, this does not lead to helping many children. At this time we need to

think clearly about what the next steps should be that would benefit large numbers of children who need better care than what they are receiving.

The fact is that in more affluent families where both parents are working and their aspirations have changed, we have not mobilized their communities to improve child care. A case in point is when Zoe Baird was nominated for a judgeship. The rhetoric was at the level of, "did she pay Social Security for her babysitter?" This was extremely revealing to me because the real issue was the kind of child care that educated, wealthy women are getting for their children.

I believe we should we be moving more towards a policy framework for strategies for universality in improved child care, rather than remaining as focused on children and families of low-income backgrounds. I am being self-critical, because I think we have not yet developed a good strategy to be more persuasive with the public at large.

Zigler: I stick with things a long time. I am very persistent, but unlike Julius, I get ruffled and unhappy, and I want what is right to happen. Child care has been the greatest defeat. After working on it for many, many years, I thought long and hard about your question. It is a complicated issue. For one, we are still ambivalent about women being out of the home. They do not understand the economic circumstances, the economic changes that demand that young couples have two salaries. We have a very active right wing in this country that has very good resources and works very hard for their favorite causes.

I was one of the architects of the Comprehensive Child Development Act of 1971, in which we thought we were going to have a child-care system in America. We came very close in 1971, but the right wing came out in hordes and argued that we do not need day care. The family should be raising children. There is a long history in this country that the government be involved with children until they enter school at age 5. The right wing is very active and believes there would be no child-care problems if women read their Bibles and were where they are supposed to be—at home taking care of their children. That movement is not going to go away.

There is another very serious issue that we have just discovered, thanks to Frank Gilligan, which is a new concept called " frames of knowledge." We used to call them scripts in the old days. That is, for everything that comes into your head you already have a framework to give it structure, and to organize and understand it. On the Benton Foundation web-site, one of their studies asks what comes to mind when you say day care. They think babysitting. He came up with a nice discovery—there is a metaphor in people's heads, and he calls it the "container metaphor." To most people, even wealthy people, day care is just keeping children. One of the tragedies is that even those who have the means to do so do not find and pay for high quality care. This is because they do not view it properly.

The work that the Benton Foundation paid for showed that to most people child care is babysitting, it is a container mentality—you park your child, the package, and you want it to be safe and dry, then you pick up the package at night and go home. That is the metaphor for day care.

Welfare reform, this time around, is a very good example of how child care has nothing to do with children. It has to do with women going to work. It is a service that allows mothers and fathers to go to work. What we know in the 37 years since Head Start began is that child care is an environment that is critical to a child's growth and development.

I have tried to solve this problem and have now decided to invent my own solution. The knowledge base I have about bonding and attachment and well beyond, tells me that I want mothers and fathers to take care of their own children for the first few months of life. Every other industrialized country on the face of the earth, except Australia, has paid maternity/paternity leave. I pulled together a commission 20 years ago, and we recommended that this country have a 6-month leave, with 3-months pay at 75% of income. That would have put us on par with Canada.

Ann Crittenden: To get your point across to policy makers you must begin to think of our children as our national resource. You must say that we need to take care of our infants properly and they belong with their mothers. The only countries that do not have paid leave are Swaziland, New Guinea, and the U.S. You must be aggressive about this, and then talk about universal extension, the other issue. You must say that the public clearly supports what we are asking for.

Zigler: Where we must go next with child care is to universalize it. We are going to have good quality preschools for all children and then there will be good quality child care for poor children as well. In my model, Schools for the 21st Century, care is universal and begins with preschool at age 3. From birth to 3 there are home visits to help parents become their children's first teacher. These schools recognize the "new world" and have a day that corresponds to the work day of mothers and fathers. Then there are "before- and after-school" and summer vacation programs for children until the age of 13. I sold this to Hawaii, and they just picked up the school-age part. My schools are called family resource centers, and in Connecticut and Kentucky they are statewide. We are working to put these schools in Arkansas right now. It is catching on; it sells itself. You are right, when child care is universal it is for everyone. It also removes the onus that it is only for poor people, and for Welfare mothers. It is even for the affluent.

We can see the solution, even though during the first 3 years of life it is still difficult. However, I believe we are going to win, thanks in large part to you and others who are better communicators than I will ever be. There are 33 countries that have a paid leave—maybe more by now, I have not kept up on this. The U.S. Chamber of Commerce and the National Association of Manufacturers testified against the unpaid family medical leave act. They said it will bankrupt America; small business cannot have it. We passed the bill—and you know there is an old adage in Washington. You win what you can win when you can win it. It was an uphill struggle, but we finally have an unpaid family medical leave act, which was all we could possibly win.

There was a report on the costs of unpaid family medical leave. This report found that it costs next to nothing. Most employers do not even hire a replacement because other employees pick up the slack. Therefore, it costs next to nothing and could not bankrupt anyone. However, only half of the women are covered because, in the present economic milieu, most women cannot take an unpaid leave. They live from paycheck to paycheck.

Ending on an optimistic note, I believe it is going to happen. It is going to happen state by state by state, so we have to all work within our states to make this happen. I argue that tying child care to the schools is simple and appealing. We will always have schools, and if we could just turn child care into education we could win this one too.

Richmond: We came very close to having a Child Development Bill. It passed both houses of Congress, and Ed was then directing the Office of Child Development. What Ed does not tell you is that this was a crisis of conscience. He and Secretary Richardson had to resign, because even though this was the will of Congress, and presumably reflected that the country wanted comprehensive child development programs across the country, the president decided at the last minute not to sign it. At any rate, we came close. We had the political will. We could not quite implement it, and we have been struggling ever since.

What I was referring to as the need for creative leadership is what Ann is manifesting. She has figured out how you put this together and communicate it to decision makers in the executive and the legislative branches of government. Also, the private sector has a major role to play, and particularly the corporate sector needs to be part of the discussion and the solution.

Crittenden: In California with Welfare Reform, it is cheaper to have paid leave than to have infant care. In Washington state they have changed from requiring mothers to go back to work after 3 months to going back to work when the child is 1 year old.

Richmond: Another point is that Ed keeps saying the glass may be half empty, and I see it as half full. Maybe the only plus in the Welfare Reform legislation is that it has focused attention on the children in ways that we were not doing before.

It does not take a rocket scientist, Judy, to understand that if parents are put to work, we also have to focus on who will take care of the children. Essentially, the right wing opposition has not ideologically moved from where they were, but in practical terms, they lost the fight. They wanted Welfare reform; they got Welfare reform. Now they have to face up to the issue of child care in ways that they never had to before. We might win if we put the package together in a way that communicates the needs of children and families in a more visible and articulate way. We cannot ask for a little bit of everything. The issue must be well focused and clear.

Shannon Dungan: As a practitioner I see that we need high-quality teachers. We must be able to pay for their training. How are we going to make educators tackle this problem? Elementary and secondary teachers do not even consider preschool teachers as peers.

Zigler: I have been giving this one a lot of thought too. You are right, none of this will work without good, highly qualified teachers. We all agree on that point. The question is how to do it. There has been a chasm between those in kindergarten through high school and those in preschool. For too many years there was a notion that what happens in those first 5 years of life have nothing to do with education. Think about it for a moment. We have the NEA, why do we need an NAEYC? Because preschool and elementary school are seen as two different, unrelated worlds. Frankly they just did not like each other; however, this is beginning to change. Studies on brain development, along with Zero to Three and other organizations, now show that if we are looking for greater achievement in later years, we must deal with the first 5 years.

Educators are coming around, and the fact that my schools are now in 20 states, shows that they are getting that message. Even the President of the United States recognizes the importance of preschool, even though there is no allocation of funds for it. The more practical issue is how to build a career ladder to produce qualified child-care workers. It looks as if this will only happen state by state, just like education.

The Mailman Family Foundation recently held a full-day conference on the subject of your question. At the conference there were many suggestions. We find that people are thinking about this issue and working on it. They know that the essence of success is the teachers. There are still many problems, such as not paying preschool teachers enough. I am not going to pretend that it will be easy. I am telling you that there is good thought going into developing programs for professional development. In North Carolina there is the TEACH program, where they are trying to upgrade day-care workers and help them pursue higher education. This is being done in 20 or 30 other states as well.

Richmond: I believe the universality approach will go a long way toward dealing with this issue. Being under the same auspices should help in minimizing the differences. Of course, those in higher education who train teachers need to retool how they do this. That is an important dimension.

One of the problems, and the reason why Ed keeps coming back to state by state, is that we have to remind ourselves that in this country elementary and secondary education have been funded largely at the state and local level. This means that there are 50 different systems. It is always amusing to me to hear the Secretary of Education make pronouncements about elementary and secondary education. Aside from the Elementary and Secondary Education Act, they contribute little, if anything, into these schools.

When the first President Bush called a Governor's Conference on Education, he thought it was not going to cost him anything, but the governors were one step ahead of him. They wanted him to focus on early childhood education because there was a precedent, with Head Start, of

federal funds being provided for early childhood programs across the country. They were no fools. They were sending the message that there should be federal money for education. However, if we develop a completely separate federal system for early childhood education, then we could be bumping up against each other in unfortunate ways.

Dungan: Many states do not even have degree programs in early education.

Peter Lenrow: Parents are viewed as the primary educators and health care providers for children. How do you, within Head Start, implement practices that place parents as the primary educators and health care providers? Would I be right in saying that by universalizing preschool education you help this?

Zigler: I think that will help a great deal and that is why it is time to move to a universal system similar to those found in many other countries.

What has always been troubling to me is that there is another program that receives more money than Head Start; that is Title I. I have been watching the Title I peer involvement component, and one of the problems has been how they deal with it. In Title I, they demand parent involvement, then they go away from parent involvement. They are not comfortable with poor parents. What Ron Herndon said this morning is true, and that is why so many poor parents, Black and White, have such low regard for the schools. There is a new knowledge base about the role of parent involvement in children's school performance. We now have a vast body of literature that shows definitively that the more a parent is involved with his or her child's education, the better that child does in school.

At that first governors meeting, six goals were developed. The first goal, because of Head Start, probably, was school readiness. School readiness, as we know, takes place in the first 5 years. The reality is that poor people do not have a lot of power. It is only when they can team up with the middle class and the mainstream that you begin getting programs through. In Europe they have always taken the universal approach. France and Belgium have a universal system with add-ons for the poor. In the United States, the pattern is very clear; we take a categorical approach that is cheaper. You just give money to poor people. Julius is right, children in the United States have only one universal entitlement—schooling from age 5 to 18. We have a long way to go, but I think universality, as you suggest, is going to help.

Palfrey: I had the opportunity to participate in a universal program called Brookline Early Education, basically a Parents as Teachers program. The program had all the components that Ed talked about, and was offered through the schools to all children in the city of Brookline. Since there are not many poor children in Brookline, one third of the population from neighboring Boston was added to enhance the sample. The young people are now 25 to 27 years old, and we have had a chance to talk to them and to their parents. What is fascinating is that the parents of whom we called the "suburban children" were the most enthusiastic about what the program had done for them and their children, and wished that programs like that still existed. We will try to do something qualitative with the information from the phone interviews. There was a control group, and the suburban children in the program did not do any better on anything than the suburban children in the control group, nor did their parents change on any measures. By contrast, we did not have quite that same depth of excitement from the urban families in the program, but the children did much better on measures of health, engagement with education, and mental health.

I keep thinking about Muhammad Ali. You've got to float like a butterfly and sting like a bee. Sometimes you have to have both parts of the approach, and for needs that are so profound, targeting is important. On the other hand, for the buy-in, the universal approach becomes important.

To change the subject a bit—I want Jack to say something about fathers. I found a wonderful article that had been written in 1915. It was one of the first epidemiological studies to show the relationship between poverty and infant mortality. Unlike today, they actually looked at father's income and infant mortality as a direct relationship. The study also looked at breast feeding and infant mortality, and found that breast-fed babies died at one third the rate of non-breast-fed babies in 1915. What was even more interesting about this paper was that there was a group of children who were not counted in it—illegitimate children. They were children that did not exist, because if you did not have a father, you did not exist. Therefore, even researchers who were looking at the effects of poverty did not count these infants in the denominator.

Here is my two-part question to Jack: (a) What happened to illegitimacy? and (b) Why don't we think about the fathers in our discussions?

Pascoe: Illegitimacy has become single parenthood. Recently, I have been looking at fathers indirectly working with maternal depression. What I have been impressed with, from the National Survey of Children and Families, is that if you look at depression in mothers, and correlate it with child outcomes, there is not a single good outcome for children. Mothers who are socially isolated, not married, do not have a live-in partner, and are indigent, have depression rates approaching 50%. There are other smaller samples of indigent mothers with small children, collected in pediatric offices where there are fairly constant rates for maternal depression at about 40 to 50%. Obviously, as pediatricians, we are not addressing the problem. There may be other disciplines that are beginning to address the issue of maternal depression, but I see the lack of a partner as a major factor in maternal depression. That obviously has ramifications for child development and for well-being.

Palfrey: The reason I was asking is that Jack has done some of the most beautiful work in showing a difference in birth weight, when the father is present and not. I am being a bit provocative here, but I think one of the things that sets us back in some of these political arenas and in social strategy is that poor women are looked at very differently from middle-class women. They are looked at in a variety of different ways, but primarily they have to be the family bread-winner. The father is nonexistent; he is a sperm donor and is part of the child's life—in fact the term, "my baby's father," is often used to describe the father. As I get older, I get more right wing—but is there any part of the debate that is about family? About the fact that there are two parents? Are we taking advantage of what we know about the strengths of fathers and putting them into the family equation?

Pascoe: At the National Data Center, I do not think they asked about partners so much as marital status. Whether you were poor or not, if you were married you were much more likely to have lower levels of chronic depression than if you were unmarried. Again, the chronic stress of being a single parent, whether or not you have the financial resources, is detrimental to yourself, as a mother, and eventually to your child.

Richmond: Let me go back to your earlier question about parent involvement. I commented during lunch about some of the dilemmas and issues we faced in the early days of Head Start. As a result of the fact that Bettye Caldwell and I had been in the trenches, we knew from our clinical experiences that parent involvement was important, so we made a parent involvement component a requisite in our request for proposals.

Because of the experiences that we had, we did not use the term parent education; it was always parent involvement. This meant we put out some general suggestions such as that parents should be involved in watching, with the teachers, the behavior of their children. Over the years we have added communities trying different approaches, which we encouraged. We have had a variety of approaches studied, and Judy has just commented on some of data that have been

collected. We never said the involvement had to be from mothers; we always used the term "parents," so when fathers were available, we certainly encouraged that. Another part of the legislation was the phrase "maximum, feasible participation of the poor," which we took seriously. In effect, what we were saying to communities was, we trust you to be interested and concerned about how these monies are spent on behalf of children. While Head Start has not grown quite as much as we would have liked, no administration has ever been able to cut it. That is because the program is so deeply embedded in local communities.

Zigler: It is embarrassing to say this, but developmentalists only discovered the father as an important factor in human development about 30 years ago with Michael Lamb's seminal work. Today there is widespread interest in studying and understanding the importance of fathers in the development of children. A recent paper I sent to Kyle Pruitt, one of the best thinkers on the subject of fathers, stated that for poor fathers, their interactions with their children in infancy predict their child's IQ scores at ages 3 and 4.

For too many years the story of human development was a dyad, the mother and the child. That is changing, and it is important in helping us move in the right direction. Furthermore, Wade Horn was the president of the National Fatherhood Initiative, and he is putting emphasis on getting more fathers involved in Head Start, which is what we have been trying to do ever since Julius's day.

Richmond: I can't help but observe that this may have been the only Head Start meeting that ever had on one panel three M.D.s and one Ph.D.

CONVERSATION WITH JOHN W. HAGEN, CLAIRE B. KOPP, SYBIL CARRÈRE

The Emergence of Self-Regulation

John Hagen: One current federal position is that we ought to be emphasizing education. That is interpreted as cognitive when we are looking at children with special needs and children in Head Start. The research message that I get is just the opposite; we have to be looking at the whole spectrum. How well children do in preschool and elementary school is as much related to their social–emotional development as their underlying physiological development. I hope that we will be able to bring that message back to our various constituencies and make sure that this becomes a part of the larger message.

Sybil Carrère: I would like to echo what John was describing. When I learned who was going to be on this panel and the different kinds of topics that we were going to be discussing, I realized that the type of research that we do is extremely complementary. Each of us, in a sense, is looking at a different piece of the puzzle: our work with emotion regulation and the importance of understanding how parents teach their children about emotions, Claire's work with cognition and self-regulation, and Megan's work that looks at stress and how that is involved with children's well-being. One of the things that I hope people are taking away from this conference is that these are not competing ideas; these are ideas that fit nicely together.

Claire B. Kopp: I would like to say that we have been de-emphasizing selfhood and the role of selfhood in so much of early development. We have not emphasized language enough, particularly the different kinds of language that children use to help themselves learn. We probably need better measures of language. We also need a better way to look at a young child's sense of self. It is a topic that is so badly ignored that we do not have measurement tools.

John Hagen: That comment reminds me of one of the faculty that I have known at Stanford for many years. Her name is Shirley Brice Heath, and she comes from linguistics and anthropology. She works with very different populations, mainly adolescents at risk, and yet she also says that language is the key. From language she gets a window on their minds and a look at their souls. Language, in many ways, is powerful, and we have not looked at it nearly as broadly or as in-depth as we could even though we have wonderful information now about the way language emerges and the roles that it plays. With that comment, we would like to hear from people in the audience.

Jane Kostelc: I am from the Parents as Teachers National Center in St. Louis. I would like to know how we can best teach these techniques. Does your research group have a parent education curriculum? Is there some way that some of us could do that in partnership?

Kopp: I am still trying to learn from parents, and I feel that parents are our best teachers on what works well and what does not. John is beginning to move into the area of interventions with family and is currently doing an intervention study with one of his graduate students, Allison Shapiro, whom I mentioned during my presentation. They are using some of the emotion coaching with parents of infants. Of course that is going to look different.

They are drawing on the work of Monica Hildenborg who is at the Karl Lynski Institute in Sweden. She has done some social engineering whereby all new parents go through training where they learn about how to communicate with their infants about emotions. She demonstrated that even with premature infants, while it may take them awhile to get those neural cogs moving and so forth, they respond. Even when they do not have language, it is important to be talking about these things. As yet, there have not been any intervention programs that have been

done for preschoolers or young children; however, there are things that could be drawn and developed from the type of work that we are doing.

Kostelc: "Parents as Teachers" is a program that goes from prenatal to age 5, but prenatal to 3 years is our main focus.

Kopp: So this might be perfect for you. Monica Hildenborg has a video that is wonderful to use with parents. For any of you that would be interested, you are welcome to e-mail me and I would be glad to share the information about her video. Her work is not only with infants but also with middle school-aged children.

Rick Vincentes: I am with Project Head Start in San Diego. I am interested in the nonverbal aspects of this research as well as communications that parents give their children. We are working with a diversity of cultures. Obviously, you already identified the group of people on whom you had focused. Is there any attempt to look into this next phase?

Kopp: There are people looking at nonverbal communication but not in relation to messages about everyday rules. As a matter of fact, there is a terrific book about signing with hearing infants as a source of information that is nonverbal language. You raise a point that I find fascinating because we know that different cultures use gestures in different ways. It would be interesting to look at exactly how parents gesture.

For example, I am from New York, and across cultures in New York there is much hand activity. There is not as much where I live now in California. It has been said that people of Italian descent use many gestures. I have no idea of how that translates into a rule system, but I want to look now that you have raised it. Do you have any ideas?

Vincentes: As an example, we have a large Indian population in the center of Mexico. I was talking with a father whose child was here. He said he could not understand how she wrote because at home they did not give much verbal direction. The experiences they have there are more on a survival basis. That is a totally different culture of how to survive, compared to an urban area. I spent a year in Korea and found those parents also have verbal and nonverbal cues that give directions to the children.

Kopp: You mention the point of survival, where a culture is concerned with survival in terms of economic survival and having enough food. However, there also must be issues of safety there, and for a culture that is not very verbal, one would want to know exactly how, for example, self-protection or child protection is carried out.

Comment: I thought it was interesting when you were relating the findings from the Japanese population. I have the impression that they keep their children much closer to them, that they do not see it as the child's role to protect themselves, and have less self-care kinds of behaviors that you might see. That is one way that the culture has an impact. For longer periods of time they do nonverbal cues for things that are important to communicate to children.

Kopp: I have to tell you a story about toddlers. I was having lunch with a graduate student in Chinatown. We met in a huge restaurant where they do dim sum for lunch. Many professionals come as well as mothers with young children. When we were there, we saw a group of three mothers and six toddlers. After the children ate, they were running all over. In fact, a few of them stepped onto one of the big round tables and were dancing on the table totally out of control. Dim sum comes on individual carts. There was a cart filled with food in the aisle. As the mothers and children got ready to leave, it was almost as if there was an instinct and a button that was

pushed because every mother grabbed hold of a child, sometimes one in each arm, and held them tight as they walked by the cart. So there is something that says, "I am responsible even though there is indulgence, like letting a child dance on the table."

Comment: There was a family grouping, and several family members were signing. The children could understand everything that was going on. They could speak in English. In fact, one of them was translating to the other. They also had facial signing. Facial signing would be an interesting course of study, like studying the long look one gets as a teacher. That is amusing to children.

Kopp: The mother look and father look is so important for safety and possession rules.

Question: Did you find a difference in your research between boys and girls?

Kopp: We do not have differences in our samples, probably because the children are still quite young. However, we clearly know there are more boys who have problems with rules than girls do. It is particularly apparent during the school years and is partly a function of boys in general. I am making a generalization, but boys in general tend to be a little more active than girls. The school environment the way it is today is harder on young boys because there is so much restriction on their need to move about.

Comment: I would be curious in relation to nonverbal communication. The information I read is that boys do not respond to nonverbal communication or facial expressions as well as girls do.

Kopp: I do not know if the studies controlled for the amount of time that parents spend communicating with boys versus girls. There is a longitudinal study 25–30 years old by Terrence Moore. He showed that mothers spent more time talking to and generally interacting with their daughters than they did with their sons. They were perfectly happy to have their sons go off and explore trucks and so forth. What was so fascinating about Moore's study is that when he evaluated the intellectual competence of the boys versus girls, at a younger age the girls were doing better, and performing slightly higher in intelligence test scores primarily because of their verbalizations. By age 8, the boys had exceeded the girls. Now we are not talking about huge numbers but there was this flip-flop probably because the mothers were not talking as much to the boys, but the boys were learning.

Carrère: I want to add that this is one of the things that we know is cross-cultural. It does not matter what culture one looks at—there is a difference between how boys and girls are socialized. Girls are spending much of their time socializing around emotional issues, whether it is that first talk with the mothers about emotions or another issue. However, in terms of their play with their peers, if one looks at their games, their games will stop if somebody's feelings get hurt, and they try to repair them and take care of the feelings. With boys, on the other hand, the game is a game, and one deals with the emotions and moves on. This sets up a different kind of social world or a different kind of experience for boys and girls growing up.

Kopp: That reminds me of a classic study by Janet Lever. She spent a year with 11-year-olds following them around the school yard. The point that you made is very much in Janet Lever's study in that when there was a conflict, the boys negotiated the conflict so that the game could go on. She pointed out that so often the boys' games had a rule structure to the game so that if one did not resolve the conflict, the activity could not continue, whereas many of the girls' activities were in a smaller group, and there was no rule structure. There are rules for how a

board game is played, for example. One could stop the board game, but one cannot stop a nine-inning softball activity. I was so impressed with this study that I was talking to my daughter about it one day and she said, "Let me tell you about our discussion group. There were six professional women. One evening, the discussion group women could not decide what books they wanted to read next. So the group broke up." I said, "Don't tell me that." I do not know if things are changing now because we see more females more involved in organized sports. There are many junior soccer leagues, for example. More girls and young women of today's generation are involved in activities that have a rule structure.

Comment: If there are more female heads of household rearing more boys, the socialization of these boys may change for this generation of children.

Kopp: In terms of taking over some of the family routines.

Comment: In the emotional sphere as well.

Kopp: One would hope so.

Hagen: Given that Dr. Megan Gunnar is not here, I would like to interject for her and see if we could have a brief discussion of what some important implications are, some of which were brought out in her talk. A strong message is that we now know that cortical levels seem to be related to the way that parents and mothers in particular interact and provide support and comfort for their very young children, and that these effects seem to go on as the children get older. We know about the individual differences and why we have them. It seems to me there is somewhat of a chicken and egg issue here. Are there some children who are predisposed to having some differences, and perhaps mothers respond that way? Or is it primarily that the mothers have these different styles that result in the different ways that provide better coping for the youngsters in stress situations?

I have also worked with children and adolescents who have diagnosed problems such as learning disabilities and ADHD. I feel that our understanding of these is very primitive. We have mainly used behavioral indicators and some rather artificial tests to come up with our diagnoses. Yet, when one works with the individuals, one sees some underlying characteristics many of which are along the lines that relate to Megan's work. The other thing that was obvious as an important change is how this relates to how the children are going to do in child care. What is the quality of the child care they are in? What about the particular adults with whom they interact? Can they provide consistency from the parents or not?

Carrère: It is interesting that we are primarily talking about little people, and those I like to call STP—"small type people"—at this conference. However, the research that I am currently doing with my colleagues John Gottman and Maryanne Taylor is looking at children as they make the transition to puberty. We are starting with children at age 8. As many of you know, we have this secular trend where girls are coming into puberty at younger and younger ages. One of the things that Megan's work reflects on is some work that is being done by Elizabeth Susman at the University of Pennsylvania who has found that when sex hormones change during the transition to puberty, there seems to be an interaction between those levels as they increase.

In terms of family dynamics and conflicts within the family, the other issue that is interesting that has come out in her research is that there is an interaction between cortical and a sex hormone called DHEA. It is like the reciprocal of cortical such that as the sex hormones increase, it magnifies the effect of cortical. Certainly in adolescents it looks like there is an interaction between stress and other biological systems of the body.

Mary Marks: I work in evaluation services in Head Start training. How is the cortical level measured?

Carrère: There are a number of ways that it is measured. The easiest and the least invasive way to measure is saliva. One of my friends who studies this says she wants to become the "queen of spit." It makes it relatively easy in terms of toddlers and middle-school children. With younger children and infants, they swab inside the mouth to gather the saliva. When cortical measures are done using saliva, one is capturing what is happening right at that moment. The other way to measure cortical levels is through urinary measures, so children—and they love to do this—give you urine. It is problematic to use plasma measures because if one sticks a child with a hypodermic, one gets a large increase in cortical levels. So we try not to do that.

Kopp: There is an interesting trend in early life in terms of cortical measures. One sees a decline in cortical levels across times. For all ages, there is also a diurnal cycle in cortical levels so one has to be careful to measure it consistently. I have always thought that the toddler period probably has a time of stress not quite as dramatic as puberty, but we do know there are times during toddlerhood—somewhere between 16 to 22 months—when toddlers have sleep problems and there is a surge in feeding difficulties. They either want to eat all the time or they want special foods. There is a growth spurt, and there seems to be for some toddlers an increase in irritability. I wonder if there is a physiological basis for this. It could be that around this time is when some of the socialization techniques have less effect, and it is possible that if parents are stressed and the child stressed, things can go wrong. This is all speculation, but we do know that there is a window of change in toddlers' systems.

Carrère: There is also some different but similar disturbing research that has been done by one of my colleagues at the University of Washington, Sam Wasserman, who does both human and animal studies. He does field work in Africa with Rhesus monkeys and has found that in those monkeys who have the highest levels of cortical material that there is an associated loss in brain cells. So death of brain cells is an interesting impact.

George Morrison: I am at the University of North Kansas, and we are working with about 5,000 children. For us, the big issue, day in and day out, is how to take what you are telling us and make a difference in terms of professional staff development with young caregivers of infants. What advice could you give us? We do not even get into the cortical levels and those types of things with the training. How can we take what you are saying and share it with caregivers and others?

Kopp: I worked with students who were going out in the community, and one of the first things they have to learn is how to observe the children with whom they are working. This is a throw back to the way I was trained. Help your staff to look at the children with whom they are working. This means writing a short paragraph on what they saw. We used to call these anecdotal descriptions. If one is dealing with 5,000 children, one is dealing with a large number of workers. However, a training program that does not focus on observation misses out on looking at the key behaviors of language, self, and cognition. We do not have good ways to measure these, so one has to use good old-fashioned observation, using developmental norms. We are focused on individual differences, yet we have normative data that say at this age we expect language to look like this or cognition to look like that.

Comment: I would agree. It is important for teachers to watch their children and be able to see what is going on with them. In addition, the degree to which parents look at what is happening with the child and themselves is crucial. There is also learning from the parents. The discussion

at yesterday's plenary session focused on how we always work from the deficit model that says the parents do not know what they are doing. However, there are parents who do know what they are doing, even 18-year-olds are doing something right. They may be getting one thing right or several things right and building on those things. Some parents or particular individuals are doing well and then expanding on that.

One of the themes that I have heard in common is that we think it is important to get parents and child-care providers to spend the time modeling and doing the kinds of things that we have been discussing. We have talked about the self and language skills, bringing those skills into play, modeling those behaviors, and talking with the children to develop those types of things. Hopefully, the teachers and the parents are not spread too thin.

In terms of emotions, as parents we often see things happening with our children. Much of the time we do not verbalize it. The teacher is taking the time and teaching the parents to take the time to start verbalizing, to start talking with the child about emotions. We think that children do not understand. In fact, they do, and that is the point I was trying to make that even a premature infant that is 1–2 months early is able to understand the way that a mother or a father is emotionally communicating with him or her. The role of sign language would be interesting to explore. Children can become incredibly frustrated because they have things that they want to say and cannot say them. There are people who are doing sign language with children who cannot speak, and they are able to use sign language to communicate.

It is important for your staff to model these behaviors and to get the parents involved with doing this, helping them to learn how to do these things.

Hagen: On a more general level, there are always gaps between the latest scientific knowledge and what we can do in a responsible way. It is important to know about both: to know about what is going on, see what has been around long enough to become tried and true, and then figure out ways where it can be translated. The Society for Research and Child Development publishes *Social Policy Reports* three times a year. Each of these is an attempt to translate the best research findings in a certain area to policy and practice. They are now available on our Web site: www.SRCD.org. We find that we are getting more requests for those from both policy makers and practitioners. We are interested in suggestions and topics, because sometimes we will seek out authors to put together papers on topics that are going to be useful.

Mary Kay Smith: You talked about the quality of self-regulation being a function of the stress encounter. If so, then, what level of stress is experienced during the shift from a child-care environment to a home environment? There are different self-regulation expectations several times a day every day.

Sarah Freidman: I am from the National Day Care Study at NICHD. Children have a lot of stress during transitions. Are child-care providers doing anything to help these children deal with the stresses and frustration? This is not something that we are looking at but that should be explored.

Hagen: It is important to communicate to child-care providers that what they do is important and that it is going to make a difference, and then to have some leads as to what some of those things might be.

Freidman: Quality matters when talking about the setting in relation to elevation in behavior problems.

Hagen: It depends significantly on the outcome one is looking at.

Comment: In a perfect world, child-care providers and parents would get together and have something planned since children go between those two environments all the time.

Freidman: The child behaves differently in different settings. For example, parents report that they do not see behavior problems, but the child-care providers see them. It is so important to communicate with the parents and child-care providers.

Comment: In many instances we are talking about parents and caregivers who are not far removed from adolescents themselves. This is a big issue that we face in terms of the quality of the environment and the quality of the caregiver. We have a national crisis regarding the provision of high-quality infant care.

Hagen: There are a number of programs at the national level that are addressing working with mothers who are viewed as being high risk for whatever reason because of their situation, inexperience, and/or emotional immaturity. The programs that I know of show that they are responsive to input that combines social, emotional, and cognitive types of things. It is not as though they are not receptive, but they have to be given guidance and consistent reinforcement for employing it, then they can become more effective at parenting.

Kopp: That takes a lot of money. I would like to raise the issue of children who are in preschools or in the early school years who seem to have problems with physiological regulation. This represents a different group of children in terms of working through issues of emotion regulation and self-regulation. These children are vulnerable early on, and they are probably more resistant to interventions. I am talking about the child who has been a poor sleeper from the early months of life and continues that disturbed sleep, who is drowsy during the day, who cannot control attention. We tend to lump this child into the larger corpus of children who have difficulties, whether it is emotion, behavior, or following rules. There might be better success with programs if there were more preliminary noninvasive, nondetrimental categorizing for the groups of children who seem to have difficulties. I say noninvasive and nonharmful because we do not put a label on these children. However, we have this group of children who are truly ignored in terms of their basic needs.

We have a sense that when sleep is disturbed, it could be from dysfunctional family environment, but it could be something as simple as ongoing mild sleep apnea which is not life-threatening but does cause sleep disturbance. Again, there is an area of research that is needed—there are major implications for the day-to-day running of centers.

Carrère: That is interesting because it is different, but it is related. Steve Porges, whom I mentioned during my talk and who developed the poly-vegal, is doing intervention work with autistic children. Here is a classic case of children who have great difficulty in terms of interfacing with their environment. He is using self-soothing techniques to help these children in terms of their environment.

Hagen: Following up on that point, have any of you read the book *Stairway to Heaven* by Temple Grand? There are three or four autobiographies currently available written by persons with autism of various types and stages. Temple Grand is a professor of animal biology and a veterinarian at Colorado State University. She was originally hired by Swift to make the killing of animals in the stockyards more humane. She has worked the last couple of years for McDonald's because McDonald's is the largest consumer of chickens and beef. A group of their stockholders voted that they had to get their animal products only from places that were killing animals responsibly. I have read her book, and it is absolutely fascinating. It gives one an entirely different perspective of what life is like for individuals who are processing information differently. She talks about how early on in life she did not process things verbally at all. In fact, that is

why she says she has great empathy for animals and also gives insight into the richness and complexity of emotions and the theory of stress without the verbal component. Then, after many years of hard work, she became highly verbal. She is now able to give us insights into both aspects.

Following up on Claire's point, we now know that autism is genetically a complex disorder. It is not a unitary syndrome but is multifaceted, both in degree and in certain features and types.

At the University of Michigan, one of my former students directs our program for students with disabilities. He told me recently that we have seven or eight students on our campus now who are truly autistic, and yet they are functioning in a highly competitive university environment. They are bringing very different experiences with them. He was telling me about one young man who is absolutely brilliant in engineering. He got a call from the assistant dean of engineering saying they were having a problem with him because the professor did not show up one day, and all the other students left after the 10 minutes of courtesy. He sat there and got very agitated because he could not understand why the class that was supposed to meet at 10:10 a.m. on Wednesday morning did not. He had that kind of disturbance yet was able to function well.

These are some examples of the kinds of extremes that we find in any population of children or adolescents with whom we are working. It is a way of giving us insights into how different people experience their world, how they learn to cope, and how we have to be adaptive and clever in coming up with ways to help facilitate their coping. I am especially enthralled with *Stairway to Heaven*. The book is so entitled because the chutes that the animals go up when they are going to be killed are very narrow. Grand says they feel very comfortable with that and do not show stress even at the moment of slaughter. She sees that as if they they are going to Heaven.

Carrère: John, you are making me a vegetarian.

Hagen: Actually the message is the opposite for those of us who still are carnivores. One realizes that it can be a much less stressful situation for the animals and also for the people who are working there. There is an interesting parallel, too, for those of us who have worked in clinical settings with children with serious problems. One of the difficulties is that the staff employ defense mechanisms. Often, they can be insensitive and make jokes about the children. It is the same thing as one can imagine for those who work in slaughterhouses. The current effort is to make the workers more attentive and understanding of what they are doing.

Comment: I work in Early Head Start where half of the children are in foster care. Early Head Start works with the birth parents and the foster parents when possible. Since we have interviewed the foster parents, there has been no absolute educational support. These are cases with self-regulation issues. The birth parents have not been able to keep their children safe, and in many of these cases there have been generational problems and violence—the mothers have not been able to keep themselves safe. As we have been looking at patterns, clearly the mothers themselves do not have good self-regulatory skills. The mothers do not have the skills to protect themselves, so they cannot pass them on to their children. At Head Start when we went in to videotape the parent–child and family educator interaction, so much of the time ended up being focused on the mother that there was little opportunity to focus on and interact with the child.

We videotaped the foster mothers who were very committed to these children. They were not reading the cues appropriately because the children's cues were not as strong as they would expect from their own children. In addition, we are finding that they are not estimating where the children are developmentally. They are using a tremendous amount of language, but their language is responding to the children at their chronological age, not at their developmental age.

Hagen: Is there a reason why they are not working with the foster parents?

mment: There are no funds to do that. One of the Head Start scholars in the last year has n trying to do that. In the spring she was invited to the agency that places the children in er homes. She did a series of three workshops that were extremely well received. However, foster parents are given information about the issues of being foster parents. There is no ning, and the Head Start philosophy is that foster parents and birth parents should not have tact because that puts stress on the birth parents. So they keep them apart, and Head Start is rged with providing the training for the birth parents. However, no one is providing training the foster parents so far. That would be the best place to begin to develop some of these self-ılatory skills.

op: Are the children out of the home because the mothers have been abused?

nment: In some cases, it has been violence against the mother and child; in other cases, it been neglect on the part of the mother because of mental health issues.

op: Is your staff trained to deal with mothers who have been abused versus mothers who are ıtally ill?

nment: I do not know the extent of that. Again, this is the population we interviewed. Head t administrators talk a lot about the variety of support needed when addressing emotional es. There is a tremendous turnover; stress in dealing with these families is a contributing or. We also found that much of the training for the staff was related to how to deal with r own emotions because we have had people become so emotionally involved that it was l for them.

op: Was there a support system for the staff?

ament: That has been a major function that the administrators saw as their role: getting tional support to the staff. We were seeing that facilitating parent–child interaction became ndary or tertiary because much of the training went to how to address the problem. Much of ension is still directed to putting out the crises. It has been hard to get them to get down to evel of the parent–child interaction.

p: Do the staff understand the difference between chronological age and developmental age?

ament: We do not have a good sense of that. The scenario we are seeing is a relatively istent mismatch of either underestimating or overestimating where the child fits.

p: What is being used for estimation?

ament: It is based on our own experience along with some of my doctoral students who had experience in evaluating children. I have done a lot with play-based assessment. We see hildren in a play environment with their parents and observe their language when interact-vith toys. I have a relatively good estimate of where they are.

p: Do you think it would be helpful to have a short brochure discussing the difference een developmental age and chronological age?

ament: There was a study within the last year which looked at parents and caregivers' ctations of children of different ages. Knowing where children are developmentally needs to part of it. If the children are not suspected of having a developmental problem, parents and givers are not sensitive to routine delays. If it is clearly a disorder, they will get referred to a

local Part C program for children with disabilities. Otherwise, there has not been any assessment done, or else there has been a hesitancy with the assessment. One of the foster mothers that we interviewed said that every foster child she gets should receive a developmental evaluation because her experience has been that the children have delays. However, it is not part of the system. She had to fight to get those children evaluated.

Kopp: Is that an issue for others in terms of where the children are? Those of you who are in programs, is there an issue in terms of differentiating where the child is developmentally? Is this a problem?

Comment: It is a major problem when it comes to the training issues, the education.

Comment: On your comments regarding observation, sometimes there is a disconnect between workers understanding, theoretically, behavioral and developmental expectations. Then, as we connect those two—where the child is—saying one is supposed to be doing this as opposed to observing and being sensitive to what the child actually is asked to do. That is not my level of skill.

I am from High/Scope. We use the Child Observation Record. Training was added, and having caregivers use that became a tremendous issue for us. We developed our own child development measure. How to encourage the use of the Observation Record on a weekly basis is a challenge. It has everything to do with this disjoint between what children are like and what people think.

Additionally, I wanted to make a comment about the caregivers who have foster children. In some cases, there are grandparents or relatives, and in others, there are people who are not family. One of the things that I found with the family is that oftentimes the problems the mother had experienced are still there with the family, and there is not much treatment for them because they have other problems.

Another issue is that we work with a diverse population. Which children are doing well and moving along based on these criteria? What are we going to do with the children who are coming from foster care? I am not saying that these disabilities cannot be helped. In San Diego, we work closely with the school districts, and the school districts have to provide us with information for the children on what they see. Along with that, we have people who work with children. We train them to work with the children, with whatever disability they may have. However, the issue of who takes care of foster children is a big concern.

Hagen: Part of the problem is getting the different systems to coordinate and to work together. That is a problem I see everywhere. In my area, licensed foster parents are required to get training initially and then go to a certain number of classes per year. They get both professionals and more experienced foster parents to teach them. At least at that level the system is trying to address the issues thought to be helpful to foster parents. There often remains a gap in communicating with the schools. I do not know whether your systems are more typical in terms of being able to provide that type of programming.

Some of you heard Professor Todd Risley speak here at the conference. He is from Alaska. In talking with him about providing services for at-risk children there—it is a small state and they have fewer professionals—they are able to get resources to work better than in larger, more complex states and situations. That is an ironic situation in that they have been able to provide services that cut across, and are successful in both the education and mental health realms.

Kathryn Barnard: I wanted to follow up and get more information on what we mean when we say developmental age. Do we mean an IQ assessment that places a child at a certain development level, or do we mean there is a profile of their development in several arenas? In one arena they may be at an age appropriate level; in another arena, they may not.

Kopp: A majority have uneven developmental profiles. In thinking about a developmental age, I tend to go back to motor, social, emotional, cognitive, and language skills. We are in a difficult position these days because we do not have good measurement tools for infants and toddlers. I am not the first one to say this at this conference. It has been said repeatedly. Those of you who are trying to work with staff to make them more sensitive to the issue have a major problem in terms of what is it that you are going to use.

My suggestion is to draw your own guidelines about what you expect of children at a given age using the developmental literature. There is normative data available saying that we recognize it is normative data, and there is variability around the norm; however, at least it is a benchmark. I have an aversion to giving young children what I would call IQ scores or developmental quotients. It is done, but it is not helpful.

Hagen: What do we do when we have these data? Earlier at the conference, Fred Morrison spoke about his work on early literacy and translating that into reading and cognitive performance. He has a clever experimental paradigm and has a good deal of data. He took advantage of the fact that schools—and he was working in the Chicago area at the time—have to have an arbitrary cut-off date for entering kindergarten or first grade. So he had matched children that were virtually the same age but one group went to the school a year ahead of the others. The evidence is clear that it is an advantage to go to school earlier.

One of my mentors at Stanford 40 years ago said one of the worse things we do is hold children back; they do not do well in first grade. The chance that they are going to do well the next time is even less. Yet schools still do that all around the country even though we now have good evidence that it is not necessarily going to be a productive approach. If there are good indices of developmental levels, then how does one make use of that? Just knowing the information is not going to solve the problem for children.

Kopp: If you know that a 2-year-old should be using three-word sentences and has little language (at 18 months there is a word spurt and children might be speaking 50 words), then you can direct caregivers and parents to provide little conversational episodes during the day. One of the problems that is quite common among caregivers in child-care centers is that these caregivers do not talk much themselves.

So when we are asking them to work with children, we are asking them to do something that they do not feel comfortable doing. Certainly we cannot ask them to evaluate children. However, a first step is developing some kind of expectation that the caregivers can have to at least define the level of where a child is. Years ago, Elizabeth Bates suggested that at least for early toddlerhood, the comprehension was far more important than productive language in terms of long-term outcomes. Although the MacArthur scales are a little unwieldy, they are terrific in terms of getting at the young child's comprehension. Parents and caregivers can use it. So there are ways that are going to be time consuming to get to the issue of where the child is with language. Second, are caregivers talking enough and what can we do to get them to talk? Third, how do we get a good interface between the caregiver and the child? That is a developmental age issue.

Barnard: One of the assessments that I have been using recently that is quite good, is developed by Greenspan, Wieder, and DeGangi, and is called The Functional Emotional Assessment Scale. It is classified by different developmental age levels from 0 to 5 and looks at not only what the child is doing in terms of attention, mutual interaction, and representation, but also at what the caregiver is doing. There are things one can observe about what the caregiver should be doing in relation to the child's age as well as to how the child is performing, so one can look specifically at the social and emotional functions. It also includes problem solving, language, and so forth. It is available on the Web from the International Council of Developmental Learning or

Amazon.com. It would be wonderful if people in child care/foster care could be oriented to this approach. It probably is not important to impart culture to children developmentally, but it is a wonderful context in which one thinks about relating with children.

Hagen: That sounds like a good opportunity for people.

Question: How does one work on simple longitudinal studies, looking at the average of children's development? Often one is basically an observer, using complex assessments and gathering much good, helpful information, but it is never transmitted to families because they are not treatment studies, but longitudinal observation studies. Several times it has been my experience that I feel as if I have information that no one else has. I am a researcher. I cannot give the information to the program with whom the child is working. I cannot give the information to the school.

Hagen: Why not give it to the parent? In fact, you are obligated to if they want it.

Comment: If they want it, we give them a version of it. However, in general, we do not share the information with people. All papers are published and presentations are available to parents, but most of our parents are not at a reading level to understand much of the material. There is nothing tailored for individual families.

Kopp: Many people who do longitudinal work do newsletters and other types of information dissemination that are targeted. They give general information. When we do longitudinal studies, at the end of the measures for that particular year we talk with participants about what it is they have learned from the experience. In a sense, just being in the research study is an intervention because they have had a chance to go through the laboratory procedures and fill out questionnaires that get them to think about what is going on.

When I first started doing longitudinal research, I was concerned about information getting back to the families because I thought that it would have an impact. With the nature of the work that we are doing, the media has a tendency to gobble it up. We were put into a situation where families were getting information because what was being published was information about them. I found that our families continue on their trajectory. According to a researcher who conducts marital research, if one does a 2-day workshop with most couples, they get it then but the effects begin to fade. That happens with parents as well. I am less concerned about even giving them feedback about strengths—things that they can build on in the study—than I used to be. For more general kinds of information, one can send newsletters to families. For example, one could write about new work that is going to be done with the children. For our longitudinal studies, we provided access to parents if they had questions and also sent out end-of-project, casually written materials. I have always had the philosophy that if a parent or child is in trouble, one should do something. One provides a recommendation, for example. That is just good practice.

Hagen: In a way, we are in a different era because of the information explosion. There are so many different ways to get information now. Much of it is available through Web sites, but it is also available through the popular press. Many professionals have mixed feelings about it because some of it is good but some of it is not. How do people judge what is good from what may not be good, or what may be a pet project of someone or a pet theory that someone is pushing? That is something that different professional associations are grappling with.

I am sure most of you have encountered this. When my undergraduates write papers, I look at their reference list and some contain good, solid sources. Other sources are from Web sites, some with dubious validity. How does one deal with that? It is not easy.

Barnard: In Early Head Start, we have been working with parents with lower education levels, and there are also social class and cultural differences.

Hagen: Regarding the information explosion, we are getting even more disparities in terms of access.

Barnard: How do we translate some of this published information in language and cultural content so that it becomes salient and appropriately available? For example, there are many handouts with charts and developmental wheels, and the idea is that one gives it to the mother. Sometimes by osmosis she will read it, understand it, and make the connection; however, from what I see that is not happening.

I hope the field starts thinking about how to provide appropriate, participatory guidance to parents who struggle with education, and focus on developing Internet and other techniques in that area. That means also addressing the issue of who should be hired for Early Head Start, what educational level we expect of teachers, and how we train them. It goes both ways. This is where the translation of the research to findings we all use becomes critical.

Hagen: In fact, it is even a bigger problem. There has been a lot of research on medical compliance—and it is not just poor families or families without literacy skills. Middle-class people who get information from their physicians do not use it a large percentage of the time. There is a huge gap there. One is often handed a brochure when a prescription is picked up. A majority of people do not read the material and take advantage of that resource. It is a challenge.

Kopp: What would you think of soliciting the help of elders of the community, such as church members, in terms of translating—using "translating" in a very broad way—some of the research messages?

Barnard: It depends. How do we read in general? How do we learn information? How do we accept what someone says to us? Sometimes we appreciate the relationship or the expertise. Is there a relational issue as well as an expertise issue? Who in the community does one listen to over one's social network? Some people prefer, for example, the elder network so there is a generational relational concept at work. Some people will listen to someone like a pastor or someone in the religious community but others will not. What I see happening lately is that we are recognizing that spiritual connections are supportive. However, at the same time, we are also realizing that not everyone falls into the spectrum of accepting that connection, so that one can think about individualizing all transmissions of messages. I agree that for some people, looking to the elders would be effective.

For different cultural communities, those are different people. In some instances, for example, a grandparent may be the person one needs to enlist in order for that information to get at the source, because in some families that may be a hindrance. One would need to enlist the grandparent but then need to do a double education. One would almost need to do corrective learning and teaching with the grandparent and align oneself with her before one could accomplish anything with the daughter who has a child. I was thinking about the foster care parent. If we do not pay attention to the knowledge of the foster care parent and teach them historically, and also never bring them together with the birth parents, what can we expect to accomplish? I struggle with that.

Hagen: That could be done at many levels. For example, several years ago the American Academy of Pediatrics instituted the provision of specially written books to parents and infants when they come in for doctor's visits. They are at certain developmental levels and are specifically designed for parents to read to children. Data have shown that that has been a successful program. So different venues—bus stations, grocery stores, or community centers—could be used.

Early Childhood Assessment and Outcomes

Cross-Cultural Issues in Assessment and Accountability

CHAIR: Gregg Powell
PRESENTERS: Oscar Barbarin, Samuel J. Meisels, John Love

Gregg Powell: I am Director of Research and Evaluation of National Head Start Association. We are focusing on the importance of addressing culture when dealing with assessment.

Part of the problem I have with the title is that I remember assessment as being used to determine what a child needs in order to provide appropriate services. Now that it is being linked to accountability, we need to look back to the original meaning of assessment. It is to identify what a child brings in order to address what they take away when they leave. We must identify both strengths and weaknesses.

Oscar Barbarin: This is in many ways the kind of presentation that I would love to go to just to learn. I will use this opportunity to stimulate, provoke, and think about the whole issue of culture within this context of assessment, also known as incentives, accountability, punishment, and reward.

I would like to start by telling a story. It is a story of two men in South Africa sitting on the side of the road. As they are sitting and waiting, a Mercedes Benz drives up. Two men are in the car. One of the men gets out and talks to them. The man speaks to one of the South Africans who approach him. The man from the car shrugs, goes back to the car, and takes off. When he gets back, the man who is sitting down says, "Well, what did they want?" He says, "They wanted to know where Mr. Mandela lived." He asks, "Well, what did you tell them?" He answers, "I told them I don't know." The first man asks, "What, you didn't ask me?" and starts chasing after the car. He runs and is out of breath but finally catches up to the car. He knocks on the window. The man rolls down the window. He pants, "Were you the guys who wanted to know where Mr. Mandela lives?" The driver nods his head affirmatively. The man then says "Well, I've come all this way to tell you that I, too, do not know where Mr. Mandela lives." The point of the story is that you may end up realizing that I, too, do not know what the cultural issues in assessment are but I will give it a good try.

It seems to me that one of the main questions that we deal with is the issue of race in this country, the issue when we think about ethnicity and culture. In the past hundred years, as articulated by W. E. B. Dubois, the question of race had to do with Jim Crow laws; overcoming racial inequities, prejudice, the reduction of disparities in income, education and housing, health, and so forth. It is not that these issues are no longer prevalent, but in many ways we are considering new issues as we look forward to the middle and end of this century, when ethnic minorities will be the majority in this country. The growing Latino population will produce many changes, along with the stability and perhaps slight increase of African Americans. At some point, Whites at some point will be less than the majority in the country.

In many ways the terms of the race question in this country have become a bit different. Presently, it is thought of in terms of diversity and how to maintain it. We question the extent to which we can maintain the integrity of national unity in the face of disparate, diverse groups. How can we maintain individual ethnic diversity and, at the same time, not devolve into Balkanized states. How can we find common ground?

In some ways this question may seem far from the issue that we are struggling with about assessment with accountability and standards. But indeed it is not. The question of learning standards often has been linked to the issue of ethnic disparities in educational outcomes and the need, for example, to produce better outcomes among poor children. In many ways the question is how to address the issues. When we begin to look at it, we understand that we are pulled into the whole issue of ethnicity and diversity.

There also is a tendency, when dealing with assessment and accountability in this country, to say that this is not a question of ethnicity; it is more a question of income. I would argue—and I have some data to suggest this—that although income hardships, poverty in particular, are important, this does not eliminate the question of ethnicity as being an important consideration of educational disparities.

The issue that schools face in achieving equality of opportunity is that families of different ethnic and cultural groups prepare children for the challenges they will face in the setting that they are growing up with. My argument is that we have created a range of sociocultural niches that have their own particular demands and needs, and that these influence and shape children's academic aspirations and their social behaviors. Culture is very much a part of this. It is important to learn about the specifics of these sociocultural niches because they play an important role in the interface of schools with families and ultimately their effectiveness.

I would argue that family life is the most important mediator. It is the crucible of culture. When we are interested in trying to understand culture, we can either look at it at an abstract level or we can look at it at a more concrete level. When we look at the concrete level, culture is expressed in the day-to-day routines of family life. Children's experience and the inculcation of culture occur within the context of the family. To that extent, it is important to understand what children are exposed to in their day-to-day lives, what they are told regarding appropriate behavior, how they give expression to their feelings, the learning climate that exists within the family, and the relationships and practices that exist within the family.

I would like to draw this closer to the issue of standards and accountability. I will begin with a confession. I approached the initial efforts in imposing standards and creating accountability with a great deal of skepticism. I had questions about the motives and the potential outcomes of these efforts, particularly in regard to the use of high-stakes testing. The basic argument and premise upon which this is based is that one gets better results if one combines high standards—that is, one is explicit about what children should learn—with assessment of outcomes, then provides incentives or punishments in some cases for either success or failure.

In principle this sounds like a good idea, but in practice it is fraught with difficulties. As someone who is particularly committed to poor and ethnic-minority children, I can see the downside when we think about who will systematically come out at the low end. The danger is not so much in looking, because it is valuable for parents, children, and teachers to know how children are doing. The question is whether these standards are appropriate, whether the measures that are used to assess are tied to those standards, and whether there is some agreement about the kinds of outcomes that people want and need.

For those of us who are particularly focused on children of color, we are left wondering: If standard measures are good, why is it that they consistently lead to outcomes that are stratified by ethnicity? One can look at almost any measure, for example, the tests of achievement that are used by many of the states' systems for assessing outcome. When one looks at the results, they are often stratified in such a way that Whites are typically on top, Asians in some measures come out highest, and Latinos and African Americans are often the lowest. One has to question what this means, what the contributors are, and how one should deal with this information.

In spite of my initial skepticism, I believe in the value of accountability. I have also gained a great deal more optimism about the whole issue, given all the discourse and contention that has gone on, particularly about high-stakes testing. Parents have been involved and concerned, and not only parents of ethnic minority children. We have school systems that are raising questions about the expectations of the system, both in terms of practicality of administering, as well as the kinds of incentives that will be applied as a result of it.

Public discourse was not sufficient prior to the passing of the federal law "Leave No Child Behind" and the requirements regarding testing. In some ways the field of debate has shifted. We have standardized testing required for children that we have to deal with. I think that democracy may be at work, in the sense that we are now debating a whole host of issues related to it.

What are the kinds of issues we should be debating? What are some difficulties? First, we know that assessment has to be seen as a system; it is not just a test. It is a system that includes, among other components, standards and uses for information. Many people have pointed out that the lack of connection between standards and curriculum is a fatal flaw in any attempt to do high-stakes testing. The lack of multiple and diverse modes for assessing performance over time is difficult. The interpretation of the test results is also important. What does it mean if a child fails? Is it a problem with the child? Is the problem with the school? Is it a problem with the family? What actions are appropriate? What incentives, what consequences, for whom and to what end? To simply punish a school that is not doing well does not serve anyone's purposes.

Then there are technical problems in using an assessment at the preschool level, in, for example, Head Start. There is a real issue about the developmental relevance of tests and the standards. There have been many efforts to develop standards. I would argue that in some cases we might know enough. For example, we know a great deal about some of the developmental steps in reading, so we can develop what is appropriate for a 5-year-old or a 4-year-old. There are many other areas, such as math, where much less is known about what is appropriate and what should be expected of children.

I would argue—as part of the debate and part of what needs to happen for research and for establishing meaningful, realizable standards—for accuracy in capturing what children know. Clearly, a single test is not going to do it.

The diversity of children's experiences, particularly in preschool, means that they are going to have differential opportunities to acquire the tested skills. As much as we may want to, we are never going to create uniformity in families. We may increase the uniformity of experiences in schools, but that is a long ways off. Once again, that leaves us with the question of how to interpret differences in children's performances on tests.

One of the issues that I find intriguing is whether we are asking the right questions in order to understand why one ethnic group falls below standards on tests. Often the quickest answer is that it is due to poverty and hardship. Another answer that is often given to us is that the parents are uninvolved; if we could just get the parents more involved in the school and show them how the teachers teach, we would be better off. Those answers may be true, but I would argue that they do not represent enough information and do not give us enough helpful insight. I think an important arena, both for discussion and research, is to explore more about which groups of children consistently do poorly and to understand why. I would argue that at least a piece of it will come from understanding the environments in which the children are raised and the opportunities they have to learn.

Another thing I would suggest is that we think differently about groups of children. We are accustomed to thinking about a single group. Presently, we have an at-risk group. Typically children in this group are poor; they are poor children from Appalachia, poor African Americans, poor Latino children, and poor immigrants. This is too broad a stroke; in fact, we would be much better off if we thought about children as growing up with specific sociocultural niches. These niches may be defined by three coordinates, and perhaps more: SES, ethnicity, and gender.

The experiences that children have within niches defined by these coordinates are sufficiently different to account for some of the differences in standardized test performance in school.

I will preempt my conclusion. I was at a meeting not too long ago where someone who was a consultant for Head Start made a statement. This person argued that there is no way we are going to be able to help all children meet the Head Start Standards. I was appalled, upset, and angry; my own impression is that we are giving up on some children. We have to look closely at the Standards; perhaps we do not have a sufficient basis for their creation. However, if we have Standards that we think are realistic for all children, then all children should be able to meet the Standards, no matter how poor, from what ethnic group, or from what language.

On the other hand, it is important to know that when children come into the classroom they have different attributes. We still do not know a lot about how we should match some of the particulars of those experiences to the kinds of changes that might improve children's experiences in school.

We know that there are many different influences that come from these niches. We know about what these children are exposed to and the kinds of teaching styles that they have experienced from their families and in their classrooms. These niches also have an impact on how children are seen by others. The notion that some children cannot succeed is a perception that people often hold. Believing that some children are problematic is a perception. The feedback children receive ultimately influences how they view themselves, by reinforcing the position they occupy.

I was struck by a series done in Britain following children from about age 4 or 5 to adulthood. It was amazing how much stratification worked in children's lives. They were asked around age 3, 4, and 5 what they thought they would be when they grew up. Of course, some children talked about working in factories and plants; others talked about becoming barristers, working in prestigious law firms. In a sense they were reflecting the kinds of occupations their parents had and what they would be exposed to. When the group was in their 30s, the researchers went back and talked to them; from the responses at 3 or 4 years of age, the researchers were able to predict quite well where they would end up in life. I am not suggesting that American society is as stratified as British society. Maybe it is, but it is clear that there is an impact, that these niches must be understood more clearly.

In looking at the niches that are given by the coordinates of SES and ethnicity, I have data from the Early Childhood Longitudinal Study (ECLS). The ECLS is a longitudinal study that followed a cohort of about 22,000 kindergarten children in the United States. It tested them in the fall and spring of kindergarten, then continued to test and follow them into fifth grade. In the parents' interviews, they were asked to describe how often they read to the child, played word games with the child, and so forth. I summed up the number of activities that the parents said they engaged in. Then I broke the data down by quintiles of SES, so as the quintiles increased so did the SES. The lowest quintile (quintile 1) would be families making $10,000 or less total family income. For quintile 5, the average income for Whites was about $95,000; for African Americans it was about $65,000–$70,000. The quintiles parallel income although they are based on parent education and occupational status.

Surprisingly, in the lowest quintile, Asian parents reported the highest number of activities. The number of activities was also high for African Americans in the lowest quintile. Unlike our assumption, low-income, low-SES families do engage in what we would call cognitively stimulating activities at least at the same level as, if not more than, higher SES families.

I have known for a while that African Americans watch more TV than other groups. There is a strong SES effect in operation here: the lower the SES, the higher the number of hours of TV watching. The inverse relationship between SES and TV watching is true for all quintiles. African Americans, however, tend to watch more TV than any other group. Whites are typically at the lowest end in terms of TV watching. I know there has been a lot of devaluing of TV watching. However, one also needs to understand the role of TV in the lives of children and families. I do not presuppose that a lot of TV watching is terrible; it greatly depends on the program one

watches. The point is that African American children, relatively speaking, spend a lot of time watching TV. When one considers watching TV on the weekend, African Americans again watch the most. There is a slight class effect, but almost across the board, African Americans watch more TV. Even the highest SES group of African Americans watched more TV than the lowest SES of the other groups. One can ask what the role and impact of TV watching is in this particular sociocultural niche.

The next set of data has to do with what is important to parents. The question was asked about how important various activities were to the parents. I do not know if there is a one-to-one correspondence between parents' values and their actions, but it does give us some sense of what they expect their children to know. The highest group is Whites. Almost across all SES groups, White parents said that learning the skill of counting gets a high rating in importance. Latinos and Asians were in the middle. African Americans were the lowest group. Again, it appears that the ethnicity effect is much more prominent than the SES effect. It is inaccurate to simply say that the results are due to low-income or poverty effects. Regarding the importance of knowing the alphabet, there was a similar pattern: Whites were at the top and African Americans were the lowest group. This was across SES groups.

Concerning the parental valuing of calmness—and I assume this might be related to socialization of sitting down, being quiet, being relaxed, not being active—Asian parents almost across all SES groups valued it more highly than the other groups. Low SES Latinos, Whites, and African Americans were pretty similar. As one went to the higher SES, Whites valued calmness more. It went up for higher SES Blacks, but they were still lower than other groups.

How important do parents think it is to share? This was a very interesting one to me because in this case, there seems to be an inverse relationship between SES and sharing. Maybe this is how lower SES groups get ahead. Asians were the highest group, and there was only a modest SES effect. The other groups were relatively similar, and it went down precipitously for African Americans from low to high SES.

There are many other data that demonstrate differences between families, regarding the extent to which they value a close relationship with the child and the extent to which they engage in specific practices. I would argue that this is a fruitful line of research, at least for understanding differences in what children bring to school. I cannot explain the link between these differences and the kinds of experiences children have, but I think that it is fertile ground for thinking and additional research.

The other point I would underscore is that when some groups of children go to school, there is a major chasm between what they experience at home and what they learn in school. There are many things that we do not appreciate and many things we cannot articulate. For example, although we do not realize it, we have been trained implicitly to pass someone on a particular side. Which side is that? The right side. When I went to South Africa, I did not realize that I was walking on the "wrong" side of the sidewalk. People would be looking at me and bumping into me. I never realized that this was a rule I was taught until I went to a different place. When children go to school, they often understand, but are not always able to articulate. They have little power to negotiate the fact that what is happening to them at school is very different. We have to appreciate this struggle; it is not easy sometimes. They are trying to manage a lot of different messages. I would argue that for children in some sociocultural niches the difference is not that great. I would postulate that with the higher SES children and maybe White children, there may be greater congruence between what happens at home and what happens in the classroom.

The argument here is that if we are going to have culturally sensitive, relevant measures and programs, we must understand and appreciate the diversity of children's families and social environments.

The final point, which I presaged with my comment about some people thinking that certain children cannot learn, is that I have an unshakable faith that all children can learn and that

there are certain propensities common to all children. It is clear to me that if one does not see this, it is because one does not believe that it is possible. I think that believing must come first.

John Love: When I was asked to fill in, I was not expected to give a long and detailed comprehensive presentation. What I would like to do is to raise some issues and suggest some areas for discussion, because, as Barbarin said at the beginning, I also would like to learn from all of you.

I was intrigued by the story of the search for Mr. Mandela. It reminded me of a very old joke about the drunk who is wandering around on the street at night under the street lamp. Somebody comes up to him and says, "Why are you fumbling around under the street lamp?" He replies, "I've lost my keys." The person asks, "Where'd you lose them?" He says, "Over there," and points to a distance half a block away. The person asks, "Well, why are you looking here then?" He answers, "Well, this is where the light is."

I think that in some sense, that is where we are in our assessment systems: We select assessments, procedures, measures, systems, and so forth because they are something we know. Instead, we must fumble around in the dark to look for a key that we have lost, and really never had. Even then, perhaps if we found the key, we would not be sure it was the right key. It is a dilemma in trying to find ways of assessing diverse children, children who have very different experiences and are often in the same programs.

When we talk about accountability, it is because we want to find out whether the experience the child is having at that particular period of time is making a difference on something that is important for the child's development, according to the adults who work with the children. That long-winded sentence suggests that a lot of different decisions and issues are involved in assessment.

In some ways, all assessment is for accountability, but different types of accountability. Even the teacher, who wants to find out whether the child is benefiting from instruction in her classroom during the last week, is in some sense trying to find out whether she has made a difference for that child and wants to hold herself accountable. We get worried when we see who is holding whom accountable. If the director of the Head Start program is assessing accountability, that may be good because we want program directors to understand how well their staff is doing and how well the children are doing in the programs. However, when a government agency—whether state or federal—is assessing accountability, it is aggregating data from millions of children in many different settings and making high-stakes decisions about children's lives, such as funding of programs. In these cases, we get to a definition of accountability that worries some of us and makes us want to step back and look at what the measures are and what they really tell us.

Part of the issue is in selecting the measures in the first place or developing new ones. Maybe the issues are different for different dimensions of development. The strengths and limitations of existing measures go along with the issues of selecting them. There is also the issue of interpreting or understanding the implications of what is learned from the assessment process.

No matter what diverse settings children are in, one approach that makes a lot of sense might be referred to as a "theory of change." We talk to program staff or teachers in order to find out what they are trying to accomplish, what outcomes they would like to see, or what indications they would like to see that show that their program or their classroom has made a difference for children.

When one works with children over a period of time—and I think of this in terms of some program evaluations that go on for several years—children grow older and the issues of age diversity come into play. Even if one were able to get a beautiful measure at 3 years of age, one probably needs something a little different when the child is 5, 7, or 8 years old. It was certainly true in the experience that we recently had in Early Head Start, where many children began the program before they were born. The issues of assessing something like language development when children are 1 to 3 years of age requires very different strategies than those used with

different ages. How does one make sense of the development from the different measurements one has taken?

We judge the value of a particular measure on the basis of its previous use. This brings a dilemma because there are not many measures that have been used with the diverse cultural and racial groups that we are concerned about today.

We always eventually come to the psychometric properties. It seems that there is an increasing emphasis on the role of predictive validity in selection of measures. Herbert Ginsberg referred to this as the pernicious predictive validity criterion. According to him, there can be many reasons why a measure taken with a child at one point in time is a good predictor of that child's behavior or development at some other point in time.

A particular case in point is the Peabody Picture Vocabulary Test, which apparently is one of the better predictors of children's language development and success in school in language. Yet I have not heard an expert in language development say that receptive vocabulary is the most critical aspect of development at age 3, 4, or 5.

What is pernicious about predictive validity is that many measures, as we know, capture many developments going on in the child's world besides what we are particularly interested in measuring. It is quite possible that children who grow up in the upper quintile happen to be in homes where they learn how to recognize vocabulary, and so forth, along with everything else they are learning. We do not know whether receptive vocabulary is most critical to their development.

Many of us like to adopt the strategy of having diverse assessment methods. We may combine teacher observation and rating of a child on various dimensions. We may have an observer, who is trained to look at particular facets of behavior and who may have different perspectives than the teacher, spend some time with a child and make a rating. We may have a direct assessment or a standardized test, where children read the items themselves and respond individually. We have assessments of the Howard Gardner nature, where children are instructed to engage in a learning activity, and we measure what the child is learning during the structured situation. In other words, intelligence is often not measured on standard tests.

Then we get to the reality of assessment and, since most assessment has to be paid for by somebody, we end up worrying about costs. That is one advantage of standardized tests; they are inexpensive, can be done in a group setting, do not require a lot of materials or equipment, do not require a lot of training to administer, and so forth. That is the practical sense of how we handle some of the dilemmas of assessment.

I challenge everyone to think about the extent to which culturally appropriate assessments might vary. They may vary depending on the child's race, ethnicity, language, and community. They may also depend on the elements of the child's development that we are interested in. These five dimensions come from the National Education Goals Panel's definition of key elements for children's early development and learning and success in school.

I think the issue of finding culturally appropriate assessments is tied in with the application of those assessments. Often there is a focus on the top one or top two categories of cognitive and language development. We certainly want children to behave appropriately in social settings, but what really counts is whether there is language development, language literacy, and numeracy—this the tri-part directive that the President has given to the Head Start Bureau.

Regardless of the child's race, ethnicity, living circumstances, or outcome assessment, we cannot understand the child's development without knowing something about what the Goals Panel referred to as "the condition that supports that development." The Goals Panel listed three or four of the qualities related to this development: (a) programs that children have experienced up until school, (b) experiences of parents, (c) opportunities for parents to benefit from parenting education classes and to act as the child's first teacher, and (d) issues such as TV viewing, as Barbarin mentioned. It is not only what is being watched, but also how it is being watched and how parents use television toward the benefit of children.

Other conditions include support for parents, nutrition, and health care. There are dozens of other conditions that are important for supporting or hindering children's development, and I just listed a few there. Some final thoughts: I think so-called culturally appropriate or culture-fair tests are criticized because they are often held to a different standard. Certain tests may continue to be used despite not meeting our high standards of validity and reliability because we have some other purpose in mind. We sometimes think that if a test is going to be used for accountability by a school system, for example, then it really has to be reliable and valid, but for other purposes, maybe it does not. To me, there are no higher stakes than the decision that a teacher makes every day about what to do with the children in her classroom. The information that a teacher has, and how she gets that information, is important. Perhaps Sam Meisels will talk about that since he has made some major contributions in helping teachers be able to wisely make those daily and weekly decisions.

Children are highly variable in many ways, as we have talked about. The contexts that they live in are highly diverse. Whatever we end with as a measurement, it is an indicator, and it really is just that. It is not necessarily the key that we were hoping to find in the dark, but it is something that is close to that key. We have to make judgments about what that key tells us in the context of many sources of information.

Samuel Meisels: I feel totally unprepared to do this presentation. It is not that I did not prepare; I just feel unprepared, and I am not sure what I have to offer. I am impressed with how many people are here, which I think has something to do with the fact that we all feel unprepared about this issue. I do not know if the topic that we were given, assessment and accountability with multicultural and multilinguistic populations, is solvable. I get calls from people who tell me, "My school district has 108 different languages represented among kindergarteners. What screening test should I use?" I reply, "Beats me." In fact, the answer that I usually come up with is that I would not give a screening test in such a situation.

Since my colleagues have told stories, I will tell one story. I started the world of assessment many years ago when I was at Tulsa University. I developed the Early Screening Inventory at that time; we had a different name for it then. In fact, I have changed the name in most places I have gone, but it is not going to be called the Erickson Screening Instrument; it is going to stay what it is. In any event, I began that work in Somerville, Massachusetts in the mid-1970s. There was a high concentration of Portuguese and Greek families living in Somerville. A colleague of mine and I developed the Early Screening Inventory at that point because the only developmental screening test was the Denver Developmental Screening Test.

I knew, even as a beginner in the assessment field, that this test would never distinguish or discriminate among children at-risk and not at-risk. We found a person who created a Portuguese translation. Then he got fired and took the translation with him, so that was the end of the Portuguese endeavor. For the Greek children, we found a father from the Greek Orthodox Church who came in and administered it. Every Greek child got a perfect score; it was phenomenal. We had learned over time that multicultural assessment has to do with a lot more than just translation.

How do we develop socioculturally competent assessments? This is the thought that I add to my two colleagues' remarks. First, we have to recognize that revised procedures in the absence of revised perceptions will be incomplete. This gets to Barbarin's last comment about what we are willing to see and what we are willing to believe. We have to recognize that we need to change not only how we assess, but also how we see what we are assessing. There are some significant differences that may be present, which are consequent upon differences in cultures and ethnicities.

The tasks on our assessments may need to change as we go across significantly different cultures; cultures that are more separated from other cultures, or cultures that are newer to the U.S. than some other cultures. There are a lot of assimilated cultures. In fact, one solution to multiculturalism is assimilation, but that is not the one we are going to be able to turn to here.

Our task is to ask for suitable, appropriate, or culturally meaningful questions and to interpret the answers that we get within a meaningful cultural framework.

This is very difficult. First of all, there are those 108 languages—maybe not 108 cultures, but there are many differences out there, most of which none of us knows about. It seems to me that the easiest way to deal with assessments across cultures is to have a teacher who is of the same culture to administer the assessment, but that is not what we usually find. If we have a teacher of the same culture as the children, or we have a teacher who is very familiar with the culture of several of the children, then we can probably expect that this teacher will be able to make adjustments and accommodations. When the teacher does not know very much about the other cultures, that teacher needs to get some help and bring in other points of view.

In thinking about how I could contribute something to this discussion, I began thinking that perhaps it would be worth my telling about how we structured the work-sampling system, which is a performance assessment, which my colleagues and I have developed. We constructed it to be used in a wide range of cultures, and it has not seemed to pose problems when we move between all kinds of children across the country: from White suburbia, to African American children in inner cities, to Native American children who are in the Bureau of Indian Affairs schools, to Latino children.

This assessment has been in use in those situations and while I do not have systematic evidence to support it, I do have people telling me that it is working for them. I am not surprised that it works because generally speaking, when we think about standards that anchor assessments and help us to know which indicators are reasonable in evaluating children's learning, there are three kinds of standards. There are program standards, content standards, and performance standards.

The kinds of standards that I am interested in are the latter two: content standards and performance standards, not program standards. Program standards are very familiar to Head Start because Head Start may have more program standards than any other known program in the world. What do they do? They focus on aspects of classroom composition, structural elements, and so forth. They also primarily describe the formal structure of the setting; they do not imply what children are taught or how they are taught. I want to define program standards so that everyone knows what I am talking about. I have never thought about it, but I am sure there are major cultural artifacts that are tied to program standards. I believe we are going to find most cultural issues in the dynamic elements. It is in the dynamic aspects where we have to revise our perceptions and not just revise our procedures.

Let me define content standards: They describe the general knowledge, skills, and competencies that children are expected to demonstrate within some domain of knowledge. Content standards are intended to define what children should know and be able to do in different domains. One of the issues with content standards is that they can be too broad and give very little direction for implementers, or they can be too specific and not provide enough flexibility.

When one looks at the standards that states have promulgated for learning in K-12, very often there are content standards that are either too broad or too general. More often they are too broad. They present the content standard in mathematics learning in computation for K-3, or for K-6 even, and that is obviously too broad.

Sometimes they will be very specific in which case they are getting more into performance standards. They do not provide any flexibility. Flexibility is a key element of working in a socioculturally competent way in assessment, as well as in instruction.

I am going to define performance standards, and then I want to come back to content standards. Performance standards are more specific. They provide concrete examples of competent, skilled, and knowledgeable behavior. They describe specific behaviors or performances that children must demonstrate in order to achieve at specified levels. They are often associated with a rubric or scoring framework, which consists of a set of criteria used for distinguishing among different kinds of performances. Finally, the issue here is that if performance standards are too

specific, they can dictate a curriculum, or interfere with the need to individualize and remain open to cultural variation.

It is important for us to consider the level of specificity and generality for performance standards when we are looking at socioculturally competent assessment. This approach apparently has not had problems in terms of its use across a wide range of cultures in America. What we have produced primarily in work-sampling are content standards, not performance standards.

An example of an indicator from our adaptation of work-sampling for Head Start, in the domain of language and literacy, is in the component of listening and understanding, where the indicator is that the child gains a meaning by listening. The content standard for that says that 4-year-olds gain knowledge about their world by watching and listening; for non-English speaking children, listening skills are key to beginning to understand English. A 4-year-old's ability to understand an increasingly complex and varied vocabulary is enhanced as stories, poems, and songs are read to large and small groups, as children participate, and so forth. We give many examples of this, which helps teachers make sense of it. This is at a general level.

We can be more specific, and I can show the performance standards for this. Primarily, when people use work-sampling—taking four different situations in the Bureau of Indian Affairs schools; in Grosse Point, Michigan schools; in Chicago public schools; or in Dade County, Florida schools—they stop at the point of the content standards and teachers, since this is a curriculum-embedded assessment. They then need to decide which of the examples, shown here and in other places, are correlative to them and are best going to depict this content standard. It is here that teachers will make a culturally relevant decision about how they will implement this, where they will look for it, and what indicators they can record and evaluate as a result of taking the specific situation into account.

The question then is whether we have lost validity. As we go from one classroom to another in different cultural milieu, do we have teachers who are applying different standards? We have the same content standard, but we do not necessarily have the same performance standards.

The empirical research that we have done on work-sampling shows that the implementation varies greatly from teacher to teacher. Yet the results are so similar that it probably can handle that much ambiguity and it does not matter. That seems to also say that there is a certain likeness among children despite their cultural differences.

If we do not apply the same standards or the same form of evaluation in a rigid way, we may in fact do better than if we tried to do the same for everyone. Our validity may be enhanced through offering some space room for teachers to make on the spot decisions or to make decisions that they have learned make the most sense. In other words, they may not approach a child in a direct way; they may approach a child in an indirect way in order to learn something about the child's language or other skills because, for certain children, that is the most suitable adult-to-child interaction. In other situations this may be inappropriate.

I am going to stop here and say that I am a learner in this; I think we are all learners in this. It is important that we understand that we do not know everything. We must pay attention to the people who ask us what screening test they should use with 108 languages in their school district. What I mostly say to those people is to watch the children; that is where one must start.

Linda Espinosa: I am currently at the University of Missouri. The distinction Meisels made between content and performance is very important, particularly as we look at the Head Start Outcomes framework and at cultural diversity. With respect to that Outcomes framework and what we all perceive as the high-stakes accountability that is emerging in the Head Start regulations, I do not think the distinction between content and performance is well understood. We still do not know how to assess it or how to make local community adaptations that would be more culturally relevant and culturally consistent. Are there any specific recommendations for training, or for guidelines, to assist Head Start as they look at the Outcomes in relationship to cultural diversity within the communities?

Meisels: The Head Start Outcomes framework is an example of content standards, not performance standards. It is consistent with the approach that I was giving, and in fact we have aligned work-sampling with the framework so it is one and the same. That is my explanation from this end.

The issue is in the latest policy framework that has come from President Bush, who we are led to believe is spending a lot of time thinking about Head Start. There is talk about a national reporting system for Head Start. This has to be done with tremendous care in Head Start. Head Start is an exemplar of so many wonderful things. One thing is diversity of the children who participate. Every year we see greater diversity in Head Start than the year before. As we move toward a national reporting system, we are going to move toward performance standards and not toward content standards that allow some ambiguity. It will become more and more difficult.

We would need to do a careful series of equivalency studies that would show us that children from different backgrounds are not disadvantaged by the assessment that is used. A study of that sort would take several years to perform. The DHHS has been told that they have to be in the field this fall. This is very worrisome because nobody can do it that quickly.

One cannot force children to grow up in the same way that one can force tulips to open up. These children are very stubborn; they take all year to grow a year older. One is not going to know at the beginning how it is going to come out.

John Fantuzzo: You all hit the nail on the head about one of the struggles we have. We are in a contact zone that we agonizingly call "virgin" where folks are basically saying that they have got to know now. Some of the processes we are talking about, and the children we have to know about quickly, are the children whom we know the least about.

Think about it from the assessment perspective. What are the constructs? The literature says that these constructs are important, so we rally around the literature. But how did we determine that these constructs are important and who do we study to determine that these constructs are important? We have a construct problem that people are not really wrestling with.

To deal with the construct problem is a major headache. One must have the will and motivation to ask which constructs are important for what groups of children with those 108 different languages. There is no will and there is no money, so folks are going to assume the construct is adequate.

Then there is the assessment part, which is content validity. People assume that an item in a measure represents a particular construct for everyone, so people are not even agonizing over content validity. However, they should ask whether that item has the same meaning for different groups of people, instead of assuming that they respond the same way to the item.

Meisels: Let me respond to Fantuzzo, because it helped me understand what I said before a little better. One can have the same content standard, but different children from different backgrounds are going to show their skill or knowledge of that standard differently, depending on the experiences that they have had. The question of content equivalence becomes important in evaluating the ways that different children demonstrate what they know and what they can do. I do not know that anybody has ever worked those equivalencies out, but that is part of what one can do formally in work sampling. It is an informal assessment where certain measurements can be made in a formal way.

Fantuzzo: That is the last point I was going to make. We are not even doing research into construct and content validity—the most concrete, beginning place. We have struggled with this, because Head Start parents who we initially worked with forced us to say that the measures we had chosen were useless for the children. We said, "That is an empirical issue, isn't it? Why don't we study the measures and see whether or not they are useless?" We found that for some of the measures we studied, with the constructs they were talking about, we would have been better off

randomly assigning the items to factors. One got better factors from our factor structure than the factors that were reported in the literature. We are not doing enough of that kind of research at the most primitive level, bringing in skepticism to existing measures such as the Child Behavior Checklist (CBCL) or the Peabody Picture Vocabulary Test (PPVT).

The notion is to consider low-income families and resolve to take a look at the assessments. None of us want to look at this critically. If we carefully assess the batteries we have, we will not have any assessments left when we are done. The next level is constructing measures with good content validity, which are appropriate for a variety of groups.

Then we have a harder, more vexing question of whether or not these constructs are salient for the groups that we care about. Particularly with Head Start and large African American and Latino populations, we should be developing an assessment technology that takes into account that those large groups should be governing how we proceed. Those are the largest populations, empirically speaking.

I am reminded of what an anthropologist once told me: "Approach children with three things in mind: they are smart, they are busy, and they are in a place." The critical element for understanding the place can help us understand how they are smart and busy. That is where I feel it falls apart, because we do not necessarily have the will and the motivation to study the place, and the meaning of different events, for different groups of children. Maybe now is the time of high stakes. There is something good about the high stakes: It should keep our ethics high about what we are allowing to be called good assessment.

Vivian Gadsden: How do we get some certainty about what good assessment looks like and bring it into policy discussions? We are all under pressure and under the presumption that we know all we need to know about children when in fact we may not know much about them. How would we take some of what was presented, which shows variability across class, and put that into the discussion of how assessment enters not only research, but policy as well?

Meisels: Maybe the answer to that is doing the kind of research that Fantuzzo's comment suggests, providing counterexamples of why the CBCL, the PPVT, and the various other measures we use to assess reading and vocabulary do not work for particular groups. It takes a lot of persistence because there is no market for that research.

There actually is a great deal of research going on. People have data, and maybe what we need to do is get people who have these large data sets on ethnic minorities to come together and see if they can tell a story. If the data tell a worthwhile story, then we can give some more attention to it.

With respect to the socioemotional issue, say the CBCL. I have been involved in and I have heard of other people being involved in trying to find out from parents, for example, what they deem to be behavior problems in their children. This is in place of assuming that the DSM-generated items reflected in the CBCL represent problems and concerns that parents have. We have found that measures of aggression do not closely parallel parents' concerns. Parents make much finer distinctions about behavior than represented in many of these measures. It is important for parents to know the degree of provocation, in order to determine whether aggression is a problem. There is a study of African American and Latino poor families that show aggression was a problem under conditions of provocation but was a serious problem if there was no provocation. There are other instances, where things that are problematic for a population as a whole are not problematic among some African American samples.

Those findings come from studies that are more qualitative in nature, where parents are asked about their expectations for their children's behavior, what things they consider problematic, and so forth. This is the kind of thing we are trying to do in this large multistate study of preschool children and families.

Susan Yom: In your assessments, I assume you are primarily focusing on preschool children because in the K-12 continuum there are national performance standards that are established by the Commission already. In addition to that, states have their own standardized tests. For example, in New York there are fouth-grade students who are taking standardized tests in math, language, and so forth. These are formal content standards, in that these assessments are basically sound and proven to be fail-proof because they are not cross-generational or cross-ethnic. Has the preschool community looked at the K-12 standardization in performance standards nationally?

The research has shown that New York State and Massachusetts have something to show with their good testing measures. For example, they test listening, speaking, reading, and writing from different perspectives, on what they believe to be a grade four level benchmark. This benchmark in accordance with the national standards and with what New York State has developed as its own standards.

Meisels: There is contrary research in Massachusetts about the Massachusetts Comprehensive Assessment Tests (MCATs), if that is what you are referring to. I do not know because I am not nearly as sanguine about these tests or even the fact that there are performance standards in all domains. National curriculum groups, like the National Council of Teachers of Math, National Council of Teachers of English, American Association for the Advancement of Science, and others, have created mostly content standards and some performance standards. Then states have gone to the content standards and have adapted them to their own situations. There are differences from state to state because there is not a national set of performance standards. Sometimes they are set very high. Virginia is a good example of a state that has set those standards so high that a vast majority of children fail the Virginia Standards of Learning.

Your other question is about preschool. What we have tried to do in our work is to do a downward extension of the better standards through age 3. There are significant differences between 3-year-olds' literacy learning and 7-year-olds or 17-year-olds' literacy learning. Therefore one is bringing in very different content that has to be changed along the line. We do not have a curriculum organization that has dealt with the preschool years in the same way that we have dealt with K-12. That is a remaining issue for the preschool world.

Mary Ann Walker: California has spent a lot of money on standardized tests in the K-12 system, but they still have not been able to minimize the cultural bias in those tests. It is the same issue we are seeing at the preschool level, that many assessment tools and screening tools have the framework, but they do not address or help teachers look at the child through the filter of that child's culture and language. I am not optimistic about what I have seen in the K-12 system. I think they have a lot to learn from what we are doing at the preschool level to try to delineate some of these divisions.

Kevin Markman: It is also important that we bear in mind that young children in preschools are much more regulated by their environment. As children get older, we are more likely to see reliability in test scores. What I often see—particularly in child assessments of professionals who have been trained on older children and then start working with infants and preschoolers—is that they are much more wedded to right and wrong answers in the face of ambiguity and are more likely to cling to standardized instruments and responses.

Fantuzzo: This discussion keeps prompting me to remember how we spend a lot of time teaching children to learn specific concepts, such as table and round. Imagine how confused they would be if they came in here looking for the round table. We have a lot of work ahead of us. What we have been able to identify at least is that we do not have answers about how to assess children, especially at the preschool level.

Certain expectations have been forced on us in Head Start, and I am sure it is happening in other preschools too. We talked earlier about programs now having to ensure that all children leave knowing 10 letters. We found out from the FACES Project that they now know 8.9. But we do not have any real basis for knowing where that figure came from. Hopefully in the future, like everything else, we will learn how to do that.

Love: It might be useful to know that the Early Head Start Evaluation created a consortium of national and local researchers. That consortium has created a number of working groups that are focusing on various issues. There is one group in particular that is addressing the issue of cultural appropriateness in the measures that we use in Early Head Start. We have a substantially diverse sample, with children with disabilities—whom we have not mentioned at all today—African Americans, Latino, and Whites, children from rural and urban areas, and so forth. This group is going to look at a number of measures that were used at 1, 2, and 3 years of age to see whether different factor structures might be better measures for different cultural subgroups in that sample. Perhaps 2 years from now, these meetings will have data related to that.

Barbra Lancelot: Could you comment on whether using a Rasch analysis is a useful way of looking at tests that exist in light of different cultural contexts?

Daryl Greenfield: Yes it is, but few assessments have the right kind of data to do a Rasch analysis. Rasch analysis is a latent trait model that I am unqualified to explain to anybody, but I have used it and know that this is a way for us to control for certain variables that are important in terms of multicultural assessment and other kinds of assessment. However, one must collect the right kind of data; one cannot just apply it to any data set.

Markman: We seem to come back to the issue of the power of setting standards, who it is that sets standards, whether it is the content standards, program standards, or performance standards. If it means that someone has a model in their head about something, the experts principally do the process by which standards are set.

I was having a discussion with Linda Espinosa who says they have a curriculum that values democracy, children sharing, and having a role in decision-making, yet they are working in a community where those are not valued behaviors or outcomes. It occurred to me that there is a kind of imperialism in experts deciding what to assess and how.

I wonder if part of the answer is in recognizing that experts are not going to be able to completely dictate a set of standards that everyone will meet. I wonder whether at least some process of negotiating, at least at the preschool level, should exist about what we want our children to learn.

Question: Is there a new term one could coin called "ignorant experts"? Someone could be identified with the power of being an expert, but they could be ignorant about certain things. It seems that real scholars should be identifying ethical principles and identifying what their limitations are. If experts could admit that they are ignorant about certain things, it would drive inquiry towards what is necessary.

Gadsden: How does partnership, which is central to research, fit in? What would it mean to include parents and other community people as coexperts? We seem to be thinking about assessment so empirically that parents cannot inform the process. What would be the process of inviting and engaging parents and Head Start staff as well as the experts in the construction of appropriate assessment?

Fantuzzo: We have approached that by sampling different measures where parents can review them. We have research staff question teachers. We then evaluate different measures. We developed a system that we are using and it is working well for our group.

Comment: But it was completely nested within this one center, this one community, and this one neighborhood. Your point is reductionism versus valuing divergent thinking, and we are not asking how many different ways we can assess. We need to find the best way, the single way. Imperialism is built into our methodology and is built into the way we approach children in the assessment process.

Richard Budgell: I am the manager of a national program for aboriginal people in Canada. When we developed our national principles and guidelines, we held a consultation across all the communities then involved in the program and had them design the principles and guidelines for the program. This included parents who were involved at that time, teachers, and other community members. As the government, we went to this with some ideas of what we wanted to see in the program, but it was done as a joint effort. Of course, that got us investment and a buy-in into the definition and the standards of the program.

Comment: It sounds revolutionary.

Budgell: We did not think so.

Carla Patterson: I am from Australia, and I would attest to the fact that Budgell's study has worked there. They consulted parents and workers, and let them form principles and guidelines. Then they followed those principles and guidelines.

Gadsden: It is funny, I was thinking as I was listening and trying to learn, that maybe we need to get out of America. But then I realized that I have been out of America, and it is not perfect out there either. Clearly what is being said about Canada and about Australia—and I understand this is true in New Zealand as well—is that there is a great deal that we could learn from leaving these shores.

Powell: The glass is not half full or half empty; it is just too big.

Policy Issues Concerning Child Outcomes in Head Start

CHAIR: Samuel J. Meisels
DISCUSSANT: Sue Bredekamp
PRESENTERS: Samuel J. Meisels, Thomas Schultz, Susan Anderson

In the context of the first year of use of the Head Start Child Outcomes Framework, many policy questions are coming to the forefront regarding standards, assessments, and impact on program self-improvement. These issues and others were addressed.

■ The Head Start Child Outcomes Framework

Thomas Schultz, Susan Anderson

(Paper summary not available.)

■ Policy Issues of Early Childhood Outcomes

Samuel J. Meisels

(Paper summary not available.)

Language, Literacy, and Early Learning

Language, Literacy, and Cognition

CHAIR: John Hagen
PRESENTERS: Twila Tardif, Todd Risley, Fred Morrison

John Hagen: I represent the Society for Research in Child Development. I am cochair of the Program Committee for the Sixth Head Start Conference.

This session is on literacy, language, and cognition. We have three excellent researchers with complementary work. From these presenters, we will see an interesting story unravel from both the basic research and the implications for policies and practice. I will introduce each of them in order of their presentations, and then there will be time for discussion and questions at the end.

Our first presenter, Twila Tardif received her Ph.D. from Yale University. She did a postdoctorate at the University of Michigan and then she was a professor at the Chinese University of Hong Kong. She recently returned to Ann Arbor and now has a new position in the Center for Human Growth and Development. She is involved in fostering new directions in research, as well as collaborations with Asia, and she continues her collaborations in China. She has done work on Cantonese and Mandarin and is a fluent speaker of both languages. She will talk to us today about early language development and cross-linguistic differences in the fundamental milestones of young children.

Twila Tardif: As I was working in Hong Kong, we started developing a Cantonese and a Mandarin version of the MacArthur Communicative Development Inventory (CDI). Over the last 2 years, we have continued to receive inquiries from various programs, including a couple of individuals involved in Head Start. To avoid any further requests at this point, we are not yet ready to release our version of the CDI.

I want to present some preliminary results from that research and other research that I have been doing on Chinese families and children's language acquisition. My question is "What is the task of a child in acquiring their native language?" Essentially, children must become confident members of their linguistic community. They need to understand what their parents and family say, and they need to be able to speak. So, there is comprehension and there is production. The task of the child is to become involved both as one who is able to comprehend and as a speaker. This is true everywhere in the world. The majority of children, and I say majority but not all because some children do have language acquisition problems, will learn the language of their community. In Ann Arbor, it would be English. In Beijing, it would be some version of Putonghua or possibly a Beijing dialect of Mandarin. In Hong Kong, it would be Cantonese, which is sometimes Chinglish because Cantonese also incorporates many English words.

When acquiring a native language, there are a number of important milestones. Children need to be able to understand as well as produce the sounds and words of their language. Children get to a point where it is not just first words, but a significant number of words they

need to acquire to move on in the world. That difference, movement from their first word to a 50- or 100-word vocabulary, occurs slowly for some children and rapidly for others.

There are two different milestones. First, children need to start putting words together. Once that happens, they begin to learn the grammar of their own language. They also need to be able to participate in conversations and follow specific conversational rules, but these rules can vary across cultures. The point that I would like to make today is that there are cross-linguistic differences present in these milestones. The milestones are universal, but how children achieve those milestones, and possibly when children achieve those milestones, can vary tremendously across different languages.

I am going to focus on first words and the 50- to 100-word vocabulary. I will primarily discuss the early stages of acquisition in 1½- to 3½-year old children. Why did I become interested in Chinese, and why is Chinese important for this? Many people who hear Chinese are immediately struck by the fact that it sounds different. This may be because Chinese is a tonal language. For example, "ma" has four tones that mean four different words. "Ma" said in a falling tone is to swear, but "ma" said with a high, flat tone means "mother." One does not want to be swearing at one's mother. Those of you who speak Chinese know the difference.

Chinese is also lexically different in a number of ways. At a superficial level, the word "cousin" can be confusing. In English, everyone is a cousin. Your mother's sister's daughter would be a cousin. Your mother's sister's son would be a cousin. They are both cousins. In Chinese, they both have a specific word. There are all kinds of kinship terms, and with uncles and aunts it gets even more complicated.

On the other hand, English is complicated with its numerous nouns. Chinese does not tend to be so specific with nouns. In particular, Chinese and English differ in their nouns and verbs. Syntactically, they are also different. Nonnative speakers of English, particularly Chinese speakers, often get "he" and "she" mixed up. It is not that they do not know the difference between males and females, it is just that Chinese does not mark that difference syntactically. There are also tense differences, plural differences, and pragmatic differences. Languages differ in where their complexities lie.

Phonological systems of almost all languages are complex, but again, they are complex in different ways. In English, the vowels are comparable to Chinese vowels. There are different vowels, but they have similar levels of complexity. When looking at consonants and syllable-initial consonants, they may be more complex in English; English has many more syllable-final consonants. We say "truck." In Mandarin, there are few, and possibly—as some people argue—no true consonants. There is an "m" and an "n." Cantonese has some consonants, but they are stuck in the throat. They do not quite get out.

English consonant clusters, such as "string" or "upbringing," present a complex sound. English has many of those clusters. Chinese Mandarin has none. Cantonese, arguably, has two. In terms of tone, English has no tone; Mandarin has four, possibly five tones, and Cantonese, depending on how one counts them, has between six and nine tones. Again, the point is that languages are complex. Phonology is complex, words are complex, but they differ in where they are complex.

Children can have problems with learning the phonology of their language. Many English-speaking children have problems with complex consonant clusters. Instead of "spaghetti," they say "pisgetti." There are instances where they reverse the order, or they cannot quite get them out. Similarly, tones can be a problem, but in fact, when looking at native speakers acquiring their native language, tone errors are rare. Although there are fewer consonants, they are still problematic.

The levels of complexity sometimes translate to problems for children learning the language. However, native speakers do not have problems with things that appear to be complex for nonnative speakers. The he/she, gender agreement case is an example. At 3 years of age, native speakers of English know the distinction. If they get it wrong, it is because they are truly confused as to whether somebody is a boy or a girl, rather than the marking.

Moving from sounds to words, my interest is in how children learn words. There are two real positions. One is what I call "all words are created equal." The idea is that children acquire all words through the same processes, regardless of what type of words they are. There are general principles of learning and cognition for nouns, verbs, articles, and so forth. The second position is that some words deserve special status. There may be some innate biases that the child brings to the task of learning words that help him to acquire words that are more important. The position that I am going to present, because it has been argued for a long time, is that children start out learning many nouns. This is a statistical fact, and some people have argued that there is a reason for it.

In 1982, Gentner did an extensive review of the cross-linguistic literature and discovered that nouns appeared to be predominant in all children's vocabularies. There was an argument as to whether in English that was 100% true. The argument holds that nouns might be easy for children to learn because the neurological mapping process is simpler. For example, in the case of a chair, a child can see its boundaries; the chair would not include part of the carpet. Usually, when we refer to a noun, we are referring to the whole object, not just to a piece of it, unless we have specifically mentioned the whole object and then the piece. It may be that we are hard-wired to acquire nouns.

Gentner examined a number of different languages and found evidence that across languages children learn nouns early. This finding was consistent. For a ratio measure of nouns to nouns plus verbs, if it is 0.5, then it is equal. If it is 1.0, then there are all nouns. If it is 0.0, then there are all verbs. People sometimes ask, "Well, what about words like 'up'? Children might use this as a verb, with 'up' meaning 'pick me up', but it is not really a verb." I am excluding those types of words, and I am not counting proper names or words that are ambiguous in both English and Chinese, such as the words "pee" or "pee-pee." These are common early childhood words, but what are they? Are they nouns or verbs? They could be either.

This was the background to my dissertation research. I was dismayed when I first came back from the field and started looking at the vocabulary of the 10 children in my study. I found that at the earliest visit, all 9 of the 10 children who were producing any words at all were producing more verbs than nouns. This was my dissertation. I was a graduate student at the time, and one can imagine my horror: "Oh my God, I have done something wrong."

As a result of my dissertation, I have spent a long time working on this area of language acquisition. I have found that although there was a Mandarin sample in Gentner's study, the Mandarin-speaking children that I looked at did not appear to conform to this trend. I was surprised by that. This led me to ask the question of whether Mandarin-speaking children go through a different process than English-speaking children. Maybe this universal is not really a cognitive universal, but more of an effect of the input or the environment to which children are exposed. It might be that English-speaking parents are constantly playing this kind of naming game and Mandarin-speaking parents are not.

Evidence suggests that there are social-class differences in the naming game, and that there are social-class differences in the use of nouns and verbs. It may be that input partly accounts for it. It could also go beyond general parent-to-parent differences in input; it could be that different languages set up the world differently. It may be that Mandarin is setting up the child to learn a different system, because in Mandarin the verb syntax is simple. Therefore, Chinese speakers have a hard time learning English because of all of the tenses. In Chinese, there is a marking on verbs, but it is straightforward and related to aspect. Aspect refers to time, whether it is happening in the past, present, or future.

In Mandarin, no matter which way one hears a verb and what aspect is marked, one still hears the common verb. I guarantee that every verb follows this. In the English "run," "running," and "ran", it is hard to pull out the commonality because "ran" and "run" are not quite the same. In Mandarin, every verb is regular, and the marking is actually separate from the verb. The marking does not get imbedded into the verb like "go," "going," and "went;" instead, it switches completely.

There are other arguments as to why Mandarin might have more of an emphasis on verbs. In particular, Mandarin allows a relatively free dropping of nouns. One can drop subjects. One can also frequently drop the object and just say "went," and as long as we both know what is going on, who went and where they went, there is no confusion. A classic example is that many Chinese speakers become confused when they hear the phrase "it's raining." What is raining? In English, one must always have the "it," even when it does not really make any sense.

There may also be some cultural differences. This is true within the U.S. as well, and it is possible that Chinese parents focus more on actions than on objects. There are also some artifactual reasons that one should recognize.

Now I will present a series of studies that I have done to address different aspects of the issues mentioned above. The first looks at Mandarin, Italian, and English. Why Italian? Well, we know about Mandarin and English. In my original study, I only looked at Mandarin. I wanted to find some samples of children with comparable types of familial background and naturalistic situations in the home. I wanted to address the issue of whether or not input in the language system affects the acquisition of words.

Italian is interesting because it is also a pro-drop language, meaning that one can drop the subject. It is similar to Mandarin in that respect, but it is also similar to English in the verb system, where the syntax on the verb is complicated. In fact, it is more complicated than English, although it is regular. It provides a nice contrast.

Nobody had ever looked at this noun/verb issue in Italian. My question was "What is the pattern of language acquisition for Italian children?" Are they more similar to Mandarin- or English-speaking children? We found that the number of types of words they were producing was comparable to English-speaking children. When I say types, I mean "ball," "duck," and "birdie." All three words are different noun types; it is the number of different words, not the number of times a child says one word. If I say "ball, ball, ball" they are three "tokens."

In English and Italian, the number of different nouns and verbs children were producing in their natural speech was similar. Again, children of both languages produced more nouns than verbs. However, Mandarin-speaking children actually produced more verbs than nouns. It did not appear to be dramatic, but the difference was significant.

The Italian-speaking children were producing tokens. This was expected in our research, since one can drop nouns relatively freely in Italian. Tokens were not as frequent, but Italian-speaking children produced as many different nouns as English-speaking children did. The English-speaking children were producing nouns much of the time, the Italian-speaking children roughly 50% of the time, and the Mandarin-speaking children, more verbs than nouns.

We then examined some of the artifactual issues. We looked at what the parents were saying by measuring token frequency, type frequency, and when verbs appeared, if they were inflected and with what frequency. We even documented whether the nouns and verbs appeared at the beginning of sentences or at the end, which is the more salient position according to researchers in the field. Across all of our measures, we found that English-speaking parents were making nouns easier to learn. Nouns were more frequent and there were more types of nouns than verbs. Nouns frequently appeared at the end, instead of the beginning, of sentences. In fact, much of the adult-to-child speech consisted of verb constructions such as "get up" or "sit down" occurring at the beginning.

When nouns appeared, they were uninflected, or had few inflections, so it was either "ball," or "balls." When verbs appeared, there was much more variation, such as "go," "going," and "went." We concluded that in English, nouns were more easily learned. As predicted, every single Chinese parent put more emphasis on verbs. Adult-to-child speech in Chinese highlighted verbs, which made it easy for Chinese children to learn them. Among Italian children, the ratio of vocabulary type was right in the middle.

It is not surprising that adult speech is driving a child's production. If adults use more verbs, then children probably will produce more verbs. Another interesting finding is that although

there was an emphasis on the adult-to-child speech with verbs versus nouns, all of the children used more nouns than their parents. Children may find nouns easier to learn, but it depends on their environments, how redundant nouns versus verbs are, and what words they will produce in the end.

I wanted to know the extent to which a child's vocabulary could be pushed around. We conducted a laboratory study. Instead of allowing children and parents to interact the way they do in their homes, we tried to control the context of the interaction. The sample consisted of 24 English-speaking and 24 Mandarin-speaking children. There was a productive speech measure during three contexts of play: (a) book reading, (b) regular toy playing, and (c) mechanical toy playing. We also used the MacArthur CDI to measure vocabulary. We wanted mothers to report what their children were saying outside of the laboratory setting.

We found that when English-speaking children and parents were talking about books, there were many words. When children were busy playing with mechanical toys, there was more action and less talk, which is not surprising. What is interesting is the ratio measure: The amount of talk, as well as the quantity of nouns versus verbs was different. Parents who engaged their children in the book-reading activities bombarded them with nouns, and they produced many nouns.

In the Chinese families, the same pattern was true. The three contexts resulted in different proportions of nouns and verbs, but in every single context, the Mandarin-speaking children produced more verbs than the English-speaking children. There was still this consistent difference between English and Mandarin families.

Mandarin-speaking children produced more verbs than English-speaking children, and English-speaking children produced more nouns than Mandarin-speaking children. There was this double crossover. It was not just that the proportions were different, or that one group produced more nouns or fewer nouns; it was different with both types of words. Mandarin-speaking children used more verbs and English-speaking children used more nouns than their counterparts, although this depended on the setting where different patterns could result.

The results for the MacArthur CDI indicated that the English-speaking children produced many nouns. For Mandarin, the children still appeared to know more nouns, overall, than verbs. That is not surprising, because the number of objects in the world is infinite, if not close to it. Where we found an incredibly consistent difference was that Mandarin-speaking children were producing more verbs and fewer nouns than the English-speaking children. Again, it is not that the ratio was different and one-sided, it was two-sided and there were more verbs and fewer nouns.

The same pattern was true with first words. Over two thirds of the 3,200 children in the sample from Hong Kong and Beijing had a noun/verb difference, even with first words. English speakers used virtually no verbs at the first word stage, and Mandarin speakers had many verbs. This finding was consistent.

Now I will present the findings on comprehension from our MacArthur study. In English, few common nouns were comprehended early. Many names for people and social words were comprehended, but no verbs. In Mandarin, half of the words were verbs. In Cantonese, not quite half of the words were verbs and there were still many nouns. It is also interesting that the early verbs and nouns were similar across the languages. They acquired the same types of verbs, but at different times, for example "bye-bye" and "kiss." "Kiss" is the first verb for English and Mandarin speakers. The word "eat" is a common verb across both languages.

In terms of word production, there were no verbs in any of the languages and few nouns. However, we found that 22% of Mandarin-speaking children produced the eleventh-rank verb, "hit" at 12 months of age; but "hit" is a general verb that can be used for many things.

In English, 4.5% of 12-month-olds are saying "all gone." "Go" is a common verb, but it was used less than 5% of the time in English and close to 15% in Mandarin and Cantonese. At 20 months of age, there was an incredible consistency across the Mandarin and Cantonese speakers. Ninety percent of 20-month-olds in both the Mandarin and Cantonese groups used verbs such as "want," "hold," "hug," "up," and "grab." Only 50% of English speakers used words such as "eat" or "sit."

The overview of noun versus verb production showed that nouns take over as children get older and their vocabulary expands. In English, nouns are dominant at an early stage and continue to be more dominant. In Chinese, the acquisition of nouns and verbs are close. The gap widens, but not significantly, until the children have 200 to 300 words in their vocabulary. This is a different pattern than with early English language acquisition.

What are the implications of this research? For language development, we know that fundamental aspects of adult language use are different. Children are going to acquire the language of their community, so they are going to move towards producing adult patterns of speech in different ways.

It is important to consider the specific language when measuring children's early language development. In English, if a child has few nouns and many verbs, it is a potential marker of serious language delay or language impairment. That criterion should not be used for Chinese. In fact, in Chinese, if a child has few verbs and many nouns in their early vocabulary, that might be a marker of language impairment. That is not to say that nouns are not important in Chinese. Certainly they are important, but the proportion or extent to which those differences exist are different across languages and have implications all the way down.

Hagen: This has set the stage for the issues that will be addressed by our next speaker, Professor Todd Risley. Risley obtained his Ph.D. at the University of Washington. He was part of the cohort at the University of Washington that pioneered much of the research on behavior development and behavior modification. He moved to the University of Kansas, where the Bureau of Child Research at Kansas studied children who had performance problems that led to academic problems. It was in Kansas that he engaged in research with Betty Hart that resulted in the volume *Meaningful Differences*, which helped to refocus the debate looking at the links between children's early family experiences, aspects of language, and later cognitive growth. Risley moved to his native state of Alaska, where he is a professor at the University of Alaska at Anchorage. Several years ago, he also served as Head of the Department of Mental Health for the State of Alaska, so he has been involved in policy and practice as well as the academic arena.

Todd Risley: Betty Hart is a master preschool teacher. She is the one whom I learned everything from. She was my graduate student and ran the Turner House Preschool. I did an enormous amount of research on day-care environments, and it all came from the same kind of question: "What would Betty be doing?" She was also fascinated with child language. The two of us have collaborated for 35 years on these issues.

I will talk about our work, and I am still going to use the same old title, *Meaningful Differences in the Everyday Experience of Young American Children*. We had no idea when we started this in the 1980s. We went through the literature, and there was no indication as to what went on in the homes. All we knew about children was from laboratory situations. I want to remind everyone that a child is awake 100 hours a week. That is an opportunity for experience each week. What goes on in those 100 hours? In the first book that came out in 1995, Hart and I reported what parents actually do in American homes. We had collected data with reliable samples of the daily life of sufficient numbers of families to be able to estimate the average amount of parent-talk received by American infants and toddlers.

Researchers went into homes for 1 hour a month, from the time the babies were 7 months old until they were 36 months old. They observed what was said to the infant and to other people in the infant's presence, and what they did and said in their interactions. By the time we found out how hard it would be, we had so much invested in it that we could not stop. The other thing to remember is that the observer would become a friend of the family.

The observer would record and take notes about the behaviors of people in the home. It hampered observer reliability. The observations were recorded, then the data were coded and transcribed. Each hour of observation took 8 hours of transcription, and probably, another 10

hours of coding. For every time there was an extra adult in the home or someone was visiting, it added another 2 hours of data handling time.

Our sample consisted of American children, not failed families. These families were perfectly happy to have someone come into their homes every month, hour after hour. They were rich families, they were poor families, some received public assistance, and some held professional degrees. There was no child abuse, drug abuse, or homelessness. These are confident families. They may receive public assistance and they may be working poor, but they are not failed families. In the data that I am talking about, we have excluded a whole category of people who are of concern.

We started making observations when the babies were 7 months old. That was to get everybody used to everything, get his or her routines down, and get everyone comfortable with the process. We began taking serious data when they were 9 months old. We stopped when they were 36 months old. We are not talking about 4- and 5-year-old children. Things are different with older children who spend more time with other children and more time alone.

One- and two-year-old children must have a caregiver. They need an adult to stay alive, and they have maximum access to time with an adult in their life. They have to be cared for, and an adult has to be there to mediate all of the things that are important. Before 1- and 2-year-old children have said their first word they rely entirely on adults. This changes from infancy, to toddlerhood, to being a full member of the family, that is, being toilet trained, eating adult foods, and so forth. They require assistance from adults. Things are different early in children's lives compared to when they get to be 3, 4, or 5 years old.

In regard to everyday experience, we needed to have an idea about what occurs during the 100 waking hours of a child's weekly life. We needed a good estimate, but we did not get complete random selection of times because the research team had to make appointments to be in the home based on the families' schedules. We were there in the daytime, evenings, and times that were somewhat representative in terms of the child's life: when the television was on, when people were on the telephone, when people were visiting, when there was laundry to do, and so forth.

I want to talk about the first two words of the title of the book: "differences" and "meaningful." In the process, we found something that we were looking for. This is not in terms of the differences within families, but what goes on in an average child's life.

The numbers indicate that children have 340 utterances addressed to them. They have 1,400 to 1,500 words addressed to them an hour. There were 17 affirmations, indications that what they did was interesting, right, and appropriate. There were 7 prohibitions, indications that what they did was not right or appropriate. Those numbers are important, and I will return to them at the end. In terms of out-of-home programs, those are areas that we need to think about.

We have some numbers and estimates that we did not have before, about range and standard deviation. What goes on in American homes with these children? The differences were a big discovery. I want to mention this because these are the things that we could not see. There are things that one cannot see in life without some augmentation and help. We had no notion of the magnitude of the differences we saw.

Everybody talking to a 1- to 2-year-old child is saying similar things. The dialogue is about eating, dressing, and using the toilet. It all sounds similar. However, we knew there were differences in families because of the data. For example, there were three typical families in our data. The age range of the children was from 9 months to 36 months, and we recorded the number of parent utterances to the children in an hour. There was variability in how many utterances were spoken to the child by the parent. Sometimes people were quiet, and sometimes people were talkative. This changed, in terms of how they felt on the particular day and what was going on.

What we could not see was the overall pattern. One family varied in the amount of talking, but most of the time the amount of talking to that child was high. There was another family where the amount of talking varied but was usually low. The differences needed some kind of

observation over time and consolidation to be able to see the magnitude of those differences. That was the real discovery in our data—the size and the scope of the differences.

I will break down the data in terms of words. Words were in three socioeconomic class categories for the 42 families. They were low-income parents receiving public assistance, working class parents (white collar/blue collar jobs), and professional parents. We saw that there were differences. For example, the professional parents addressed 2,100 words an hour to their children hour after hour, month after month. The low-income families addressed 600 words an hour to their children. The working class parents varied greatly, with an average of around 1,200 words an hour addressed to their children.

The amount of parent-talk differed greatly between families. Some parents addressed fewer than 500 words to their child in an hour of family life, while other parents addressed over 3,000 words an hour. Some parents expressed approval and encouragement more than 40 times an hour of family life, and other parents expressed approval and encouragement less than four times an hour.

These differences accumulate. The consistencies within the families indicated that one could begin to accumulate data and ask about the magnitude of the child's language experience. For each family, the parents talked to their children in consistent amounts, over time.

We were interested in how much is going on when we see the children in preschool at 4 years of age. What has their previous experience been? What are the differences? What we have is an estimate or extrapolation: 48 million words for the child in the professional family. Among families on public assistance, 13 million words were addressed to the children in their home life. In the working class family, the average was about 30 million words addressed to children in home life. The size and consistency of the differences was the big discovery, as well as the magnitude of the differences in language experience that had been accumulating in children's lives.

For those of us who are interested in more than language, let us look at encouragement and prohibitions. Children in professional families heard "You are right" 32 times an hour, while they heard "You are wrong," "Get down from there," "Stop that," or "Don't do that" about five times an hour. That ratio is 6:1. It adds up, so that by the time the children are 4 years of age, the differences may be between hearing encouragement 750,000 times, or only 120,000 times. The children will hear that they are wrong only 120,000 times or 250,000 times per day. This is a ratio of 2:1 in the other direction. That is a massive kind of lifetime batting average.

The amount of family talk is characteristic of high and low socioeconomic status. That is the big socioeconomic correlate here. We looked at the number of parent utterances per hour to the child. Among the college-educated group, almost everybody was talkative, but in the low-income group, most parents talked less to their children. The working class, from blue collar to white collar, was scattered all over the place. This is "Middle America," where some people are talkative, with college degrees, and some are low-income families receiving public assistance.

Let us talk about "meaningful." The number of words in the children's recorded vocabulary at 3 years of age was measured. The average number of words said per hour by the parent to the child before the child was 3 years old was measured. The amount of talking to the child and the size of the child's vocabulary had a strong relationship and were related to developmental projectories.

The cumulative vocabulary acquisition of the children from our data showed the rate of the child adding new words over time from 10 to 36 months. The children from professional families grew at a high rate, working class children were at a middle rate, and low-income children were at a low rate. The reason that this is important is that it indicates where they are going, not just where they have been. The developmental projectories are different. They are going in different places. There is a widening gap. In terms of child language development, that is the meaningfulness.

Using the Stanford-Binet with a group of 3-year-olds, we found a correlation of 0.78 between IQ scores and extra talk, that is, a parent talking to their child more than they have to. This is

from the business of everyday life. I want to provide an idea of how big that correlation is. The test/retest reliability of the Stanford Binet was 0.81. Our interobserver reliability was about half the reliability of our data on parenting variables, which was in the high 9.9s. So, one hopes to apply those two together and not get much higher than 0.78. It is accounting for all of the variance that is left over in the measures.

My point is that the real variable does not seem to be poverty or receiving public assistance; it is the amount of parent talk. When we eliminated the low-income and the professional families, the correlation between the amount of parent talk and IQ test scores was 0.76. We followed this up when the child reached the third grade, and the children were given a Peabody Picture Vocabulary Test (PPVT).

The correlation of what we saw in parenting before age 3, and then at age 9, for PPVT was 0.78. Looking at only the working class children, it was 0.77. The issue is magnitude. How much experience has been packed into a child's life? It is built up over 100 waking hours a week, hour after hour.

I want to end with a discussion of how much children experience. When we looked at parent words per hour in low-income homes, it was 616. In working class homes, it was 1,251. In professional homes, it was 2153. In 1 year, we are talking about 3.2 million, 6.5 million, and 11.2 million words and experiences. The respective number of affirmations per hour was 5, 12, and 32.

Those are the numbers to keep in mind, because those numbers are relevant to our family child care. If a parent addresses 1,200 words per hour and responds positively to a child 12 times an hour, what are they getting from day care or other out-of-home programs? Does the remedial program even match what would have been happening at home? We would like to say yes; however, if one were to observe some of the programs, the answer would be no.

Children between the ages of 9 months and 36 months only gain experiences that are mediated by an adult. The implications of these numbers are the ones we want to come back to, in terms of group care programs for children. What is the experience per hour compared to typical homes? Remember that there are 100 hours, even in a 10 hours per day, 5 days per week, day-care setting. The child is still in the home half of his waking hours. One cannot consider early intervention without addressing the parents. The younger the child is, the more critical the intervention.

Hagen: Our final speaker is Professor Fred Morrison. He did his Ph.D. work at Harvard University. He has been at the University of Minnesota, the University of Edmonton, the University of Alberta, the University of North Carolina, and Loyola University.

His more recent research has examined the impact of child, family, and schooling factors in shaping growth, specifically those factors that may lead to predicting early problems in school. He has used an innovative approach called the *School Cutoff Method*. This method takes advantage of a natural experimental situation, which he will talk about today.

Fred Morrison: Over the past few years, I have been involved in a number of research efforts looking at the process of school transition. I would like to expand upon what has already been described, in order to emphasize the importance of early individual differences and parents. Then I will discuss what happens when children start school. What are we doing in terms of the schooling environment and society to address some of these issues? I will present some of the research that we have done by observing classrooms directly.

First, I want to reinforce that it is absolutely critical to recognize that before children ever start school, there are significant, meaningful individual differences and a broad range of important skills that are relevant for success in school. Skills such as vocabulary, phonological awareness, word decoding, and self-regulation. Self-regulation goes by a variety of names ranging from "executive control," to "attention control," to "learning-related social skills." All of these are

important skills that promote learning. It seems that over the past 30 to 50 years, we have seen deterioration in these skills for some percentage of our preschool children.

Those differences have focused on attention, on the true importance of parenting. We are beginning to get a sense that it is not just the literacy environment that makes a difference for literacy development over the school transition process. There are other important dimensions of parenting in which there is variability and which predict outcomes in kindergarten, first, and second grade, particularly, warmth/responsivity, as well as control/discipline. When we put these together into what is an ecological, contextual, or a multilevel framework, we begin to see that there are complex interactions among children and their parents leading to particular pathways of development in early life.

In some of the research that we have done on large samples, the family learning and literacy environment directly impact a child's academic skills, including vocabulary and word decoding, in complex ways. Parental warmth/responsivity and sensitivity seem to have a dual focus of directly influencing academic skills, but also indirectly influencing academic skills by impacting the child's self-regulation. Controlled discipline appears to operate primarily through its effect on a child's self-regulation, work-related skills, or response inhibition.

We cannot lose sight of the fact that some important differences and dynamics relate to parenting. All of these dynamic factors produce huge individual differences for the children who walk in the school door.

One of the questions we have tried to answer is "What happens to children when they start school?" We are living in a situation where we have a pessimistic view about being able to close the gap. The existence of Matthew effects, that is, the rich get richer, the poor get poorer, would indicate that school is not having much of an effect. Overall, this notion pervades our society.

The research on early instruction started out with something called the "great debate." It is now called the "reading wars." It refers to the extent to which an emphasis on basic skills or phonics is more or less appropriate than an emphasis on meaning, or whole language. Beyond the reading wars is an attempt to say that there is an adequate amount of research suggesting that all children benefit from some amount of basic skills or phonics training; in fact, learning is best imbedded in a meaningful or rich literature environment.

Keith Rayner and others are talking about a balanced curriculum. The problem with that, however, is that we do not really know what the right balance is for a particular child or particular groups of children. This is one issue we want to understand better.

A second issue that has arisen, and one that I think is beginning to impinge on our understanding of the effect of schooling, is what I call "specificity of learning." There is growing evidence that the impact of particular parental behaviors or instructional practices actually produces specific outcomes in certain cognitive, language, or literacy skills.

Monique Senechal and JoAnne LeFevre have shown that parental activities, such as book reading, have a direct and unique impact on children's language, but little impact on literacy skills, such as word decoding or alphabet recognition. We have also found evidence that the amount and types of instruction that children receive in kindergarten and first grade can have a dramatic effect on skills such as phonological awareness or word decoding, but not on vocabulary. The specificity of what children learn is, in essence, what they are exposed to. There is little transfer in this kind of developmental richness and it does not seem to apply to many of the skills that we consider important in school. It therefore appears as if the impact of particular kinds of instruction differ in their effectiveness, depending upon the child's characteristics or level of functioning.

Barbara Foorman has evidence that children who are at risk, and who are relatively low functioning at the beginning of first grade, benefit most from explicit and direct code teaching in basics skills, such as word decoding. She also found that the children who were lowest in phonological skills at the beginning of first grade benefited most from that type of instruction.

Connie Juel has some interesting data on those children in a classroom where there was emphasis on basic skills. The children who started out the year with the lowest reading skills

benefited most in that classroom. However, the children that started out with high reading skills benefited most in another classroom that was much more open, where there was discussion.

There is a growing sense that we need to focus more on some specific child instruction interactions. Working primarily with first graders, we have been trying to develop a systematic way to conceptualize the early instructional environment and to break our data down into more specific dimensions that we can quantify. From the literature that we reviewed, we focused on three dimensions. We looked at the teaching environment, where we found that issues of learning break down into whether the instruction is primarily teacher-managed or child-managed. If one hears echoes of phonics and whole language, that is deliberate.

Teacher-managed (TM) instruction means that the teacher is in charge of directing a child's attention to a particular skill, or level of processing. Child-managed (CM) instruction means that the child is in charge of his or her own processing. An independent, but interlocking dimension, is whether the instruction is explicit (E), or implicit (I). If the teacher is using initial consonant stripping or phonetic awareness as an instructional practice to promote word decoding, the instruction is direct and explicit. For example, sustained silent reading was a salient activity in the district that we studied, where the primary or explicit focus was the extraction of meaning. Children may have also been implicitly learning vocabulary, or learning to decode words. Again, this was an element of the whole language approach with an emphasis on implicit, or incidental learning.

Another dimension that we looked at was word level versus higher order, which essentially asked whether the instruction focused on the word level or on a higher order comprehension. One other dimension that has not received attention, which we believe to be important, is the extent to which the teacher changes the amount of particular types of teaching across the school year. Connie Juel found that a teacher who emphasized basic skills systematically decreased the amount of explicit teacher-controlled instruction that she produced. There is some sense that this is important because the classroom is not a static environment. We wanted to see to what extent teacher sensitivity to changes in instruction might also predict growth at the end of first grade. In addition to that, we wanted to ascertain the child characteristics that were important. We were decoding vocabulary, phonological awareness listing, comprehension, and so forth. These work-related skills are called executive functioning.

In our study, we examined word decoding and vocabulary. Our working hypotheses were: (a) Children with low decoding or vocabulary scores in the fall of first grade would achieve higher decoding scores in the spring in classrooms with more teacher-managed explicit (TME) instruction and decoding and less child-managed implicit (CMI) instruction; and (b) Children with high decoding or vocabulary skills in the fall would benefit from less TME instruction and more CMI instruction.

We followed the children from kindergarten through the end of third grade. We had 108 children in the first grade. They were a normal group, judging from the results on the Stanford Binet. We followed 44 teachers over time. We went into the classroom three times a year: the fall, the winter, and the spring. We stayed there all day. We created a narrative, recorded what the teacher and children were doing, what the materials were, and any other remarks. From that, we extracted quantitative measures of the types and amounts of instruction.

Now, I will focus on the teacher- versus child-managed and explicit versus implicit instruction. We observed classroom activities and coded them according to the dimensions of instruction. An analysis was conducted to determine the extent that the instruction and activities would influence the child's word decoding skill.

TME instruction included alphabet activities, or direct teaching of letters and sight and sound activities. An example of TME is when the teacher says, "The next line says 'id.' What is that word l-i-d?" The children respond with the verbal response, "little." The teacher says, "No." Then, the children say, "lid." And the teacher says, "Yes, that is correct."

TMI instruction was vocabulary, teacher reading aloud, and other activities for which the explicit activity was focused on something else, but could influence word decoding. For CME

instruction, only spelling activity was observed and coded as explicitly influencing word decoding. Interestingly, that there was a strong whole-language emphasis in the school district we studied. There was little seatwork and few word-level worksheets. There was a lot of CMI, particularly sustained silent reading.

We measured the children's decoding skills with the Peabody Individual Achievement Test, the children's vocabulary with the Peabody Picture Vocabulary Test, and we also used measures of the home literacy environment. The parents' educational level was used as a control variable.

The children's vocabulary levels were fairly standard. Overall, they were a little higher than first grade, although, this was a skew caused primarily by a few children in the district whose vocabulary skills were extremely high. We used hierarchical linear modeling, considering the spring decoding score as a function of the child variables, and also as a function of the teaching variables. This was a powerful technique, which allowed one to take out all of the background variables and look only at those influences of interest.

We wanted to find out the effects of different kinds and amounts of instruction, in relation to the children's characteristics. We found support for our initial hypothesis; the level of the child's fall decoding score varied with the amount of TME instruction. Low-reading children benefited from more TME instruction, and high-reading children benefited from less. We did not find the predicted interaction with the amount of CMI, which was somewhat of a surprise.

We found a mirror image with the vocabulary scores taken in the fall of the school year: High- and low-reading children responded to different amounts of CMI instruction in the predicted direction, but it was not the same effect with TME. Because of what we assumed was a reasonably high correlation between vocabulary and reading, we had expected that we would find the same pattern and results with both types of instruction. We were suspicious that something more complicated was occurring. We examined the relationship between vocabulary and word decoding scores.

In this sample, we found that the correlation between the children's vocabulary scores and their reading scores was only 0.26, which was surprisingly small. When we performed a scatter plot, we found that many of the children clustered around the mean, but that there were a significant number of children in each quadrant. We thought that the instruction was sensitive to more complex characteristics of these children, which related to both their vocabulary and their word decoding scores. The data were analyzed in the same way, but there were two indicators, the level of vocabulary and the level of word decoding, instead of a single indicator.

The low-vocabulary/low-decoding group was functioning at the 25th percentile of the standardized test scores according to the national norms. We found that those children who where low in vocabulary and low in decoding benefited significantly from more minutes of TME instruction. However, there was a different pattern for CMI: the more CMI and the more sustained silent reading, the worse these children were doing.

An interesting finding was that the rate of change, or the extent to which teachers changed the amount of CMI instruction over the course of the year, also predicted growth. Those teachers who went from low to high amounts of CMI instruction over the school year produced children who had higher scores at the end than those who had a less steep slope, a flat slope, or for teachers who had high CMI throughout the year. For these children, it was not optimal to have a high proportion of CMI over the course of the entire year. Instead, they should start with a small amount of CMI and gradually move up as word-decoding skills improve.

Assuming these data were a reasonable reflection of what was happening, we wondered what we could expect from instruction if our dimensions were reasonably good predictors. We looked at more effective and less effective strategies, and attempted to measure how much growth they would produce over the course of the first grade. We examined the 90th and 10th percentile strategies on the three dimensions. The 90th percentile was the more effective strategy, compared to the 10th percentile. If our predictions were correct, we could move a child who was well below first grade reading level at the beginning of the year to well above second grade level by

the end of the year. In fact, no child ever achieved this, but our predicted outcomes were based on extrapolation.

We found that the less effective strategy produced almost no growth. Individual children seemed to conform to the pattern. We found that a child who was close to the optimal strategy in the first grade approached the least optimal strategy in second grade and was still about a half-year behind.

The other groups conformed to the pattern that we predicted. For the high-decoding/ high-vocabulary group, the amount of TME instruction had no effect. The more CMI instruction they received, the better they performed. The best predictor, in terms of change, was a steady amount of CMI over the course of the whole year. The high-decoding/low-vocabulary group was interesting because given their high decoding skills they did not need much TME. There was no effect by amount of TME. In fact, because of their high decoding skills, they benefited much more from a year of steady CMI instruction. Since their vocabulary was low, the best predictor was the steeper slope of CMI. The low-decoding/high-vocabulary group needed much more in the way of TME due to their low decoding, and a steady diet of CMI, because of their high vocabulary.

We may have captured real phenomena that could help us to understand the complex patterns that are observed; that is, why some children succeed at some points and fail at other points. In general, we found that different profiles of instruction appear to be most effective for children with specific combinations of child characteristics or levels of skill.

For further research, we should try to understand the dimensions of instruction at a more analytical level. What are the dimensions of instruction? How do they operate? What kinds of variability do we see in our classrooms?

It is also our intention to start looking at other child characteristics. Clearly, phonemic awareness is a worthy area of study. However, consider a situation in which two children are both good readers, but one has reasonable self-regulation skills and the other is presenting with ADHD. One would suspect the patterns of effective instruction for these two children to be somewhat different. It would be useful to have empirical confirmation of that suspicion, because it would tell us something about what should happen in the classroom.

This entire research effort attempts to take what Risley and Tardiff are doing, in terms of understanding the nature of these early differences, and match that to an understanding of how schools can best deal with those individual differences. Our sense is, and we have just begun this process, that we are looking at some complex interaction patterns. We think the implications for instructions are fairly clear and straightforward. If we are ever going to make a difference at the individual child level, we have to be able to identify what a child's individual profile of skills is. At some level, we have to admit that we cannot make a difference until we know what that particular child needs.

Finally, it seems that when we have a profile, and if we do understand the dimensions of teaching, that we could put this together into an effective package of instruction at the individualized level. It is not just a matter of balancing one or another kind of instruction, but also looking at a particular profile of strengths and weaknesses and fashioning an individualized instructional profile for a given child.

That may seem rather idealized at this point, but we are building a good foundation by considering exactly how to make a difference in children's lives, and how to optimize the reading and literacy levels of children.

Question: I had a question about the TME instruction and the down side for children who are doing well. In other words, for those who come in with high-vocabulary, high-decoding skills are you suggesting that it can cause major problems for their continued learning if you stress their outlook too much?

Morrison: The optimum profile for the high-vocabulary, high-decoding group is that they do not even need to go to first grade.

Question: If we do interfere, and give them too much indirect instruction, are we going to make them worse?

Morrison: That is what these data imply. Not so much that it would make them worse, but essentially, it would retard the degree of growth that they could show. The degree of growth between them is not that great. It is half of a year, but that is half of a year in first grade, second grade, and third grade. All of a sudden, in fourth grade the child who received the most effective strategy you could produce is 2 years ahead of another child who did not receive it.

Question: Did you control for socioeconomic status when you looked at these data?

Morrison: Yes.

Question: Did you find that low-decoders/low-vocabulary producers were more likely to come from low socioeconomic backgrounds?

Morrison: In general, that is true. Our children did not really go nearly as low as Risley's low-income children did. In general, there is an association with parental education, which was our main message. I think Risley's point has to be recognized. I think that is one of the starkest graphs in his book. Theoretically or conceptually, I am not sure we should be focusing on social class. Let us go down to the proximal level and ask what behavior is producing the outcome.

Question: Say there is a child from a lower socioeconomic class and early intervention is provided. How do we intervene with the parents? How do we make this child produce more like higher income children?

Morrison: Risley's data are sobering, in terms of what it takes to work with parents. In our lab we go back and forth between whether or not we should take those dimensions of parenting; whether or not we should try to work directly with the parents to help them gain control of themselves, learn the skills they need, and impart these skills to their children. That is a mammoth undertaking. What we need to do is educate the next generation of parents. We should start parenting classes for middle-school children. That is the real answer.

Risley: The problem is that it is impossible. You cannot do this in a generation. We were given the Civil Rights Movement and John F. Kennedy broke our hearts with that issue by saying that we were going to make it different in one generation. You have to be thinking about the next generation; about how to make sure every child receives more language and more vocabulary than his or her parents. We have to stick to that movement.

Hagen: Unfortunately, we are not patient; people want results right away, or else the money is removed from programs.

Question: This brings up the issue of early screening. If this pans out in your study, then we should take a look at assessing children when they come in and then design a future strategy based on the assessment. Is that accurate?

Morrison: Yes, that is the direct implication. If these results were accurate, that would be the first step. We need to know what a child's profile looks like, and we should not have a global instructional intervention for them.

Hagen: I would point to Joe Torgeson's research as something to look at if you are not aware of it. He has an NICHD grant for the largest funded study there has been on learning disabilities. He takes a preventative approach to learning and reading disabilities, and talks about how one should start at a general level, then move to a more specific level as the data from the child will show what she needs.

Teaching Mathematics to Head Start Children: Developmental Approaches

CHAIR: Catherine Sophian
DISCUSSANT: Sidney Rachlin
PRESENTERS: Catherine Sophian, Douglas A. Frye

■ Mathematics for the Future: Developing a Head Start Curriculum to Support Mathematics Learning

Catherine Sophian

While mathematics instruction for very young children needs to be age-appropriate in format and content, it should also prepare children for the future. I will begin by expanding on this idea and the broader developmental perspective behind it because considerations about future learning are not widely discussed. I will then describe a Head Start mathematics curriculum based on this perspective and present preliminary assessment data.

The core of developmentally appropriate practice is that the content and format of early instruction should not be too advanced for the cognitive and behavioral characteristics of young children. This perspective is derived primarily from Piaget's (1970) account of a sequence of cognitive-developmental stages. Piaget cautioned against providing instruction prematurely, warning that it could interfere with the discovery process he considered essential for genuine cognitive growth.

However, Vygotsky's (1978) theory, which emphasizes the role of society in promoting cognitive development, has different instructional implications reflecting this perspective. Soviet work in early mathematics education has been concerned with identifying the conceptual foundations for mathematical ideas and making them central to mathematics instruction from the beginning. In 1966, Davydov developed a curriculum for the entire course of primary and secondary mathematics education based on an analysis of the concept of numbers as a foundation in measurement.

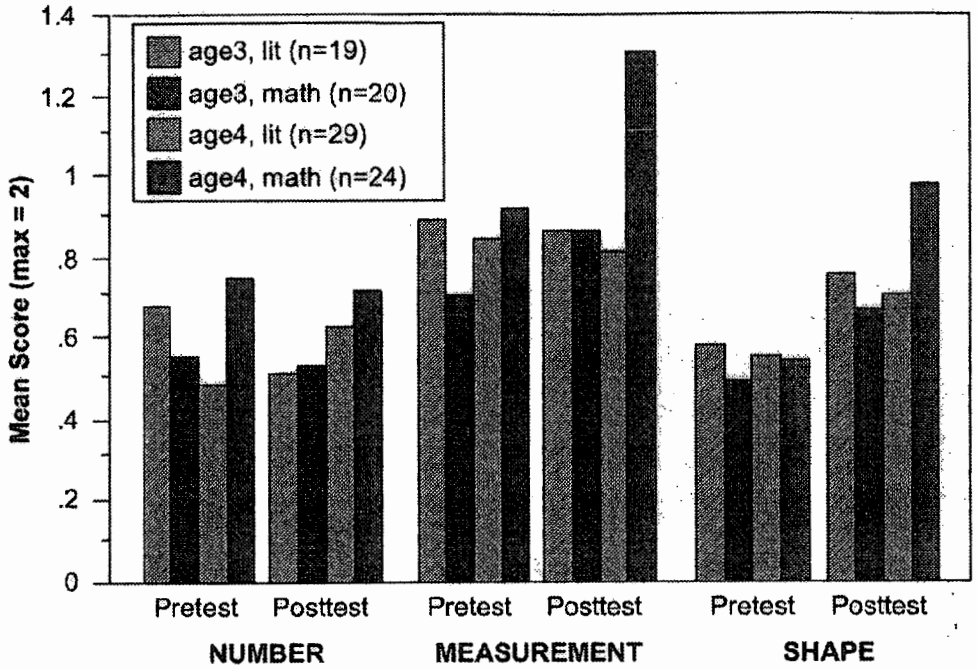
The Head Start curriculum I have developed also emphasizes measurement. Core concepts include the *unit of measure,* and *composition,* or the idea that individual units can be combined to form higher-order units or taken apart to form lower-order ones. These themes run through learning activities that span the domains of: (a) numbers, particularly counting and comparison tasks involving units other than discrete objects; (b) measurement, including continuous quantities, such as area and volume; and (c) geometry, with a focus on the discovery of relationships among shapes.

Two 12-week instructional sequences that were presented consisted primarily of structured small-group learning activities involving objects that can be manipulated, such as containers of different sizes, materials to fill the containers, and cut-outs of geometric shapes. Related family activities were also provided.

Two assessment instruments were administered at the beginning and end of the year: (a) the mathematics subscale of the Developing Skills Checklist (DSC), and (b) an original instrument, the *math supplement,* which was developed for this project and contained nonstandard enumeration items, measurement items, and shape items.

Although scores on the DSC improved from pretest to posttest, no significant differences emerged between children who received the math intervention and children who received a literacy intervention instead. On the math supplement, the 4-year-olds who received the math intervention showed stronger gains on the measurement items (but not on the other items) than children who received the literacy intervention (see Figure 1).

Figure 1.



While further work is needed, these findings raise important questions about what we can and should be teaching young children about mathematics.

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■ The Effects of Strategy-Based Learning for Emergent Numeracy in Head Start

Douglas Frye, Adam DiBella, Virginia Hampton, Margalit Ziv

The current project was designed to support Head Start children's cognitive strategies in emergent numeracy. The project's aim was to identify a reliable pathway to early math learning in school. In partnership with Head Start in the School District of Philadelphia, the project used research on children's cognitive strategies to formulate a set of whole class and small group instructional activities in early math. The activities included instruction in counting, number recognition, cardinality, comparison of amounts, and addition.

The project builds on developmental and educational research that establishes the importance of cognitive strategies in acquisition of early math (Baroody, 1987; Frye, Braisby, Lowe, Maroudas, & Nicholls, 1989; Fuson, 1992, Fuson & Secada, 1986; Siegler, 1995; Siegler & Jenkins, 1989; Steffe & Cobb, 1988). The curriculum presents activities that allow children to

apply a known strategy to a problem in order to discover an appropriate answer. Thus, the curriculum fulfills the dual goals of the new National Council of Teachers of Mathematics Standards (2000): providing students with a method to compute an answer but doing so in a way that supports the relevant numerical concept.

The effectiveness of the strategy-based activities is currently being tested with the participation of 180 children (M = 5 years 3 months; range = 4 years; 5 months to 6 years) from 21 classrooms in six Head Start centers in Philadelphia. Half the children are experiencing the new curriculum and half are acting as a comparison group. Both groups were pretested at the beginning of the year and posttested at the end, using shortened versions of the TEMA-II adapted from Ginsburg & Baroody (1990). The results show a significant advantage for the new curriculum. The longitudinal data will eventually make it possible to analyze individual differences at multiple time points. These data will be used to ascertain whether early strategy use forms a pathway to later strategy use and learning in school.

The results that have been analyzed indicate that the children in the study possess a variety of early math strategies (DiBella et al., 2001). For counting, the children recognized that numbers must be said in sequence and the entire set counted, although not all the children knew that they should both count the numbers in sequence and count the entire set. They also understood that addition involved the combining of sets, which was an understanding they had developed before being able to count the total accurately. The results show that having children choose between strategies was a more sensitive method of assessment than Siegler and Crowley's (1994) approach of having them rate individual strategies. Being able to compare strategies appeared to help the children identify the important differences, and may offer a new means of strategy instruction.

The final results of the project have the potential to yield important theoretical information about the relationship between cognitive strategies and learning, the impact of early experience on strategy formation, and the characteristics of strategy use that best provide a pathway to later learning. The partnership will provide a practical demonstration of how an approach that supports emergent numeracy strategies in Head Start can contribute to the achievement of school readiness.

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Impacting Policy Through Research-Based Emerging Language and Literacy Practices: A Model Program Leads to Policy Changes on State and National Levels

CHAIR: Ann Minness
PRESENTERS: Nell R. Carvell, Salvador Hector Ochoa, Connie Peters, Wanda Smith, Liston Mike Rice, Bill Ball

Ann Minness: I am the director and grants administrator with the Texas Instruments Foundation (TI) and also a member of this collaborative team. You will learn how a partnership including a corporate foundation, private and public universities, and courageous Head Start agencies were instrumental in impacting policy at the state level in Texas. We have also seen changes in early childhood education at the national level.

Our panel of speakers are Mike Rice, President of the Texas Instruments (TI) Foundation; Wanda Smith, CEO of Head Start of Greater Dallas; Connie Peters, Director of the Southern Methodist University Preschool Initiative; Nell Carvell, author and creator of the Language Enrichment Activities Program (LEAP); Bill Ball, Researcher and Director of Initiative for Program Evaluation; and Hector Ochoa, Associate Professor of Psychology at the School of Education, Texas A&M University.

Mike Rice: Two other universities are working with us in this program, including the University of Texas at Arlington, School of Social Science, and the Lyndon B. Johnson School of Public Affairs at the University of Texas, Austin.

In the late 1980s, the Board of Directors of the TI Foundation asked the staff to find an activity in Dallas that was important and unique, with the potential to impact the community. We decided to focus on early childhood intervention, largely based on the Prairie Preschool Study, which showed that a solid preschool experience could pay itself off many times over in the future of children.

We formed a collaboration with the Head Start of Greater Dallas, in a new Head Start center called the Cone Head Start Center, which opened in 1991. We have worked together ever since. In the area of Dallas served by the Cone Center, 97% of the parents were single parents when the program was started. Furthermore, 85% were unemployed, and the average yearly income was no more than $7,000. Children in kindergarten were scoring in the 20th and 30th percentiles on the Iowa Tests of Basic Skills, and by the time they entered third grade they were about a year behind their peers in skills. These numbers have improved since the collaboration.

The Foundation's initial activity consisted of adding strength to the medical and social services components of Head Start as they were normally offered at that time. A full-time nurse practitioner was based at the Center, to work with 90 children. We provided excellent medical care to the children because our nurse was there all day, everyday. We also employed two graduate social workers for this caseload of 90 families. The way social workers are used in the public school system in Dallas, it is impossible for them to have any real impact on the families.

As an example, Frazier Elementary School has one social worker for one half-day a week, for 250 children. That social worker cannot have any impact on the lives of those children or their families; but with a caseload of 45 families per social worker, they could have some impact, and they did.

We sent the children into the Head Start system, they experienced activities, and they became extremely well socialized. They learned how to complete activities by themselves. However, they were not learning enough about the educational tools they needed in order to succeed in the public school system. In the Iowa Tests of Basic Skills (ITBS), the children at Cone were in the 36th percentile for reading and vocabulary; this is below the national norm by 14 percentiles.

The children who did not attend Cone did worse in that particular domain. However, the Cone children did not score any higher on average than the children who had not attended Cone. The same finding was true of the second group that went through kindergarten. We started to wonder whether the program was making a difference considering the amount of money we had invested in it. The educational values that we had hoped to find were not apparent.

We went in search of the silver bullet. That silver bullet was phonics. We checked with the best private school for young African American children in Dallas, and we requested permission to use their phonics program designed for the preschool level. The headmaster of that school said we could not, since the Cone children were way behind the children at the school. This school charges tuition and only accepts a limited number of children. He told us we would have to find our own suitable phonics program, and if we could not find one, we would have to make one.

The next step was to find somebody with the ability to make a phonics program. In the early 1990s, we found Nell Carvell. She came to the Cone Center and observed the children's activities. She loved all the activity centers, the movement from one activity to another, circle time, and the discussion about what the children had done. She thought the activities were wonderful but her impression was that we needed to enrich the language component. Ten years later, she is still adding language to the mix. She cannot seem to get it done, but she is good and does not give up.

The national norm is at the 50th percentile. The language program started in the third cohort of children, around 1993 or 1994. There was some improvement when the program started but my goal was to get the children up to the national norm in the disciplines that ITBS tested at that time, which were vocabulary, word analysis, and math.

We are up in the mid- to high-40s for reading vocabulary and word analysis, and at 54 for math. This work was done at Frazier Elementary School, across the street from the Cone Center. The combination of the preschool, the stronger preschool language program, and a new principal at Frazier resulted in the data at cohort four. Cohort four is above the national norm. They are above approximately two thirds to three quarters of all children in the United States, with scores of 65, 73, and 73. These are young African American children who live in dangerous neighborhoods with violence, drugs, and environmental issues.

Carvell and I continued to develop this program. One of the instruments Carvell has used in the evaluation of the curriculum is the Peabody Picture Vocabulary Test (PPVT), in its third edition. It shows the situation of the children when they come into the Center, with a bell curve distribution to the left.

The only trouble with that distribution is that it is backwards. There should be a small number on the left where we had 25% of our population. That is the bottom 1 percentile of all children in the United States. We should have 0.4 children in that section of the curve. Then they get gradually smaller and smaller. One child is at or above the 40th percentile. It is typical in this population that we do not get a single child who is at or above the norm. Not one of the 90 children in the Center were above the national norm.

When we get through one year at the Cone Center, we see that we are down to only one child in the bottom 1 percentile. That is not good enough, but it is much better. Seven children are in the 40th percentile category or better. We have not given up, and we are making great strides.

We now have 8 years of data, and eight groups of children, with 90 children per group. For reading and vocabulary, the early cohorts went from the 36th percentile, to the 21st, to the 40s, up to the 60s, and as high as the 94th percentile in our latest cohort. In word analysis, the Cone children are up in the 60s and 70s on average. In math, they are up in the 60s and 70s, with a couple of exceptions.

These children are now performing better than the average child in the United States. Regardless of color, creed, or anything else, they are above average. When looking at the Texas Assessment of Academic Skills (TAAS), the school these children attend has shown exemplary results over the past 2 years, in the state's highest category. In various groups, 90% of the children have

to pass the TAAS. Over the last two years, every child who went to the Cone Center and took the TAAS reading and TAAS math passed the test, through the third grade at Frazier. That is a better statistic than if one looks at all the White children in the state of Texas, or all the White children in the Dallas independent school district. One does not often see data sets where young African American children outperform young White children, but that is one of them.

The Dallas independent school district has a strong analysis and evaluation group, and they looked at a group of students who attended Cone and Frazier and stayed in Frazier. When those children got to the third grade, 55% of them could read at grade level, compared to the Dallas school district average of the low thirties. Of the children who did not go to Cone but did attend Frazier, 42% of those children could read at grade level. That implied a 13% improvement in children who could read at grade level, just based on the preschool experience. Of the children who attended Cone, then Frazier for kindergarten, and were then scattered through the system, only 19% could read at grade level.

Everyone who sees this data agrees that family factors influence those numbers when children move that often, and I believe that is absolutely true. But the fact is that those are the data. For the children who did not go to Cone and then went to Frazier for kindergarten and then to various other schools, only 5% of those children could read at grade level. There was a 14% change based on preschool. The message is that a good preschool experience is essential. It is equally important to have a good elementary school experience.

At the state level, we commissioned a study by the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin, to create a legislative initiative to distribute research-based curricula, evaluation, and teacher training across the state. Some graduate students created a program worth $1 million. The state legislator saw the amount and said that with such a high figure, they would have to tell him what to cancel, since there was not $1 million available. When they finished, they had appropriated $17 million to this program for research-based curricula with strong evaluation programs and teacher training. That is in process today.

As a precursor to that, the state gave a few hundred thousand dollars to Southern Methodist University (SMU) to start four centers around the state of Texas, in Mount Pleasant, Brownwood, West Orange, and El Paso. Bill Ball will talk about the data from those four centers. Interestingly, we always hear about little towns, poor children, "bad this" and "bad that." In all four of these sites, the children came into the center ahead of the children that came into Cone—so much for the small town idea.

Wanda Smith: Rice is a hard act to follow, and I have been trying to do that for the 13 years now. Head Start of Greater Dallas is a large metropolitan program, and we serve the entire Dallas County. We operate 27 grantee centers, and we have two delegate agencies who operate six other Head Start Centers. When Rice discovered us, we had probably 11 centers and 1,180 children, so we were very pleased to be discovered by Texas Instruments.

We were fortunate in that we had just received expansion and were about to open the Margaret Cone Center, so that gave us an opportunity to start out fresh with Texas Instruments at a new center in a new location in the city. The Cone Center is located in a federal housing project in an extremely low-income neighborhood. It is one of the lowest income neighborhoods in Dallas.

The University of Texas at Arlington was commissioned to talk about what a quality, ideal center would be. What would it be made of? A lower teacher to child ratio was the first thing we identified, so at the Cone Center we have a 1:9 ratio, with one teacher per nine children. We also have a nurse practitioner there on a daily basis. She takes care of every health need a child could have. We also have the two social workers, a site-based Center manager who is responsible for all of the Center staff, and a receptionist to answer the telephone and do secretarial work.

It is an ideal place, a place that people dream of. How can Head Start dollars to do that? That was very difficult for us to do previously. Some of our advantages include the corporate sponsor,

a university partnership, and collaboration with a unique person, our Mayor Fullbright, who is with us every step of the way. In terms of challenges, we are part of a community action agency and have not been accustomed to dealing with "Corporate America." Rice has been wonderful, talking constantly with us. That first assessment of when our children went to Frazier blew us completely out of the water. We were devastated. We asked what we were not doing to prepare children, because the initial research by the University of Texas had talked about Head Start children and how they fared well above their peers, with fewer failures in school and fewer children in special education classes. All of those things had been precursors to our involvement with Texas Instruments.

As we went into Frazier and that first cohort whom we had worked with for 7 months took the ITBS and did not do well, we were devastated. We did not know where to go. When we began to look at their assessment and what we were doing, we knew that there was something wrong. We did not know that phonics would be the answer, and we were reluctant about it since it was something we had never done. One of the good things about Head Start of Greater Dallas is that we learn from lessons. We learn from assessments. We learn from what has been shown to us in black and white, and we are flexible.

We began to look at what our children were not doing, and we then began to seek out the answers. We met with Carvell, who was at SMU, and she too believed in developmentally appropriate activities. Initially, that was one of the phrases that Rice hated, but I think he has a good understanding of it now. Learning has to be meshed with expectations of children and age-appropriate tasks. Carvell understood that and integrated her program into classroom activities.

It is difficult to replicate a model center with Head Start, in that there was not enough money to do the things that worked at Cone. We began the replication as we received quality money. We could not hire a nurse practitioner for every center. Our initial hiring was two nurse practitioners, who had the responsibility of ensuring that our health content area was operating above the performance standards. They went to the centers and examined individual children. They made sure children had a health home. Our on-site management philosophy has expanded to all of the 26 centers.

We replicated what worked at Margaret Cone in the curriculum. We have expanded the LEAP curriculum to all of our centers with the exception of nine, where we have just received funding to expand. We wanted to take responsibility for, but could never prove, the fact that we were responsible for the change in the language of reauthorization for Head Start. We know that we cannot take credit for it, but as we look at every child, No Child Left Behind, and all of those things that have come into the national forefront, we feel that the Margaret Cone Center was used as a beta center. The Cone Center proved that a language-enriched environment works. The $17 million received in Texas was based on what we were doing at the Cone Center. No Child Left Behind is based on what we are doing at the Cone Center.

Our agency is in its third long range plan and many of the components that are implemented are attributed to what we have done in the past, and what we can build on to make our program exceed the quality of performance standards. One of our new endeavors is the Jerry Junkins Center and Ochoa will present the program. It has been a hard role to learn to work with children who have three different masteries of language. It is one that we know that we are finding the answer to. We feel strongly that those children will come out ahead of the curve, and that it is something that could be used as a model for our program, as well as other programs that work with predominantly Latino populations. We have been able to examine and refine our work along the way.

Nell Carvell: I have had the blessing of working with Rice, Minness, and Smith, who are visionaries. From the beginning, the program has been written with the teachers. I met with the teachers weekly for 2 years. The teachers told me what was working and what was not working in the classrooms. I never tried to write a phonics program. I did not feel that it was appropriate for 4-year-old children, but they were missing language. Children have limited vocabularies.

They do not speak in complete sentences. They did not use correct endings on words. We know from research that these circumstances will hinder their abilities to learn to read. If we could correct, build upon, and strengthen their language skills, then we felt we could truly give them an edge toward learning how to read.

I want to briefly go over the components of LEAP. We want children to love reading. If they love reading, and they can learn to read easily, they will be far ahead of the game, for the rest of their lives. The first 3 years of school are spent learning to read, and if we can get these children ready to enter kindergarten ready to read then they will succeed.

The seven components of the Language Enrichment Activities Program (LEAP) are: (a) language with stories, (b) language with words, (c) language with letters, (d) language with sounds, (e) language with ideas, (f) language with fine motor skills, and (g) language with math and science. The first and most essential thing is to have books in the classrooms. Hardcover books for children are always part of the budget. The books are in Spanish or English depending upon the class composition. Language with stories builds listening skills, begins print awareness, enriches vocabulary, strengthens sequencing skills, and shares the joy of reading books. However, if I only had $7,000 per year in my budget, I would not buy books because they are not essential. They may be essential for one's soul but they are not essential in the same way as food. Head Start families do not have money to purchase books. If we can put books in the Head Start environment then they will be available to them.

Language with words builds vocabulary, strengthens concepts, and models correct grammar and syntax. The Oxford University Press has a nice series of bilingual posters of children doing everyday things, and we talk about them. We talk about what is happening in the poster. Children in Dallas, in the inner city, often have no experience with a farm; they have never seen a real cow or a horse. They have not been to the beach, so if one can bring that in with literature and posters, it provides a way to talk about objects and events. We work on vocabulary. We work with the teachers as well as the children.

Language with sounds is phonological awareness. Of all the components of the program, this aspect has been the most controversial. In the early 1990s, people did not like to talk about phonological awareness. We now know that it is critical. We begin with rhyming, sounds, and finger plays. We march to words. We clap words. We talk. We show them print awareness and we explain that words run across a page from left to right. Historically, we have not done such a good job with that at the auditory level. If I say, "stand up tall," I want a child to know that the phrase has three whole words that it is not just the concept of "stand up tall," but in language, it is three units of speak. We talk about a whole word. Your name is a word. Naming things is part of learning that words are units of speak as when it is seen in print. We progress from one-syllable words to phrases to compound words. Some of our children in the late spring are ready for single sounds, but that is only an option for children who have turned 5 in the winter and are ready.

Language with letters provides an experience with block capital letters, an introduction to lowercase letters in print, and is the beginning of sound-symbol association. Along with phonological awareness, children need to be aware that letters and numbers are different. They are both symbols with meaning in our visual environment, but they are not the same. We talk about upper case letters. The first letter of the child's name will be the first letter he or she recognizes. The children learn that first letter by wearing a nametag. It impacts how they scribble and how they draw when they begin to write. It often reflects the shape of the first letter of their name. We talk about letters while engaging in free play; it is not a structured activity.

The fifth component is language with ideas. After a few years, we found that although the classrooms had a lot of size, shape, and color sequence activities, the children were not talking about it. If children do not use language to express the concepts, then they cannot communicate their knowledge. We want to build vocabulary so that a child is able to communicate with others. We have teachers talk about sequence, patterns, size, shape, color, and linguistic concepts to build language.

Language with fine motor skills is important. Motor skills develop from the center out to the extremities. Think about your fingers; they are out at the end. If someone is holding objects with the whole hand then they are not ready to pinch. We develop fine motor skills (prewriting) with whole hand activities that require grabbing and grasping and finger activities to squeeze and pinch; both are incorporated with language.

The last component, language with math and science, is a recent development of the program. Last summer we decided that maybe our children were not performing as well in math and science as they could. Although math and science was scattered throughout the program, we did not specifically say, "This is math. Now here is a whole section on math." There are many graphing, patterns, numbers, and counting activities. There is a science and discovery table with magnets, measuring, and sorting. Many children can sing the ABCs or count 1 to 10 but it has no meaning. We use graphing to back up these concepts.

Connie Peters: I have been with this group for almost 4 years. Our pilot site for English-speaking children is the Cone Center. Our pilot site for Spanish-speaking children is the Junkins Center. We had curriculum improvement because we worked together with teachers to develop lesson plans. But there was a missing piece because there was no teacher-training component.

We went into the classrooms and observed the teachers. Head Start does a great job of involving parents and bringing them in as teachers. All that is required is a GED or high school diploma. We wanted to encourage these teachers to have better language skills with their children.

We started offering a 3-hour course for credit at Southern Methodist University (SMU). We incorporated LEAP, but we also spent an enormous amount of time on improving the teachers' language skills. The results have been tremendous. At the beginning of the semester the teachers are rather passive, and by the middle of the semester they are in fully engaged in learning. They are excited and ready to learn. Then they have the confidence to go back to school. As you know, the Head Start mandate is to have 50% of teachers with an associate's degree by 2003.

We received a grant from Texas Educational Agency (TEA) to pilot LEAP in four sites around Texas: Brownwood, Mount Pleasant, El Paso, and West Orange. This was a challenge for us because two of these areas were incorporated with the public school and they had degree certified teachers. We did not feel that it was necessary to work with those teachers to improve their language skills. We changed our teacher training to build upon their existing skills. We wanted to help them manage their learning centers. Since language is important in the pre-K classroom, we trained teachers to incorporate LEAP throughout the day, whether it is transition time, free play, or circle time with large and small group activities.

Recently, we went to California and trained 135 teachers. California has decided to implement LEAP in a statewide initiative program. We will also be implementing LEAP in Louisiana. In Tuscaloosa, Alabama we had an incredible model because we combined the pre-K and the public school Head Start for teacher training. We are using that model in Dallas to train Head Start programs and independent school districts; 235 classrooms will be using LEAP.

The three necessary components of LEAP are curriculum, teacher training, and volunteers. There is an incredible volunteer program at the Margaret Cone Center and at Jerry Junkins. The children and the teachers love it when the volunteers come. It is not break time for the teachers; it is a time to observe good teaching and practice. The volunteers go to the center to read and model lessons with the children. This last component has been probably the hardest thing to replicate.

Bill Ball: I have been at the Margaret Cone Center for 12 years. We still use the assessments to form our intervention and changes in curriculum, but the core part of the curriculum has been there since the mid-1990s. I will not present composite data for that era. We did mostly entry and exit testing with scores on the PPVT-III and Clinical Evaluation of Language Fundamentals-

Preschool (CELF-P). The CELF-P includes six subtests: three receptive language subtests and three expressive language subtests. The total language score is calculated from the scores on each subtest. I will present data in finger scored format.

For those of you who are not familiar with finger scored format, a score of 100 is the median national average for these scores. These are all standard scores, where 100 is the mean and 15 is the standard deviation. For example, a score between 90 and 110 is in the average range. If a child enters the program with a standard score of 74 and has the same score at exit, it does not mean that the child did not learn anything. It means that they were learning at roughly national averages. They stayed in the same position in rank relative to their peers throughout the nation.

On the PPVT-III, the children at the Cone Center (1997–2001) started out with the standard score of 73.95 at entry and had an exit score of 83.46, a 9.5-point gain. To provide a rough comparison, a 1997–98 national study found a 3-point increase from entry to exit on this measure. There were some nice gains in our standard scores on CELF-P. There was a gain of 9.5 points on the receptive language composite score. There was not as much gain in expressive language, but still a nice gain of 5.5 points. There was good positive gain in total language scores.

I will present the data for the four Head Start centers. Keep in mind that the data are from the first year the curriculum was implemented in each of these sites. There was an 8-point gain in West Orange. Mount Pleasant had 9.5-point increase. El Paso had a 3.5-point increase. It is not an impressive score, especially compared to the national study. However, it is still a respectable increase and there are some complex language issues since El Paso borders Mexico. Brownwood had an 8-point increase.

Michael L. Lopez: Can you tell a little about the sample size?

Ball: They range from probably 20 to 40 for each center. We have continued to assess the Mount Pleasant center because it is a nice place for longitudinal assessment. It is a more rural area with only three elementary schools in the community. It is easier to track children there than in Dallas where there are hundreds of schools. Mt. Pleasant public schools have a number of centers. Some receive direct Head Start funding and there are full-day classrooms, half-day classrooms, classrooms just for 3-year-olds, classrooms for 4-year-olds, and so forth, all under one roof.

I will present some data over a 2-year period from 2000 to 2002, for preintervention and postintervention. On the PPVT-III, there was an increase of 6 points for 3-year-olds in full-day classrooms. The 4-year-olds in half-day classrooms had a 10-point gain. There was a 5.5-point increase for 4-year-olds in full-day classrooms. Overall, this is positive data. The total scores on the CELF-P were also promising. There was a 3-point gain for 3-year-olds in full-day classrooms. There was a 9.5-point gain for 4-year-olds in half-day classrooms. There was an 8-point increase for 4-year-olds in full-day classrooms.

A measure that we recently started using was three subtests of the Woodcock-Johnson-III Achievement Battery (WJ-III). This is probably the most administered measure for special education decisions in elementary schools throughout the nation. We examined two different years of exit scores, 2000–2001 and 2001–2002, from preschool on the WJ-III.

The letter-word identification subtest is an early type of reading measure where children are asked to identify letters. The test moves into advanced items such as simple words and even more complex words. In the 2001–2002 school year, the children exited with a median standard score of 100; that is right at the national average. The children are not exceptional letter identifiers, but they are improving to meet the national average. It can be translated to mean that the children are moving to the same level as some of their peers who come from more enriched settings.

The spelling test involves fine motor tasks such as staying in between the lines, writing some letters, and forming capital and lower case letters. They are even asked to write words and spell words. Not many children in this sample, at the end of preschool, would be there but the skills

develop at some point. For spelling, in 2000–2001 the children exited with a score of 90. In 2001–2002 the children exited with a score of 96; that is still within the average range.

Sound awareness is a new task on the WJ-III. There are many phonological awareness tasks. It is well standardized in part because most of the administration is on tape. It is tricky because much of the administration variance is in how the words are pronounced. There are four tasks that make up this one subtest, which makes it thorough, especially for children this age. In 2000–2001, the results were incredibly good with a median standard score of 108. In 2001–2002, the median standard score was 99; this was also a solid score.

The students that attended Mt. Pleasant Preschool in 2000-2001 were followed and measured again the end of kindergarten. At the end of kindergarten the children had a mean standard score of 111 on letter-word identification of the WJ-III. For spelling and sound awareness on the WJ-III the scores were 110 and 107, respectively. We have not been able to fully document the extra variables in kindergarten, but children can really benefit when those variables are integrated the way they are in the school district, where there is good communication between preschool and kindergarten.

Then we had a comparison group who attended some private preschools in the same community. This data just came in and it should be looked at cautiously. I can generally say that there was not a strong emergent literacy focus in the private preschools. There was some letter exposure but it was not a key part of their curriculum and that is a significant difference.

The children in the comparison group scored a 104 on letter-word identification, a 101 on spelling, and 100 on sound awareness. The children hit national norms in most districts. However the children who had the LEAP curriculum scored 111, 110, and 107 respectively. These samples still need to be compared and examined further to see what the difference may be.

Hector Ochoa: I will talk about the development of the Jerry R. Junkins Child Development Center. Texas Instruments and Head Start were interested in expanding what had occurred at the Cone Center to Latino children who were limited English proficient (LEP) in the Dallas area. The number of children who enter school and are LEP will increase and it has become an issue. The latest census data reported that one out of every five children in the United States has at least one parent who is born outside the country. From the best data that we have collected, LEP children in pre-K to sixth grade comprised 9.3% of the student population in the U.S. In Texas, it is more apparent; one in every five LEP in the United States resides in Texas. One advantage in Texas is that 96-97% of the LEP student population are Spanish speakers. The LEP population is much more homogenous in Texas than it is in California, for example.

Head Start and TI were interested in serving LEP children as a result of this increasing trend in the late 1990s. They called several university consultants who had backgrounds in reading and worked in schools with large heterogeneous populations. We wrestled with several questions. What language should we provide services in? The issue of providing second language or dual language services to second language learners is very controversial in the U.S. It was a greater challenge because many families in Texas are skeptical that bilingual education works. Should we provide language in the students' first language (L1)? Should we provide instruction in English?

There is a classic study by Jim Cummins that discusses Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP). BICS are skills that students need to communicate and have social conversations. However, it does not develop the type of language that is necessary to succeed in school, and that is CALP. He advocated that the way to make students proficient in English is to development proficiency in their first language. Concepts should be taught in the language they bring into the classroom. Another study by Thomas and Collier concluded that one of the best predictors of positive education outcomes for LEP students is the amount of time they received instruction in their L1.

We decided to teach the curriculum in L1 and English. When these students enrolled in the Dallas public schools, they completed a home language survey and they were tested to find in which language they should receive instruction. In Texas it is required to provide bilingual

education services if there are 20 students that speak the same language across the district, in the same grade. The students were tested and given measures of oral language proficiency. The concern was that these children received instruction in English in Head Start, and 2 years later they would enter the public school system where they would most likely receive instruction in Spanish. Unless the parents gave a bilingual denial, most of these children would be placed in bilingual education classrooms. Our vision was to provide a center that could make a smooth transition to help develop that first language based on a research model because that is what these students would experience when they entered public schools.

We talked to parents about their concerns. Many parents said that they wanted their children to learn English since they were new immigrants. Some of the parents felt they were discriminated against in the public schools because they were not proficient in English.

We provided training for parents to learn how to promote learning in English even though they did not speak the language. We dispelled the myth that speaking to LEP children in Spanish hurts them because they will never learn English. We also explained that they had rights in the public school system. We empowered the parents.

Once we decided to provide services in Spanish, the LEAP curriculum had to be translated and modified to be culturally appropriate. That was a huge task because concepts have difficulty levels and some concepts cannot be directly translated. This has been a period of transition and there is a team of experts who modified the curriculum and continue to reexamine it. Although the curriculum is in place there are still other issues. We have to find Spanish-proficient staff; that is a critical component. Some of the staff may be Latino, but they only speak English or vice versa. It has been a difficult issue regarding optimal services to Head Start children who are LEP.

The first step in providing services for these children is to screen them for their language abilities. The issue of measurement surfaces right from the start. How do we find the appropriate measures when there are limited measures available in Spanish? When we first began, we used language measures and looked at growth in L1 and Spanish and growth in L2. This what they were doing at other centers, but we used the PPVT in Spanish and there are no standard scores in the Spanish version.

Greater Head Start of Dallas started implementing the Developmental Indicators for the Assessment of Learning, Third Edition (DIAL-III) to measure growth. This assessment is available in Spanish but we noticed that there was not much psychometric literature in the technical manual. TI was grateful and allowed one of my doctoral students to do his dissertation on some of the psychometric properties of the DIAL-III in Spanish. We will conduct another study next year to examine the validity of this instrument. The DIAL-III looks at three domains: motor, concepts, and language skills. We looked at effect size to account for sample size, as well as growth from pretest to posttest. We also analyzed all the items within each of the scales and found how many children were performing at age-level expectations.

This is how the Jerry Junkins Center started about 5 years ago. We spent the first few years observing the environment and making changes. Finding the staff has taken a lot of collaboration. Teachers have to believe in the curriculum and understand the importance of providing instruction in Spanish. Dealing with the heterogeneity of this group has been a big challenge. We cannot automatically assume that because these children are Latino they speak Spanish. Some of them only speak English, some of them are proficient in L1 and L2, and so forth. There is in-group variability and we have to figure out how to account for that variability. There are different amounts of instructional time depending on the language proficiency of the student. For next year, the directors have proposed that testing and screening of children for their language proficiency happen a week before school starts. This makes a smoother transition and matches up children with teachers.

Erin E. Carlisle: I am from the University of Florida. You found Dallas Head Start. I am working at a Head Start that has not been recruited to participate in such collaboration. How is a center recruited by a funder?

Rice: I cannot answer that question from experience, because I did not have to crawl up the pipe that way. We decided to do something and we chose Head Start over other possible candidates because we felt that if we learned something worthwhile in Head Start, it could be used by a lot of children. There are 4,000 children in Head Start in Dallas. There are Head Start centers across the country and there is the possibilility to affect millions of children; the program can be implemented nationwide.

I do not know anything about Gainesville, but if I wanted to find a partner for a project I would get a book of foundations and companies that are headquartered in Gainesville. Then I would approach them with some ideas about collaboration.

Carlisle: In one of our language classes last semester, we talked about Black English Vernacular. I heard you say that students are not using the correct ending on words. We learned that Black English Vernacular is its own dialect and those incorrect endings are actually correct within that dialect. Again, I understand that it will not help a student on a reading test. What is the LEAP philosophy on that? Do you correct the students when they use Black English Vernacular or do you let them use it and then teach them the Standard English so that they can succeed in our schools?

Minness: The question is do you correct Black English because it is not Standard English, and what is the LEAP philosophy? The philosophy is that since it is a bilingual setting where Black English is critical for survival in the neighborhood, I do not want to take that away. I also believe that Standard English is essential for learning to read, write, and succeed in the business world, which is what we want for children. If we can show them instead of correcting them, that is the best way. I would not interfere with a child who is playing, but if a child comes to me and asks a question, or if I am interacting in a small group time, I might model the correct way to say it, instead of correcting the child. It is the way one teaches 2-year-old children. One models for them. If the child says, "Him do it," I would respond by saying, "Did he do it?" You model and when they hear that model they pick it up. We taught many of our teachers to model because they did not know it.

Lisa Lopez: You talked about children who have limited English-speaking skills and are proficient in Spanish. How are you focusing on teaching these children? What language are you using?

Carvell: The Dallas school district used a gradual model over a 5-year period. They started with 90% Spanish and 10% English at the beginning of the year, then it went to 80/20, 70/30, and so forth. It is my understanding that schools in Dallas will move toward a 3-year plan, instead of a 5-year plan.

Question: Do you have any concerns on the model being watered down?

Response: Of course we are worried that the program will be watered down since it is a collaborative effort of universities, federal agencies, state-funded agencies, and a corporate foundation working together. The program could become too structured; either way is not good. Often people who have limited education will resort to tight structure in order to compensate; that is as much of a concern as watering down the project.

Our plan right now is to strongly urge people not to use the curriculum without a training model. We have trainers that are going to be available across the United States; they are mostly in Texas at this point. The plan is to have a 3-day training and visit the site twice during the first year of implementation. That way we can provide support and encouragement and use the mentoring model where there is someone on-site to help the teachers.

Rice: The best assurance is to couple a good evaluation program with a curriculum, teacher training, and other components that you want to put in place. Be sure that there is a solid way to evaluate the results that you are getting versus what you expect to get. That is your insurance policy.

Judith Swett: Have you included children with disabilities, and how?

Response: At least 10% of our Head Start population is children with disabilities. There are children with disabilities in each center to which LEAP has been introduced. We work with the child's Individual Educational Plan (IEP) to incorporate specific activities in the curriculum since LEAP is done throughout the day.

Swett: You are using LEAP and children with disabilities are being exposed to the curriculum.

Response: Right. They are not segregated from the other children. As we work more intensely with those children we will be able to see what gains they are able to make.

Response: We have worked with several classrooms in West Texas called Preschool Program for Children Disabilities (PPCD). We modify the same materials and ideas in LEAP to be more appropriate for these children, depending upon the disability. One of our trainers has a background in PPCD. She conducts training on how to modify LEAP and what activities can be used in all areas, whether it is fine motor or language.

Ochoa: I think that your topic is very important and becomes even more significant for bilingual or LEP preschoolers with disabilities. How do you differentiate between those students who have a disability versus those whose problem is language acquisition? In the Texas public schools there is no certification for bilingual special education teachers. A child's language needs must be addressed in the IEP, and school districts now realize that and monitor documents.

Bilingual special education research shows that it is just as critical for those preschoolers who have disabilities to receive instruction in their first language. It has been found that Latino children are underserved greatly from 0-3 and from 3-5 years. I would argue that one reason for that is because many of those children may be LEP and the programs do not know how to connect with those families. They do not provide adequate services for those children. You would expect that a certain population that is LEP would be disabled. Texas is one of the few states that not only look for disability by ethnic group but also by LEP, under the monitoring and documentation required in special education. We should definitely examine LEP and disability in preschool.

Flora V. Rodriguez-Brown: I am a psychologist specializing in language development, and I happen to be bilingual. When addressing language issues why not develop cognition and concepts in the language that children know best?

Response: I guess we did not explain that well. That is exactly what we do.

Rodriguez-Brown: Then my second concern is that in terms of early literacy development, I can see that adapting the English model that you have is not best way to go. Spanish reading is different from English reading and takes a different approach. In English we introduce vowels first, then consonants but in Spanish it is the opposite.

Response: That is why we use the word adaptation. It is not a translation. It has to be adapted for a different style of learning.

Starting Strong: Understanding and Promoting Math Development in Young Children

CHAIR: Juanita Copley
PRESENTERS: Juanita Copley, David H. Arnold, Douglas H. Clements, Carole Greenes, Robert Balfanz

Juanita Copley: Our discussion is on "Starting Strong, Understanding and Promoting Math Development in Young Children." It is a roundtable discussion. I am from the University of Houston, and I will be serving as the chair for this presentation. Our panelists are David Arnold from the University of Massachusetts at Amherst, Douglas Clements from the State University of New York at Buffalo, Carole Greenes from Boston University, and Robert Balfanz from Johns Hopkins University.

I will give a brief, contextual introduction to mathematics and young children, both historical, and will include some recent innovations. Three interventions will be presented, with each of the participants spending about 10 or 15 minutes discussing their particular projects and the exciting things that they are doing. As a group they will discuss the questions we all have about what we mean by research-based curriculum, how we measure that, and how we talk about that. That will be something that we, as a group, will talk about.

Balfanz has written what I think is one of the most interesting articles about the history of mathematics and young children and about why we teach so little mathematics. He used the phrase minimalist curriculum, which is the idea of the last 60 years. If you asked teachers of young children what they teach, they would say they taught the four important shapes and how to count from one to ten. Those made up the entire mathematics curriculum.

In 1998 I was contacted by National Council of Teachers of Mathematics (NCTM) to write a book for young children, *Mathematics in the Early Years*. It was the most amazing thing to hear people say, "You mean, really, mathematics for 4- and 5-year-olds?" I also received e-mails that said, "Well, I've never thought of that and what am I supposed to do?" It was quite interesting.

In 1999 we worked on *Mathematics in the Early Years*, the first joint publication of NCTM and NAEYC. In 2000, NCTM actually included prekindergarten in their principles and standards, which was very exciting for those of us who really love early childhood and mathematics. Clements spent a great deal of time writing the pre-K section.

As you know, the Head Start outcomes include mathematics, and it is certainly much more than knowing four shapes and how to count from one to ten. There are many interesting developments that have happened recently to encourage mathematics in the early years.

Young children are rather sophisticated math thinkers, they have potential to think in a rather sophisticated way, but the fact is we often do not tap into that potential. Those who work with young children and mathematics know how amazed we are at their information and the way they think; it may be very different. We are all amazed by what they believe, how they reason, and how they put ideas together. We know from many observations that children informally explore and use mathematics in play and their daily activities. Some of the buildings that they build, some of the perspectives, the patterns they create and they notice are rather amazing.

Young learners benefit from having a variety of ways to understand. A child's answer often depends on how the question is asked. Different ways of asking the same question might produce very different responses.

Researchers have identified some developmental learning paths for some mathematics topics. There are trajectories where we know or have an idea that children do one type of task first, and then they do the next task, and then the next; but certainly not everything at the same time. We do know curriculum needs to be coherent and focused on important math concepts, but the depth for each concept is different. The curriculum must be well articulated across grades, and it

needs to be connected from level to level. In my recent work I have been looking at the connection between pre-K and kindergarten and how, if it is connected, it makes a difference.

As the researchers make their presentations I would like you to focus on the methods they use in their work with young children and mathematics. We will also talk about the strengths and the limitations of our research. Then we will present the specific challenges with looking at young children; how they think, and how they reason in mathematics.

David H. Arnold: I am serving as the spokesperson for our group, but I am definitely neither the brains nor the sweat of this project. The brains and the sweat are here in the front row; Paige, Britta, and Jen, my three graduate students, are the heart of this project. They deserve all the credit.

In my 15 years doing research, I have never had anything work the first time I tried it—ever. I am glad I did not tell them this. When we began the math area was new to us. Our literature review led us to the names of all of the other panel members, so we are in awe of them. It is a dream panel and a pleasure for us to be able to meet the people whose work we were reading as we began to learn a little bit about math.

Our local Head Start came to us asking for help in boosting children's early math skills. Since we did not really know much about early math development, we decided to start with something we did know about, which is how children learn and how teachers teach. We began by listing some very basic but powerful principles. We were committed in this project to targeting both skills and interests. It is common sense that one's skill at something and one's interest in something are going to feed off each other and create a cycle. Yet in the research literature it is rare to see both included.

We tried, throughout our project, to use ways to keep our program practical so it could be useful in the real world, to try to keep it fun, and to try to keep it adjustable. We gave teachers control over how to do it, when to do it, and what to do, so that they could adjust it to their students, since they obviously knew them much better than we did.

Our implementation involved having teachers implement math activities in Head Start classrooms for 6 weeks. It turned out, from our informal observations, that there was very little math-oriented activity going on in the classrooms. In order to avoid making more work for the teachers we decided to incorporate the math activities into parts of the day already on the schedule. We did not have them add any new times to the day; we had them incorporate activities into parts of the day that were already on their schedules. For the first 3 weeks the activities were done during circle time, and for the next 3 weeks the activities were used during small groups, transitions, and meal times.

My graduate students came up with 85 different activities from which the teachers could choose. That is an example of giving the teachers many choices and retaining our desire to have flexibility. We were trying to keep it fun and flexible, with everything from singing songs with numbers, matching a number to a number on a chair, baking pretzels in the shapes of numbers, adding paper ice cream cones based on the number on a dice roll, and counting the steps on the playground—everything we could think of to try and incorporate math into everyday activities.

To try to determine whether this worked or not, we randomly assigned our eight classrooms; half of them were using our math activities and half were not. We collected information before and after the program on the Test of Early Mathematics Ability, Second Edition, (TEMA 2), which is a standardized assessment of emergent math skills. We also were interested in whether children were interested in math activities, and this was a little more difficult. The TEEMA 2 is a straightforward, solid measure of math interest but this measurement is much trickier in 4-year-olds. We went about trying to obtain this information in three different ways. We had teachers report how interested children were in math activities, we had a child report of how interested children were in math activities, and we videotaped the children in a structured task while they were playing with math toys.

We also knew that the program would not work if the teachers did not like it. Therefore, we

also had teacher surveys to try to assess teachers' attitudes about teaching math, how much they enjoyd it, and how good they felt they were at it. It was important to find out directly whether teachers liked the program, so we also had a program satisfaction questionnaire that we asked teachers to fill out. We wish that we had been able to do classroom observations.

We found that teachers reported that they actually did use the activities. On average they said they did two of the activities a day. I think that is an underestimate and that math activities were spilling into many aspects in the classroom, but we are not sure because we do not have the observations. The teachers reported liking the program. On a scale of 1 to 10 the average rating was 9.5. This could just be teachers telling us what we wanted to hear, but they did not seem like they were putting one over on us.

In terms of math skills, our effects were quite large. I believe that is due partly to the good choices that the group made in terms of the activities, and partly to how little math was being done in our control classrooms. On the TEMA, the experimental group increased their scores by about four questions compared to the control group, over 6 weeks, increasing by about one question. The experimental group was learning four times as much over that 6-week to 2-month period.

Of concern to us was that the difference between the experimental group and the control group was almost entirely accounted for by the boys in the experimental classroom. In terms of math quotients, which are similar to an IQ scale, the boys in the math program increased their math quotient by about eight points, while the girls in the math program did not increase their math quotient at all. Our intervention effect was accounted for, almost solely, by the boys. Another puzzle that we do not really understand is that the change was largely accounted for by increases in the African American and Puerto Rican children, with very little gain in White children. This is one other reason why I wish we had classroom observations.

In terms of interest, we were especially pleased to find evidence that the math program made children like math more. This was based on the teacher report (taken with a grain of salt, because obviously the teachers know that they are in the program, they know that we want them to say that the children like it), teachers in the program did report increases in children's interest in math, compared to teachers in the control group. We were also excited to see that based on the child report children in the program liked math more than they had before.

We are in the process of analyzing the observational data, which I think would be the most convincing piece of evidence. Thus far two of our assessments suggested that the program does increase not just skills, but also interest in math.

Teachers reported changes in their attitude towards math, increasing their scores from four out of ten on how much they enjoy math activities in the pretest to eight out of ten at posttest. Teachers also reported that their math teaching skills increased from a three and a half to a six and a half. These were significant changes compared to the control group.

The next step is to find out what our direct observations tell us. They are not classroom observations, but we do have the videotapes of the children playing with math toys, and that should be a key piece of evidence, especially with the question of children's interest in math.

A related issue is looking at the relationship between interest and skills in children this age. Preliminary data are striking in suggesting that these 4-year-olds are already figuring out whether they are good at math or not and that is influencing their trajectory of interest. The children who start out low on skills are already showing a decline in interest, across even just our 2-month period. We need to complete that data analysis, but the first results on that are a bit worrisome.

We need to replicate these results for a number of reasons. I would like to make the program longer; we tried to cram too much into too short a period of time. Making the intervention 1 year or 4 months long, instead of 6 weeks would make a huge difference.

It is going to be critical to get parents involved. We were only working with the teachers, and I believe parents could be a tremendous boost to making the effect much stronger. I would love to try this with a combined teacher and parent component.

Next time we definitely need classroom observations. We need to find out what is going on with the gender findings. Maybe it was a fluke and would not happen again, or maybe there is something about the intervention we created that appeals more to boys, or maybe there is something the teachers are doing that helps boys benefit more than girls, or maybe it is something the children are doing. We need to find out because the last thing we want to do is contribute to the gender gap in math and science. It seems that whatever we tried to do, we would get it right for the boys but not the girls; so we need to find the answer to that.

Douglas H. Clements: In regard to what was just said, we do have evidence that in elementary classrooms, the teachers call on boys more. Classroom observations would reveal if teachers just think of it as a male domain and are engaging more scaffolding with boys.

I'm presenting for myself and my colleague Julie Sarama, University of Buffalo, on our Building Blocks—The Language of Mathematics project. It is a prekindergarten through grade two software, print, and manipulative-based materials development grant funded by the National Science Foundation.

Over the years we have formulated the idea that most curricula will claim to be research-based, but that claim is based on a number of arguments as to why it is research-based. We have come up with a schema in order to determine if indeed one is correctly using the term research-based.

1. Has an a priori foundation. This is when broad philosophy theories or empirical results are used as the basis for the curriculum; this is the most common one.
2. Subject matter. People can look at the subject matter and say, what does research say already, a priori, before we start curriculum development. What does research say about mathematics, what can children learn, what do children know, what are the important and generative ideas of mathematics?
3. Pedagogical. In our own curriculum we did research reviews to see what it was that children found interesting and engaging about computer activities so that we would have a general, pedagogical foundation.
4. The learning models/learning trajectories idea. That is what I will emphasize today. What one does here is look at models of children's learning and ask what we know about how children learn, how they think about the subject, then carefully craft the model with the activity one makes for children, and invent those activities to pass through the learning trajectories we know about. What separates this from a priori is these things are almost always done dynamically. You make a little activity, then you try it with children, then you go back and reform it; this is kind of an interactive process.
5. The main category under evaluation is market research, which tends to be commercially driven. Market research usually means doing focus groups or hiring an outside independent agency. Very often textbook companies do this and then they hide the results. This is the opposite of what research and scientific discourse is all about. Market research is the most widely used and the most frequently conducted method of research. However, it is the one that contributes least to the research community and the betterment of children.
6. There are three formative research evaluation techniques, in which case one works with one or two children on an activity to make sure that it fits the learning model and learning trajectories. The next pass-through, you work with a single classroom, Then after that you go into multiple classrooms, and start giving it to teachers who do not know the curriculum ahead of time to see if the curriculum has appropriate supports for the teachers. The next step is doing summative research. We have not reached this stage yet.

With our intervention, Building Blocks, we are at the multiple classroom stage; next year we are moving to the small-scale stage, and the year after that to the large-scale stage.

I contend that if a curriculum development does not either consciously go through most of these stages, all but market research, the curriculum is not really research-based in a way that is complete or valid.

Our basic approach in Building Blocks curriculum is finding the mathematics and developing mathematics from everyday activity. We help children extend and mathematize their everyday activities; from building blocks, to art, to songs, to puzzles. If we find the mathematics in everyday activities and bring that to the teachers and children's conscious awareness, we believe that is a very powerful approach to teach children about mathematics. It is based on children's experience and interest, with an emphasis on supporting the development of mathematical activity and even mathematical play within those environments.

Building Blocks was developed from previous research that Julie and I did, with the addition of learning from the experts, including those at the table with me here. Our approach was to find what research says would be the a priori foundations in terms of subject matter for 2-year-olds, 3-year-olds, 4-year-olds, 5-year olds, and 6-year-olds. Also, what does the research say about how these ideas grow over time? Then we tried to design activities based on what we learned.

Now, an important caveat, before you think this is going to turn into a checklist curriculum, is that we tried to design activities that would cover multiple goals. There are games for the children to play that teach math concepts.

[Videotape is played] The only reason I show that is because teachers told us and others told us that children will not like the part about having to ask, "am I right." We have not found that to be the case. Children like checking with each other, you heard, "come on, am I right, am I right?" This creates more interactions and no child seems bored while the other is taking their turn. The most important point I want to make is that there are multiple goals even in the simplest game.

[Video of a game being played] The teacher puts a certain number of pieces on a "cookie," hides it under a napkin, and then the child is asked to duplicate what the teacher had done. Then the teacher takes the napkin off and the child sees it. This is a skill that the average child develops at age $2^1/_2$ or $3^1/_2$. Many of our children in Head Start classes did not have that ability at the beginning, but can develop it very quickly. The nonverbal comes much quicker than the verbal counting or number. Then we take it to the computer and they do similar things.

[Video of children playing with shapes, illustrations, the different learning levels of the children in composing and decomposing shapes]

The curriculum provides children with shape puzzles, from very easy to the more difficult. The children who are piece assemblers have puzzles in which they can match, other puzzles are for children who are picture makers, and still other puzzles for shape composers. The last are the most difficult and the child has to think about angles and synthesizing shapes in order to fill the puzzles with no gaps. We also do that on the computer.

On computers the children must use turn and flip tools, the computer supplies feedback, and can individualize in that it can make sure the shape composer gets a shape composer challenging puzzle. However, if the child is having difficulty with that, the computer will just give the child a puzzle from the earlier-in-the-learning trajectory.

Carole Greenes: I'm very pleased to be here with you. Balfanz will be discussing with me the research issues and the questions that we have after I present the program to you.

What is Big Math for Little Kids? Big Math for Little Kids is a comprehensive mathematics program for 4- and 5-year olds, prekindergarten and kindergarten levels, and we developed it for a number of reasons. Our other colleague, Herb Ginsburg, could not be here because he is speaking to a Head Start group in New York City today. He is a developmental psychologist at Teacher's College, Columbia University. Balfanz and I are mathematics educators.

About 6 years ago the three of us met and we were talking about the great numbers of children who are entering school at risk of failure at 4 and 5 years old. These are largely children of poverty, and because of that there are a great number of minority students involved. We could not believe that they could be failing at math before they had even been given a chance to begin their study of mathematics.

Then we looked at what was available to help young children, ages 4 and 5, explore mathematics. We found that there was a paucity of mathematics materials, and most of what we found were very fine activities, but contained no developmental sequence, no plan for how to develop some of the ideas that children already know a little bit about.

Finally, we have some real important research that Ginsburg collected recently and did with funding from the Spencer Foundation. He studied 30 children who were in a low socioeconomic group in New York City, 30 in a middle SES group, and 30 at an upper socioeconomic level, with an equal number of boys and girls at each level. He attached microphones to the children and videotaped each child 15 minutes during free play so he could listen to what they were saying and watch what they were doing.

He discovered that during free play, about half of the time children chose to do mathematical types of activities, and that there was no difference between boys and girls, nor between socioeconomic levels in terms of interest in mathematics. All children like to do math. He analyzed what mathematical activities they did, what was the nature, the character of those activities, and found that they did more pattern-type of activities than any other during free play.

Based on this that we decided to apply to the National Science Foundation for support to develop a mathematics program for 4- and 5-year-olds. There is a separate curriculum for each of these age groups. Children want challenging mathematics.

We have five major guiding principles:

1. All children are capable of learning mathematics at a young age, and in fact, they are very excited and eager to learn mathematics.
2. Play is not enough. Adult guidance is necessary for children to reach the appropriate levels of achievement.
3. An appropriate program should not be push-down curricula where we take what is done in first grade and push it into kindergarten. This is what has most frequently been done in the past.
4. Young children are capable of dealing with a comprehensive mathematics curriculum; the four basic shapes and counting is not sufficient.
5. Children are capable of dealing with complex mathematical ideas.

We began our curriculum development in 1998, and are now in the fourth year of our development. It was developed in the three sites where each of us is based. Balfanz's study was conducted in the Willie A. Ross Day Care Center, a program in the basement of an African American Church in the heart of Baltimore. Ginsburg did his work in two sites, the Corpus Christi School across the street from his office, and also at PS 207, a public school in Harlem.

I did my work in the Chelsea, Massachusetts public schools, in an early learning center that houses 400 prekindergarten children, 500 kindergarten children, and 200 grade one students in the same building. This was a tremendous resource and opportunity for being able to follow children as they move from prekindergarten to kindergarten and to first grade.

Chelsea, MA is largely Hispanic. Eighty-four percent of the children in pre-K and kindergarten classes come from families that are not native English speakers. The largest percentage are Hispanic (about 74%), about 8% are Southeast Asian, the other 2% percent are Somalian, Russian Serbs, and just about every group possible. This presented us with considerable challenges to work through.

We were at a school site at least 2 days a week, working with the teachers and working with the children. During year 1 we observed children during free play at each of our sites to identify interests, carrying out many studies similar to the one that Ginsburg did over a long period of time, but now with our specific children to find out what their interests were. We observed and interviewed all of the children who were involved in our development, and we observed them during their regular math activities and classroom activities, in literacy, music, and art; but we also put them in situations where they could bump into some interesting mathematical ideas and see how they responded.

In the second year we continued with that and we began to build and evaluate our program. In the third year, the teachers at the sites where we did our development taught the program and talked with us about how to modify it and make a good instructional sequence, and how to change things. In year four we have been evaluating the program in five states and in England, and I believe we now have ten sites.

There is a separate curriculum for pre-K and kindergarten. They are separate programs but they are connected so that at each level there are teacher resource books containing the whole program, the activities, and all the needed information. At the same time there is an evaluation to assess children's performance as they go through our program. Then there are storybooks that have mathematical themes so that children can talk and tell mathematical stories.

There are coloring books for the teachers, and then we thought it was very important to give each child a bound, black-and-white copy of each of the storybooks. In these books some of the illustrations are missing, giving them an opportunity to draw in the pictures before they take them home and read them to their families.

We wanted to use the TEMA as well, and since Ginsburg and Burudi coauthored the measure we thought we would surely use it. However, the TEMA focuses on arithmetic and numbers and does not focus on measurement concepts, on geometry ideas, on spatial concepts, navigation ideas, and map-making. Also, it does not focus on patterns and does not have those other rich topics that children explore. Before we start we need to assess how much the children already know about each concept so that we can capitalize on their strengths.

By the way, one of the things that I did not point out that I thought was really interesting was that in year 2 we eliminated all activities that the children mastered. We simply eliminated them, because if all children can do them, then there is no reason to do them—they are no longer challenging.

We want to use activities that prompt the making of conjectures, we want to use activities that develop mathematical language, that capitalize on students' interests, that present different representations of the same idea concurrently, and we repeat core activities regularly and frequently.

Robert Balfanz: I will talk about the research questions that guided us. First is the critical role of oral language and the potential for mathematics to enhance language and development. This was a critical finding for us, because it reduces the tension that exists between, "I would love to do math with the children, but I must do the prereading skills first, and once I do prereading skills there is no time for math." We found that the two go hand-in-hand. When one is doing mathematical activities, the children are describing what they see, using all concepts such as, "this is taller," "this is smaller", "this is on," "this is below." They are formulating questions, making conjectures, and talking math with their peers and teachers. Math, especially at this age and wonderfully so, is very verbal. It leads to serious preliteracy skills, and learning the basic important words, such as on top, below, bigger, smaller, but also more indepth conversations about if/then situations.

We are still left wondering in what ways children's language is changing over time. Certain activities can be more influential in language development. We want to know which mathematical concepts are best for developing the connection between mathematics and preliteracy.

It is still important to realize that repetition is necessary for digestion of key concepts and skills. It is critical during initial exploration to establish understanding, and it is important over long periods of time to maintain understanding. People told us that children have short attention spans at this age, so our activities had to be short and quick or we would lose their attention. We found that not to be the case. We found that when things were connected and done appropriately, children can have long attention spans. Even in a chaotic environment where I was working, there were 2- and 3-year-olds in one corner, 4- and 5-year-olds in another, and a big screen TV playing. The 2- and 3-year-olds were watching Barney, and the 4- and 5-year-

olds were trying to do work. They actually could do it; they could focus for long periods of time if we kept the situation structured and built in the repetition. What we do not know is how much repetition is needed. This is the age-old question in education: How much repetition is needed for different types of skills? Also important is that experiencing multiple modalities appears to assist concept acquisition and to stabilize concepts. That means a child learns about the number five in many different ways.

The key point for us in Big Math as a program development project was that it should be about how to develop a curriculum that is engaging and joyful for 4- and 5-year olds. The purpose was not to document how children's thought process changed in the course of doing this. That will be our next big task. We found children in a mathematically rich environment, in minimalist environments where a great deal of research on children is done, and that gave us certain answers. We also want to know the role of games in developing critical thinking skills. These are some of our important research questions.

Copley: I would like to quickly add some information about the project that I have been involved in, because it fits with all of the other studies. I spend my time trying to work with teachers from all different places and talk to them about good mathematics teaching. I have 7 sites in Houston, with 28 different languages spoken. There are many children in pre-K and kindergarten classrooms; some are Head Start sites and some public school sites.

As the presenters were talking I was struck by how similar their problems were to those I have encountered. Overarching issues seem to be, how do we really know what children know and how can we assess the effectiveness of the curriculum we are using if we do not really know what children know? Before we begin taking questions, I would like to show you some of the ways we have been doing assessments in our project. We have been looking at the work that the children produce. Every one of my sites uses different materials, whatever their particular school asks them to do, but I decided to have them bring children's work, and we talk about what we see. We ask, "What do we know about children based on this work? What if you asked this question? What if you asked this piece of information?" Here are some examples of the children's work.

Dahlia brought me some of her art work. I asked, "Dahlia, can you tell me about this?" She answered, "This is one of those pattern things, Miss Copley, look, look, look. There's smiling/frowning/smiling/frowning." As I talked to her about that I said, "Dahlia, is this a picture of you?" She said, "No, no, this one is me because this is the kind of hair I really want." That told me a lot about this little girl's thinking, some of which I did not like, if you want to know the truth.

Some other pictures, which fit nicely with Carole's presentation, were drawn because we were trying to figure out how to get an elephant into the third floor of the hospital when the circus came to town. When I talked to the children about their pictures, I found out something about their understanding of weight. There were several other pictures where the children were actually pushing the elephant up the stairs. We have one that is a teeter-totter, where all the elephants were jumping on one side to get the other elephant up. Very interesting information can be found in children's art work.

[Pictures are shown]

We do many activities in the block center, because I find rich mathematics there. But teachers do not often see what the children are learning. I take digital pictures and then ask teachers to please tell us what it is they see, and then I talk about some other things that they might see.

What I love about research in these settings is that this is real. My job is to be in real settings; I think everyone here has talked about real places, and children, and the joy of working with children in these studies. From the many challenges that all of us face, we find delight in listening to what they discover.

What would you say was the biggest challenge you had in conducting your research on these projects? Would each of you talk about that?

Arnold: My guess is that it has to do with getting the teachers started on the intervention. It is an interesting contradiction; on one hand the teachers love it, and on the other, it is easy to let it slide when you have a million demands on your day. My graduate students put a great deal of effort into getting the ball rolling.

Greenes: Our biggest problem was that in the beginning we had teachers who were very eager to participate and agreed that they would teach math at least 30 minutes a day in prekindergarten from The Big Math, and 40 minutes a day in the kindergarten as a minimum. They do much more now, but they were fairly convinced that children could not sit still and participate that long, and they did not think that the children were capable of dealing with complex mathematical ideas.

To convince them, we asked them to just try the activities. We did not rush in and do them ourselves, we asked the teachers to try the activities and to let us know if they had to adapt the activity or modify it in any way. Once they tried it they found that a number of the children, not all of the children, but a number of the children could really grasp these ideas with very little assistance.

Clements: I always observe just how dynamic children are at this age. I would be working in a classroom, and I would see a child who just did not seem to get it at all, but by the next week and he had gotten it. One wonders what happened, but one does not really know what happened. The reverse also happens, where a child might seem to get it one week, but the next week is struggling. It is unstable knowledge at this age, and it is very difficult to get a firm grasp on what is solid and what is shifting.

Copley: I have always been amazed at the after-Christmas phenomenon. I start out with children who have seemingly no clue about anything, and yet they come back after Christmas and suddenly they know the material.

Clements: I would say the biggest challenge is keeping them going. One can get teachers interested in the children's thinking, and they become interested in the children' activities.

But if we left the school, and came back 2 years later, we often found it to be disappointing, in every single one of our projects how many loved the project, yet were no longer using it. Many of our programs were computer-based, and many no longer had the computers for the programs. Computers were too expensive to maintain so they locked them up.

Someone has to pick up the ball and keep on worrying about all the supports teachers need in order to sustain their interest and their ability to do these things.

Clements: In a study Julie Sarama did a few years ago, with primary grades not preschool, she found that what the teachers really needed was somebody from the district to come in and tell them that what they were doing was really good. It was nice for them to hear from us, the developers and researchers, that what they were doing was good, but what they really wanted was to have the district supervisor validate what they were doing.

Copley: I think all of us who work with teachers of young children understanding the many levels of support teachers need to have, and the idea of sustained support is really important. We are on our seventh year on some of the sites, and what has been so nice is that when I go in to talk to the study groups now, they do all the talking. There are times when I do not even know if I am necessary, and that is my goal.

Question: I would like to hear more about measures.

Clements: As Greenes was saying, one of the disadvantages of the TEMA is that it is restricted to numbers and geometry, and all the rich information that she was talking about is not measured. Two alternatives that are coming down the road are a measure by Klein and Starkey called the Childhood Math Assessment. It is not sold or standardized yet. Likewise we have two Building Blocks instruments; one does geometry, shapes, patterns, and spatial sense, and the other one does numbers. The Childhood Math Assessment is numbers, spatial sense, and geometry

Greenes: I just wanted to say that we have a clinical interview assessment for major concepts in each of our units, at the prekindergarten and kindergarten level. I have one more comment. You mentioned Klein and Starkey; there is one other NSF funded project in mathematics for kindergarten-age children that should be identified. It is called Stories and was developed by Beth Casey at Boston College. It is not a complete curriculum, but it is a really interesting set of stories and math activities that come out of those stories.

Clements: We left out Creative Publications Math Curriculum Resources. One more is Number Worlds.

Greenes: I just want to say that we observed a number of things that we need to test further. There were many things that were very surprising to us based on the literature. For example, we know that many second and third graders have difficulty identifying a triangle if the baseline is not horizontal. If a vertex is on the bottom and it looks like it is on a plane, they will tell you it is not a triangle. However, our prekindergarten and kindergarten children have no difficulty identifying shapes in a variety of orientations. What's happening? Is it learned? Is it because triangles are frequently drawn or pictured with the baseline horizontal?

We found that children did not have difficulty counting objects that varied by size or color or shape or function, or even arrangement. Yet, when they get older, it seems to matter. What is happening? It seems there were many times, with different concepts, that the children who we worked with seemed not to be distracted by features that we are told in the literature they are distracted by. This is only anecdotal, observational information with small groups of children, we do not know what the answers are.

Question: I would be interested in how you determine the specific goals. You all gave some goals for your curriculum. How did you do that for your intervention? How did you decide?

Clements: We gathered a group of experts to talk about what we knew from research-based curricula. Which ones fit the criteria of being important mathematical ideas from the idea of a mathematician, important to children in terms of their interest, and then important in terms of its generative of further mathematical learning.

Arnold: We used whatever you guys had written! Focusing on the fundamentals, the basics that the TEMA measures very well in terms of number recognition, understanding quantity, coming away from a preliteracy research base, showing that those core skills then free up mental capacity for some of the creative, more advanced concepts.

Greenes: We recognized early on that children often knew a great deal about mathematical ideas but had a great deal of difficulty expressing themselves.

Copley: If you cannot tell, we really do like this topic, and some people get very excited about math. There are so many questions to ask. Where do we go from here? I plan to spend the rest of my life looking at this, and I think that is probably true for everybody here.

Literacy for Preschoolers: When Learning to Read Is Vital

CHAIR: Deborah J. Leong
DISCUSSANTS: Ellen Frede, M. Susan Burns, Bob Stechuk
PRESENTERS: Deborah J. Leong, Elena Bodrova, James Christie, Kathleen Roskos, Carol Vukelich, Myae Han

■ Tools of the Mind—A Vygotskian-Approach to Early Literacy Development: Results From a Field Test in Head Start Classrooms

Deborah J. Leong, Elena Bodrova

How can Head Start classrooms provide good literacy experiences for young children? Some advise that we more or less ignore experiences with early literacy and instead turn to earlier exposure to formal instructional practices—such as whole group instruction or seatwork—initially designed for older children. The problem here is that young children lack the underlying cognitive, social, and emotional development that make it possible to use these strategies effectively, and the small gains, when accomplished, may come at the expense of long-term growth and resilience (Bodrova, Leong, & Paynter, 2000). Rather than drilling skills into the children, early childhood educators need another approach. We propose to address the problem using a "structured way" based on the work of Lev Vygotsky and his students that achieves high levels of early literacy without ignoring the child's level of development.

The proposed presentation reports the findings from a field test of the "Tools of the Mind Approach" conducted in Head Start classrooms in Colorado. The "Tools of the Mind Approach" is a Vygotskian-based early childhood innovation model that focuses on the development of early literacy while including self-regulatory, math, science, and social foundational skills of young learners. Results from previous small-scale empirical studies (in 1998 and 1999) showed promise. The instructional strategies and materials used in the program had a positive effect on the literacy skills of children (Bodrova & Leong, 2001). These results led to the inclusion of the program in the UNESCO database of promising educational innovations available at http://www.ibe.unesco.org/International/Databanks/Innodata/inograph.htm.

At the core of "Tools of the Mind Approach" are the Vygotskian ideas about how play, the leading activity in preschool, can be used both to foster underlying cognitive skills necessary for later school success and to promote literacy development. Teachers in the program learn how to scaffold play so that by the end of the year children can sustain play for 40 to 50 minutes—engrossed in the activity and capable of solving their own disputes. In addition to scaffolding the play of the children, special literacy tools were invented to scaffold the representation of the child's own message in writing, such as Scaffolded Writing and the Sound Map (Bodrova & Leong, 1998).

In 2000–2001, the effectiveness of the innovation was evaluated in a quasi-experimental study of 10 Head Start classrooms (5 experimental and 5 control) that were first matched on teacher characteristics and then on child characteristics. Children were administered the preschool version of the "Early Literacy Advisor" assessment battery (http://www.mcrel.org/resources/ literacy/ela/) to provide pretest and posttest measures.

Data for 228 children were analyzed using regression analyses that controlled for age, gender, special education, English language proficiency, and pretest score. Significant advantages ($p < 0.01$) for the children in the experimental classrooms were found on composite test scores for Early Reading Concepts and for seven of the nine Early Reading Concepts subscales, as well as for tests of Letter Recognition and Sound-Symbol Correspondence. Greater levels of implementation of the curriculum in the classroom were associated with better outcomes for children.

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■ The Effects of a Well-Designed Literacy Curriculum on Young Children's Language and Literacy Development

James Christie, Kathy Roskos, Carol Vukelich, Myae Han

Wright Group's "Doors to Discovery" is a comprehensive pre-kindergarten literacy program that focuses on five areas: oral language, phonological awareness, print awareness, alphabetic knowledge, and comprehension. The program's basic design includes a variety of contexts—large group, small group, and discovery centers—that offer multiple encounters with language and print.

Our evaluation of the Doors curriculum was conducted in two phases. First, we evaluated the design quality of the curriculum, using criteria based on the Standards of Effective Pedagogy (Dalton, 1998). In total, we made judgments about 26 indicators across these standards. We concluded that 22 indicators were fully met, 2 were partially met, and 2 were unmet. Overall, Doors appeared to be a well-designed early literacy program.

Next, we conducted a small-scale research study of the curriculum. This study took place in five Head Start classrooms in a large metropolitan area in the Southwest. The classrooms were matched by language: two had English-speaking children, two had Spanish-speaking children, and one had a mix of English- and Spanish-speaking children. At the beginning of the study, the sample consisted of 75 preschoolers, 3–5 years of age and from low-income families. By the conclusion of the study, the sample had decreased to 53 children.

Teachers in the experimental classrooms used three units from the Doors program: Vroom, Vroom; Build It; and Tabby Tiger's Diner. Each unit was taught for 4 weeks. Teachers in the two control classrooms used the existing language arts curriculum, loosely based on the Creative Curriculum (Dodge, Colker, & Heroman, 2000). In order to check curriculum implementation and to provide data for subsequent qualitative analyses, video clips and field notes were collected during periodic visits to each classroom.

During the 2 weeks before and after the intervention, three assessments were administered: the Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 1997), Get Ready to Read! (Whitehurst & Lonigan, 2001), and an eight-item measure of concepts of print (CTB/McGraw-Hill, 1990).

Results indicated that Doors was effective in promoting Head Start children's language and literacy. Overall, the curriculum resulted in significant gains on the PPVT, Get Ready to Read!, and concepts of print measures. Analyzing the results in terms of the children's native language, Doors promoted English-speaking children's performance on the PPVT and concepts of print measures. The curriculum also increased Spanish-speaking children's performance on both literacy measures.

A preliminary viewing of video clips filmed in the experimental classrooms and control classrooms revealed two major differences between the curriculums:

1. Integration—The activities in the various components of the Doors program (large group, small group, and discovery centers) were usually connected, whereas the circle time and center activities in the control classrooms were usually unrelated.
2. Explicit literacy instruction—The Doors program featured explicit instruction on vocabulary, concepts of print, and phonological awareness (rhyming), whereas the control classrooms featured very little of any kind of literacy instruction, other than storybook reading.

These factors in curricula may have played an important role in the Doors subjects' enhanced performance on the language and literacy measures.

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■ "Tools of the Mind" and "Doors to Discovery" in the Context of Research on Early Literacy Practice and Commonly Used Preschool Curricula

M. Susan Burns, Ellen Frede

The two symposium papers on "Tools of the Mind" and "Doors to Discovery" will be discussed in light of research findings on the literacy opportunities necessary for preschool children. Specifically we address the research underlying the joint position statement on early literacy of the International Reading Association and the National Association for the Education of Young Children (IRA/NAEYC, 1998) and the National Research Council's (NRC) "Preventing Reading Difficulties in Young Children" (Snow, Burns, & Griffin, 1998).

Our guiding questions are as follows. What are the basic research findings that apply to early literacy? What content do "Tools of the Mind" and "Doors to Discovery" contain? What methods are identified within each of the curricula? What is expected of the teacher? What is expected of the child? What is the nature of the interaction? To answer these questions we gathered information on the literacy opportunities listed in the program materials. We then examined the curriculum material with an adapted form of the Supports for Early Literacy Assessment for early childhood programs serving preschool age children and targeted points from the Head Start performance standards. Finally we did a listing of other curriculum content areas included in each of the programs. These programs will also be discussed in the context of commonly used preschool curricula such as the Creative Curriculum (Dodge, Colker, & Heroman, 2000) and the High Scope Preschool Curriculum (Hohmann & Weikert, 1995), and the literacy opportunities they provide in their materials.

We add to this analysis an empirical study of classroom practices in one state. Over 200 Head Start, public school, and child-care classrooms that serve children in 30 low-income school districts were randomly selected. They have been observed for the past 2 years using structured

observations instruments including the Early Childhood Classroom Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 1998) and a literacy-specific instrument based on the IRA/NAEYC position statement. Results describing practices by auspice, by curriculum (including High Scope and the Creative Curriculum), and by teacher preparation will be presented.

We end with an effort to find common ground among the programs presented while simultaneously addressing the nature of early literacy opportunities that promote children's preparedness for later formal reading instruction.

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Parenting/Families

The Important Role of Fathers in Young Children's Development

CHAIR: Lonnie Sherrod
DISCUSSANT: Natasha Cabrera
PRESENTERS: Vivian Gadsden, Catherine Tamis-LeMonda

Lonnie Sherrod: We are delighted to have both this focus and our panel of speakers. Michael Lamb and I began graduate study at the same time, and having worked with Mary Ainsworth, he was just beginning to look at infants' response to fathers and the Ainsworth Strange Situation Paradigm. It was discovered that infants react to fathers very similarly to their reactions to mothers in the situation that presumably measured infant attachment. That was probably the first systematic research attention we saw to fathers in the child development field.

Since then, this research has grown. The next phase of research that I found interesting and relevant was Lois Hoffman's research looking at working mothers in which she found that, in fact, working mothers looked much like fathers in regard to their interaction with young children. It showed that any differences we saw between mothers and fathers had more to do with role than with gender or a biologically based set of attributes. We also saw the work of people like Linda Burton, a sociologist at Pennsylvania State University, who was studying young, urban single mothers. She found that the fathers of young infants were not invisible, but, in fact, were very involved and important contributors to young children's lives.

The panel today brings that line of research one step further by looking systematically at the role of fathers in the lives of young children, particularly the young children involved in Head Start programs. Our first speaker will be Catherine Tamis-LeMonda, who is an Associate Professor in the Applied Psychology Program at New York University, where she also directs the Developmental Program. She is a member of the Early Head Start Research Consortium and the Early Head Start Fathers Group.

Vivian Gadsden is Associate Professor of Education and Director of the National Center on Fathers and Families at the University of Pennsylvania in Philadelphia. She is conducting a longitudinal study with Head Start fathers in which the sample is primarily African American and Puerto Rican. She is now working with John Fantuzzo at the University of Pennsylvania School of Education, looking at literacy in Early Head Start families.

Natasha Cabrera is an Expert in Child Development at the National Institute of Child Health and Human Development (NICHD). She conducts research on fathers, child care, and poverty, and she coordinates initiatives at NICHD in those areas across the different agencies, a role that is very important given the lack of coordination that typically occurs across agencies.

Catherine Tamis-LeMonda: The title of the talk is "Father Involvement: What Is It and Why Does It Matter?" The past 3 decades have witnessed burgeoning research on fathers, which has

incited considerable dialogue and reflection on these two questions: What is father involvement, and why does it matter? My aim is not to answer these questions, because if I did, I would receive the Nobel Prize; rather I would like to raise some of the complexities that underlie research on fathers.

I will start by highlighting perspectives from diverse scientific disciplines, to shed light on how complicated these two questions can be. Then I will focus on a developmental approach to provide the framework for presenting some of the research at NYU. Consider the first question: What is father involvement? For hundreds of years, we have had different ways of conceptualizing and characterizing those aspects that are subsumed under this construct of father involvement.

What does it mean to be an involved father? How involved should fathers be if they are to positively influence their children's development? Are there thresholds of father involvement below which children's well-being is at risk? Does the nature of involvement change when different father types are considered? Is it different if one is a resident father or nonresident father, a biological father or social father? Should different criteria be used to assess involvement of these different types of fathers?

It is agreed that father involvement is multifaceted, and defining criteria of the construct varies by scientific traditions. If we look at different traditions, the definitions change. Father involvement and what it is changes with children's and fathers' ages. It also varies with socioeconomic and cultural factors. Consider the second question: Why does father involvement matter? Once more, the outcomes of father involvement are multifaceted. How and why father involvement matters will depend on the dimension of fathering that we are considering and the person thought to be affected. Father involvement exerts meaningful change on children, fathers, and their families. Moreover, fathers can be seen as mattering directly as a source of direct input to children and families, for example through attachment relationships, as well as mattering indirectly. Fathers can affect mothers' own engagements or the engagements of other caregivers in children's lives, and they also indirectly affect children through their effects on household resources, financial stability, and the socioeconomic opportunities they afford.

Finally, scientific discipline and the orientations and biases of researchers' discourse shape conceptions of why fathers matter. The meaning and outcomes of father involvement will not be the same for developmentalists, economists, anthropologists, evolutionary psychologists, or sociologists. I would like to think about what father involvement means from a multidisciplinary framework. We must begin to talk about fathering within and across the boundaries of scientific traditions. Multidisciplinary collaboration and emphases must begin to frame our thinking about fathers.

Why is this? Obviously, if we expose ourselves to the scientific traditions of others, we begin to challenge and confront our own assumptions about what it means to be a father. We begin to expand our thinking to embrace a more integrative and complex model of family systems. Let me offer some examples of different scientific disciplines and the different ways they have thought about the meaning of father involvement.

Developmentalists often focus on the quality of father-child relationships, and how such relationships develop and change over time, particularly in early childhood, because the idea is that we are laying the groundwork for attachment relationships and how they affect the trajectories of children's lives. Researchers such as Lamb, Parke, and Palkovitz emphasize attachment, father's role in children's social emotional development, father-child connections, father's disciplinary practices, father's direct teaching, father-child activities, and father's sense of responsibility and commitment. Those are some of the ways we think of fathering from a developmental perspective.

In contrast, economists often focus on financial provisioning and view child support dollars as a critical link to children's well-being. Economists, such as Garfinkel and Sigle-Rushton, often utilize cost-benefit analyses to understand and explain fathers' allocation of resources to children. For example, they note that nonresident fathers must allocate greater resources to

spend time with their children than resident fathers. Nonresident fathers incur costs associated with visiting arrangements, travel expenses, and sometimes arranging a venue for visits.

Coresidency allows for the shared consumption of goods like housing, for example, thereby lowering the costs of involvement for resident fathers. The net effect of these patterns is that time spent with children is priced at a higher cost to nonresident fathers. Such formulae present one interpretation as to why fathers with fewer economic resources might not be as involved as either resident fathers or nonresident fathers who have financial resources.

One of the most illuminating illustrations of the varied scientific conceptualizations of father involvement is evidenced in the evolutionary approach. Evolutionary psychologists refer to the term father investment rather than involvement, reflecting an orientation that links behavior to biology. Evolutionary psychologists seek to understand how, why, when, and under what circumstances men invest in their offspring. According to evolutionary theory, children benefit from fathers in a multitude of ways, and that is including, but not limited to, fathers' enhancement of their offspring's biological fitness and reproductive success. Therefore, thinking in evolutionary terms, father investment would be displayed by bearing many offspring.

Sociologists and anthropologists emphasize the cultural settings of father involvement. Culture encompasses the norms, practices, language, and beliefs that are collectively shared in a community. Sociocultural ideologies and prescriptions about father involvement, together with the economic structure of communities and societies, affect fathers' roles. They determine the kinds of expectations we have about what fathers should be doing.

Cultural perspectives are also critical for timeframes of fathering. Different cultures believe that there are different periods in development when fathers are thought to be most influential. In essence, what fathers do, when, and why, are integrally bound to cultural context. Fathers, mothers, and other persons in children's lives perpetuate the psychological and behavioral foundations of cultural communities through the context they create, the activities they engage in, and the attitudes they convey. Every day, fathers and mothers present their children with a series of cultural lessons unconsciously and consciously, subtly and boldly, directly and indirectly.

The research by Townsend demonstrates how cultural expectations determine what is appropriate behavior of men, fathers, and families. Townsend's anthropological research draws on intensive field work with men in the San Francisco Bay region of Northern California, compared to men from Tswana, a village in the southern African country of Botswana. In the Tswana cultural model, men provide economic, social, and emotional supports to a variety of children, including their own offspring, their grandchildren, and their nieces and nephews. Therefore, there exists what is termed "enabling collective shared investment" in children's lives.

Additionally, in Botswana, father involvement takes on different forms and intensities over children's life course as fathers pass through a series of culturally prescribed roles and relationships. In childhood, for example, children live with their grandparents while their mother is away working, and the father's role is not as salient as it will become later on in development. In adulthood in Botswana, fathers are expected to provide a home for their daughters and grandchildren, at which point their importance increases dramatically.

This contrasts with fathers from the San Francisco Bay area, who tend to focus on the well-being of their own offspring. These fathers, as many in middle class, Westernized societies, are expected to support their children early on and then to be less central as children grow into self-sufficient adults. A multidimensional view of fathering prompts reflection on this notion of tradeoffs in parenting.

Fathers cannot be all things to children, but rather, fathers make choices consciously or unconsciously about where to direct their energies and resources. Moreover, these decisions are constrained by a limited set of perceived choices that are determined by many factors, including the number of children they have, their economic opportunities, employment conditions, the quality of the mother-father relationship, and personal characteristics. The decisions that fathers make have costs and benefits for children, fathers, and families. It is never always good. By

investing in certain aspects of fathering, for example, the quantity of offspring one bears, fathers may be unable to invest in other ways such as giving personalized time to each of those offspring.

The first example I draw from is economic theory. Economists note that the quality of father-child relationships might positively predict the time fathers spend with children, positively predict financial provisioning, and even positively predict the quality of the mother-child relationship. However, fathers who become more strongly attached to their children actually have lower bargaining power in the family system and also tend to bear fewer offspring.

The second example is the breadwinner role. Fathers who are committed to their role as breadwinners may have to compromise other aspects of involvement, such as the actual time they spend with their children. Here I would like to use an example taken from a statement made by a participant in our study, of a New York City father with a low income. This exemplifies the idea of tradeoff. In an effort to describe the various ways he involved himself in his infant's life, we asked him an extensive series of questions about the activities he shared with his child.

We asked, "Do you diaper your baby? Do you feed your baby? Do you sing to your baby? Do you play with your baby? Do you hold your baby?" His responses to question after question about the frequency of his participation in all of our predetermined activities were "Not at all" or "Rarely." After continuing along these lines for some time, the father interrupted our experimenter in an exacerbated tone and asked, "When do you get to the part of this questionnaire where you ask me about how hard I break my back working so that I can support this baby?"

The third example is that of labor migrants in the United States as well as many poor men from developing countries who send remittances home but spend very little time with their children and families. Children of migrant workers benefit from an increase in resources, yet they do not receive the direct attention that characterizes more traditional father-present environments.

The research being conducted at New York University focuses on a specific dimension of father involvement in children's first few years of life and falls within a developmental framework. Thus, this is to be conceptualized and interpreted within this narrow lens of my own scientific training. All the prior discourse was to say that we need to recognize that what we look at is a small part of the puzzle. Specifically, I am going to present some work on fathers with low incomes and their engagements with 24-month-old children in relation to children's communicative and cognitive competencies.

This research evolves out of a larger ongoing collaboration among members of the Early Head Start Fathers Research Consortium. The Consortium's aim is to advance an understanding of the nature, antecedence, and consequences of father involvement in populations with low incomes. The Ford Foundation, NICHD, the Office of the Assistant Secretary for Planning and Evaluation (ASPE), and the Administration on Children, Youth, and Families (ACYF) fund the research.

In our research of father involvement, we have adopted Michael Lamb's taxonomy as an initial framework, and his theory conceptualizes involvement along three dimensions: (a) availability, which refers to fathers' presence or accessibility to children; (b) engagement, which is fathers' direct experiences, contact, caregiving, and the shared interactions fathers have with their children; and (c) responsibility, which refers to the extent to which fathers arrange for resources to be available to their children and their sense of commitment and responsibility for children.

For purposes of this presentation, I will focus on the second component of Lamb's model, that of father engagement. Who are the fathers we have been observing? To date, the Early Head Start Consortium has been longitudinally following approximately 700 fathers. In the New York City site, we have seen over 100 fathers and their children, some between 24 months and 4 years of age. Other fathers are followed from the time of the children's birth. In all families, we also interview and observe mothers. Families are from many ethnic minorities, and our sample is

primarily U.S.-born African Americans or Latinos of Dominican or Puerto Rican descent. About half of the fathers have their children with a teenage mother, so there is a wide age span in the fathers we see, from approximately 19–47 years of age. All families can be classified as having low incomes.

The studies that I am going to talk about have four broad goals. First, our questions, the ones I am discussing today, concern the engagements of present fathers in children's lives. Rather than focusing on absence-presence, whether or not fathers see their children, we sought to explore variation that exists within fathers who do see their children regularly. Second, the fathers we talked to are from ethnic minorities and are largely poor. As such, we hope our research moves beyond general understanding to understanding underrepresented and often stereotyped fathers. Third, we are interested in behaviors and thoughts of fathers themselves rather than as caregivers to be compared to mothers. While many similar patterns of engagements do exist in the mother-child and father-child dyads, a comparative framework only is quite limiting and is not at the heart of our work. Finally, we seek to describe fathers' language interactions and didactic stimulation, rather than emphasizing fathers' roles as playmates only whose contribution rests in the kinesthetic stimulation afforded by their rough and tumble play.

At NYU, we code various dimensions of father engagement from videotaped interactions. Our protocol includes a 3-minute teaching task, 5 minutes of do as you wish, 10 minutes of free play, and 3 minutes of cleanup. All of these exist in the father studies protocol of the Early Head Start Consortium. These are the types of tasks we are using at 14, 24, 36, and 48 months of age with fathers and children.

For purposes of today's presentation, I am going to focus on variables coded during free play at 24 months, which include Likert ratings of approximately 15 father items such as responsiveness, intrusiveness, language amount, and quality. During the free play sessions, we transcribed father-child language, and that is incredibly tedious—it takes about 10 hours for 10 minutes. We then classified fathers' and children's speech into a number of functional semantic categories. We looked at fathers' language and asked if he is labeling, describing, repeating, questioning, imitating, expanding, directing action, and so forth.

In children, we coded on 5-point Likert scales as well, of approximately 12 items that parallel those used with fathers, including responsiveness, language amount, language quality, play sophistication, positive affect, and negative affect. For fathers, all child utterances are coded from transcripts so that we could derive contextual information. That is used to classify each child's speech act, as well as each word within an act, into one of several linguistic categories or types. These include imitations, labels, descriptions, and words that express recurrence, actors, actions, patience, object of actions, recipients, locatives, and possession.

Just as in the father component of this study, mothers and children are observed in various situations including free play, and global measures of mother behaviors are coded on the same dimensions as that for father. Mother-child interactions are transcribed so that mother's speech could be coded for their functional purpose. Finally, children's behaviors with mother as well as their speech with mother is coded using the same systems as the father-child interactions.

We measured the total number of and diversity of meaningful utterances made by each person in the interaction. Diversity represents the number of different language functions of meanings expressed. For example, a child who used language to label, indicate, and talk about action receives a diversity score of three regardless of how many times she said each of those, just to get an array of the ways children communicate. The reason we like to use this in our work is that it is not tied to a large vocabulary, so one could point to a cup and say, "Mommy," expressing possession, that is, a thing belonging to mother. This would be a sophisticated way of using the term "Mommy," so we are able to see how richly children use language, not merely how many words they have.

From these various coding systems, we have identified two meaningful factors in the way fathers are interacting. The first, which is labeled the responsive didactic factor, reflects positive

loadings and is quite strong, 0.45 or above, on measures such as language, play engagements, and responsiveness. This is a responsive didactic factor. The second factor we have identified in fathers is labeled a negative intrusive or overbearing. It is sometimes called overbearing because the word negative intrusive sounds too negative, which receives high loadings for our measures such as negative verbal statements and intrusiveness. In children we have three factors. "Playful communicative," which receives high loadings for play and language, a social factor which receives positive loadings from items including participation and responsiveness to the caregiver, and a child-regulated factor which receives positive loadings from emotional regulation, involvement with toys, persistence, and low levels of negative affect.

Next, we examined associations between these father and child outcomes. We found that fathers who score higher on the responsive didactic scale had children who were more communicative during interactions and more socially inclined. They were more responsive toward their fathers as well, and scored higher on the Bayley Mental Development Index (MDI). We were also interested in the extent to which fathering predicted delay versus nondelayed status in the Bayley, so we ran a series of logistic regressions based on these findings, which included father and child items in the regression. We found that fathers who scored low on the factor of responsive didactic were four times as likely to have children in the delayed range of the Bayley, as were fathers with high scores on this factor. Therefore, there was a probabilistic shifting and this is not father absence. It is within fathers that we are seeing effects on this score.

When we next explore relations between father's language and children's language, both father's total language and diversity in language predict children's total language and diversity of language use. The correlations range from 0.2 at the low end to close to 0.6 at the high end. More important is the fact that father's diversity, like the number of different ways he uses language to communicate, was significantly more predictive of children's language totals and diversity than was his sheer amount of language. This mattered in end regressions; diversity came up as being the most important contributor to children's language. In mothers, we found that both language total and diversity predicted children's language totals and diversity.

However, there are a couple of points I would like to mention. First, mother's language showed somewhat weaker prediction than father's language, and both total and diversity of mother language showed equal predictability. The correlations for mothers were in the 0.3 range, which means there is 9% variance explained as opposed to over 25% variance explained for fathers' language. That is a significant difference. Second, mothers' total language and mothers' diversity of language showed equivalent patterns whereas for fathers it was the range of meanings that seemed to be most telling. Therefore, there exists some similarity, yet also some distinct patterning, in the relations between fathers' and mothers' language and children's observed language.

I have four final take-home messages for you. First, father involvement is multifaceted, complex, and intimately tied to the biases of our specific scientific orientations. Not surprising to someone trained in language development, I am focusing on what fathers mean for that aspect, but it is a small piece of the puzzle. Second, for developmental psychology, the construct of engagement seems to be fundamental to capturing the quality of father-child relationships. We need to engage in more work on what present fathers are doing. Third, in our work, we find that fathers' linguistic engagements predict children's Bayley scores. They seem to matter for whether children are delayed or not, language amount, and language diversity. Therefore, stereotypes of fathers as rough-housers need to be expanded. Finally, through interdisciplinary collaboration, our group hopes that we will be able to embed our findings within a broader ecological framework.

Vivian Gadsden: My presentation is about parent involvement, specifically fatherhood in early literacy. I will focus on conceptual issues related to father involvement within the context of Head Start's mission on parent involvement, and the possibilities for considering father involve-

ment in relationship to children's early literacy. Although a few Head Start studies, such as those by Fagan and Fantuzzo and others, have examined father engagement and children's social competence, multiple questions persist about the role of fathers in children's cognitive development, specifically their early literacy, reading, writing, listening, and oral language.

At the same time, Head Start programs are encouraged by federal policy makers to engage fathers. Programs, by and large, aim to respond to this call to action while recognizing the potential advantages, complexities, and possible risks to relationships within the programs themselves—that is, among staff who may or may not be predisposed to doing this work, and the family members other than the father. A situation is exacerbated when the father is not a coresident in the household or when the family itself is in turmoil.

There is a relative absence of a strong empirical base in father involvement and children's literacy. Remember that despite what we might consider the inherent relationship of literacy, it was 10-12 years ago when Head Start received a specific mandate about literacy. While we assume that that should be taking place, it has only been formalized for the last decade. This is the result, in large part, of the historically limited research base that focuses on fathers as active contributors to children's daily development needs.

As has been chronicled through countless articles over the past few years, the work of preparing children, of getting them school ready, has typically been considered women's work. This reality of history offers, however, only a partial explanation for this limited attention. Some among them would suggest, and I would agree, that research in the field is still emerging and that even now we have limited data on child outcomes resulting from father involvement initiatives. Moreover, there is no systematic body of research that tracks these outcomes, although current policy studies such as the Early Head Start Study will undoubtedly provide such data over time. In short, it takes time for new areas of work to be integrated thoughtfully, systematically, and coherently into the diversity of knowledge bases.

At best, we might expect only a few studies in any one area. Such is the case for father involvement in children's early literacy. We think the need for a conceptual framework is central to future research that attempts to link fathers' roles and early childhood education. Head Start, in my opinion, is an appropriate, if not the appropriate, context in which to consider and promote the study of these issues. It is one of the first formal programs children will attend that is specially designed to prepare children for kindergarten through 12th grade schooling, and which has a longstanding commitment to parent inclusion.

There are two overarching issues. First, how do we determine the ways in which families and fathers can enhance young children's cognitive development, academic achievement, and social well-being? Second, how do we effectively utilize Head Start as a critical point of entry to engage fathers in families over time? How does Head Start engage families and fathers at present, and how do we respond to these families and fathers who do not have the literacy to support their children? Head Start is a critical setting, and we are looking to explore these parallel areas of work affecting children's early learning outcomes. I would also like to talk about father involvement within the context of Head Start's mission, and possibilities considering father involvement in relationships. We are interested in seeking the points of convergence, and that is what I will attempt to do.

Parent involvement has been a critical theme in Head Start since its establishment in 1965. It is prominently displayed, for example, in the Head Start performance standards, which make exclusive two mandates. The first is to enhance children's developmental competencies to prepare them to succeed in their present environments and with later responsibilities in school and life. The second is to partner with families and the community to enable, empower, and support families' efforts to enhance their children's development competencies.

In highlighting parent involvement, Head Start draws heavily from ecological theories of human development. This suggests that the developmental potential of a specific setting is enhanced when there are many supportive links, that is, when there are shared goals, mutual

trust, positive orientation, and consensus between settings so that both can function harmoniously. Parent involvement in Head Start, as is true of other educational settings, serves then as a facilitator that bridges the 3 years of the school program and family life to promote positive developmental outcomes for children.

There is empirical support for the Head Start practice of engaging parents in order to minimize discontinuity between home and school—a problem that has been linked throughout the literacy literature. During the 1990s, there was a rush of work on family involvement and parent involvement. Those words are used interchangeably. It is my understanding that families are more than parents, so part of what we need to do is think about what we mean by parent involvement and what we mean by family involvement, thinking about the constellation of people who contribute to children's lives.

These conceptualizations have attempted to build upon the premise that staff members and parents of Head Start, acting on behalf of children, can construct relationships steeped in equality, mutuality, and shared decision making. That each has respected roles; that the typical hierarchies can be replaced with common goals; and that both have the capacity and will to engage in goal setting, goal achievement, and the reciprocity of knowledge and information. Over the past 10 years, Head Start has made efforts to move past the traditional focus on mothers only when considering children's parents. This way, it is attempting to think about what the constellation of contributions might be.

I will talk about fundamental issues forming fatherhood research in practice, what we have learned about early literacy as a context, possible applications of what we know, and pathways for thinking about it. I am begin with a conceptual stance, that parents are a critical component of the micro system called families, and fathers have the potential to play a significant role as parents. As Tamis-LeMonda said, let us be reminded that sometimes that is good, sometimes that is not as good, and extended family members contribute to the broader concept of families. Second, parents, families, and fathers can serve as protective factors, but they also might serve as barriers. Lastly, we need to understand developmental competencies that are dependent on precisely operationalizing fathers in family involvement, and examining relationships between culturally-rich dimensions of both, as well as children's school readiness.

These are just some of the core learnings from the National Center of Fathers and Families, which I direct. They have come from practitioners who serve fathers directly. They would say based on their experience, and coupled with the literature, that there is a sense that fathers care, that father presence matters, and that there are issues around joblessness and unemployment for a disproportionate number of fathers with low incomes. I might add that this is true of fathers with low incomes who live apart from their children, as well as those who live with them at home. In particular, there is an absence of literature about the working poor.

There are systemic barriers to father involvement, and there has been much discussion about that over the past several years. In fact, some would say that only child support has been talked about. While there are opportunities to talk with fathers, whether they live within the home or outside the home, and while we know transitions are important, we have yet to understand what the issues are that allow men to make the transition from nonfather to father, from unengaged father to engaged father. Lastly, fathers' perceptions of what is possible are informed by their own experiences; or they may choose to do something different from their own past experiences. What they do now will have some impact on their relationship.

The images of fathers are complex. The portrait of fatherhood itself, of the field itself, is one of a forming and reforming field with a past, present, and future that is still to be etched, with a companion story yet to be scripted. Some fathers have children who rely on public assistance. Others have children with teenaged mothers whose families do not want their involvement. Some are technically absent, but may provide support for child care, material goods like toys or diapers, and show their commitment to maintaining a strong, nurturing relationship with their children.

By contrast, some fathers who meet the traditional definition of fatherhood by living in the

home and providing for the family's material needs have children who feel unwanted. Tamis-LeMonda's example is a good one because this father saw his role, in part, as being the breadwinner. That is what we often hear from fathers with low incomes. Their construction of fatherhood is about being a breadwinner. It is interesting because much of what they do is the nurturing, love, and support, and there is a tradeoff that ends up happening when they make this transition to being responsible in terms of financial contributions only.

I work with four men who are part of studies we have done in Philadelphia, Indianapolis, and San Francisco. I work mostly with African American and Latino fathers, so therefore my examples are from these populations. One participant is Carlos, a married father of three in his 20s, who emigrated from Costa Rica. For 2 years, he has attended a male involvement program focused on fathering. His goals are not unlike those of thousands of other men who are fathers. He wants a good life for his family, his children, and for himself. He describes these goals with incredible deliberateness to demonstrate his increasing facility with English fluency and his marketability in the workforce. He talks about his visions, hopes, and images of a time when he can move his wife and children out of public housing, where they now live, into a good neighborhood. He talks about his unassailable aspirations to be a good father, to talk to his children, read to them, ensure that they receive a good education, and be there for them in ways that approach his most basic motivations for coming to the United States.

Pedro is another father in the program, about the same age as Carlos. Although he echoes Carlos' sentiments, it is not clear that he is motivated by the same passions or with the same knowledge of possible goals and options for the future. He is separated from his son's mother and usually sees his son once a week. He is experiencing some difficulty gaining access to his son who, as a first grader, is having problems with classwork in school. His son attended Head Start. From his description, which he provided in Spanish, he is concerned. His description of his son and the problems he is facing in school are threaded with a clear query to the interviewers about what he can do to help his son in the face of opposition to his involvement and his limited knowledge of English and the school.

The third father is Stan, who was a 23-year-old father married to the mother of his children at the time of this study. He dropped out of school in 10th grade and returned a year later. His experience of school was turbulent at best. After episodes in and out of school, Stan dropped out permanently at age 20. There is much talk about fathers acknowledging the children. At the point that he was having children with his present wife, she was still under the age of 16. He was only about 4 years older than she was, and he was still in high school. The statutory issue is particularly complex in this field, because it is different when one is 19 or 20 years of age and still in school, compared to when one is 45 years of age. Before he dropped out, he fathered his first child, a daughter, whose birth caused him tension: "I knew I needed to get my diploma, you understand, and things were bad between me and my girl and her family and I could not really take care of my daughter, you know, like a man. School became harder and it seemed like there was no place to go. I thought I might get a job." During 2 years of intermittent employment and after several brushes with the law, Stan fathered a son with the same partner.

At the time of the interview, he had begun to participate in a fathers program and had returned to school to earn his GED. Stan's daughter is now 5 years old and enrolled in day care. Stan has taken great interest in her literacy development. He reads to her and spends a great deal of money purchasing educational materials for her and his son. Although he is engaged in positive experiences with his children, his life circumstances are still tenuous. He fears that his children's schooling will not prepare them for the world they will enter as African Americans, and he feels ill prepared to question the quality of his children's schooling. He says, "I do not want them just going through the system with people thinking that they cannot be somebody." The question is whether Stan can ensure that his children are not forced to face the disappointments.

The last person that I will tell you about is Parker. Parker is a bright, strong, determined, young African American father. He attended the Philadelphia schools where he got As, which he

challenges, because he was clearly not prepared. Parker has participated in a fathers program for 4 years, not because he was unengaged or irresponsible towards his son, but because he wanted to strengthen his relationship with him, file for custody, and increase opportunities available to his son and himself. As a 20-year-old African American man, Parker provided for the daily care for his child. He gets a little help from his mother.

Over the years, Parker has tried to contextualize his life experiences, goals, dreams, despair, and hope within the history and culture of African American families, in which fathers supported their children through care, nurturing, and economic support. Like millions of young mothers who are also and often invisible, he is balancing child care and responsibilities at work. Parker has a high school diploma, which enables him to get low-level jobs that can also expose him to dangerous circumstances. In one job, he was asked to do the drop-off and was robbed two times. He figured he had a child to take care of, so he better quit that job. Since he did this, he has commuted to New York to go to locksmith school. He did this after he worked 8-10 hour days and took care of his child. Now he is a locksmith.

There is an abundance of data about fatherhood. Michael Lamb, Jim Levine, and others have put forth frameworks for looking at the dimensions of responsibility, availability, and engagement. There is also a good body of work on paternal caregiving. Caregiving may focus on feeding children and ensuring that they get sufficient rest and are protected from danger. It may also refer to attachment and security, generativity, and managerial tasks. What is interesting about the caregiving literature is that it tends to describe the frequency of care and the tasks performed rather than the quality of the father's care and the relationship to child's outcomes.

There is an interesting body of work on fathers' involvement in children's academic achievement. There are many ways in which fathers can have a positive impact on children's academic abilities, including fostering their intellectual and language development, attending school functions, making time for and helping children do homework, expressing interest in children's homework, reading to young children, and so forth. An increasing number of studies reveal that fathers have a significant influence on their children's intellectual development. Some of the work that we have done with Phil Beaumont suggests that fathers' participation in literate activities enhances their faith. A father's own illiteracy and perceptions of the role he can play in his child's literacy development may affect whether and how well children are prepared for school.

Such factors also may influence the direct and subtle messages that fathers convey to their children about the value, achievability, and power associated not only with literacy, but also with schooling and knowledge. Even when fathers have limited school involvement, their involvement in children's schools and school life is still a powerful predictor of children's academic achievement. Lastly, more research has been done on poor African American fathers than all other fathers in the past few years. However, less research has been done on Latino fathers and fathers of other ethnic backgrounds, so we still have a limited body of knowledge for those populations.

Nigel Anderson uses a framework that is both excellent and problematic, but he identifies the work of fathers within three domains: the street, the home, and the system. Although we question some of the explanatory stances of Anderson's model, we believe that urban spaces are somewhat analogous to simpler societies that maintain separation between women's and men's roles, and within these urban spaces, the issue of education and schooling are particularly tenuous.

Every now and then, as Presidents come and go, we remember that literacy is important. Literacy is seen as developing specific competencies. Early literacy skills involve extracting meaning from printed samples and decoding printed words. There are several dimensions of this, much of which has been discussed in various national reports including the National Research Council's reports *Eager to Learn, Neurons to Neighborhoods*, and *Preventing Early Reading Failure*.

One dimension is awareness of literature, that is, showing interest in stories. Another dimension is print awareness, that is, awareness that print does not go away and that stories are accessible over time. For instance, there is an informal assessment that reading specialists often use in school. It is called retelling, and it is a fantastic way to understand what children actually remember and understand. Alphabetic knowledge, story sense, and awareness of the sequence of the story are critical, in addition to early writing skills, which is not talked about quite as much as reading.

I also want to mention that we are doing work with John Fantuzzo, Paul McDermott, Doug Frye, and the array of wonderful students and former students who are now colleagues. We are including literacy in that framework because we think it needs to be an expansive framework that is not limited to reading and writing alone. Literacy should not be synonymous with reading. We need to understand how all these cognitive skills come to bear.

There are other dimensions in literacy. Literacy is often considered an interactive process in which there are verbal language and literacy skills developed during the preschool period as children increasingly interact with others. Some people will call it the social process. We believe that literacy is a social process and a cognitive process. Cognitive and social are not exclusive; they are intersecting. Literacy is intertwined with children's social and emotional well-being, and literacy is relied upon in the development of the theories and learning behaviors. Literacy is occurring and being used in a range of contexts and being taught by a range of people in the young child's life.

Regarding the relationship to effective early childhood, an important part would be a focus on oral language, which is the part that is often minimized in the programs. It not only concerns what happens at home, but also what happens within the workplace. The second is phonemic awareness, both reading and inclusion of families, and a focus on the cultural and social contexts for learning outside of Head Start.

We have found that families create ways of "doing life." These frames of reference allow them to work through issues and help inform the degree to which these frameworks have allowed education to be positive experiences, and even the degree to which families and fathers, more specifically, are engaged. There are several areas of convergence for child well-being and success.

During the school years, high levels of parental and maternal nurturing, sensitivity, reasoning, and control are associated with proper social and academic functioning. This is slightly controversial, but it is very important because we find this repeatedly in our Head Start work. Over time, low-income families of children at risk of school failure often become distrustful of schools and educational programs' abilities to protect and engage them and their children. Head Start can interrupt this and help to eliminate such distrust, and that is much more pronounced, as my experience has been, with fathers who have had bad experiences in school, particularly African American and Latino fathers with low incomes.

Some of the general considerations we should think about are first methodological. We have the family involvement questionnaire which looked at the multidimensionality of parental engagement, so part of what we are beginning to do is look more specifically at father engagement within that multidimensional framework. In a study of 5,000-6,000 parents in Philadelphia, Fantuzzo found that parents' predictions of children's performance in Head Start were highly correlated with children's actual performance. One empirical study that focused on fathers and literacy found that both mothers and fathers overestimated children's literacy performance. While some parents had the better sense of how their children will come to be socialized within Head Start, in fact, we know far less about children's literacy performance. When we think more particularly about fathers with low incomes, we need to think about how they construct involvement and how literacy folds into that.

I would like to read a list of commentaries. These come from our own studies as well as those by Aisha Ray of the Erikson Institute and Sydney Hans at the University of Chicago. These are commentaries from fathers who were asked specifically about what is important to them:

1. I am committed. I realize what it is like to be grown and responsible.
2. You have to make sure your child eats. He can go to bed hungry, but he'll eat.
3. It made me more responsible for my children and myself. I am usually at home with them. I cannot hang out. I help them get ready for school. I take them to school, too.
4. Be there to support them financially and give them a hand. Somebody else may try to teach them something different. He should be responsible, secure, and understanding.
5. Make the children feel secure in love and financially.
6. Do different activities with children. Take care of them, feed them, clothe them, help them with school, come home with surprises, and take them places. They need to get out.
7. Teach them about school, their ABCs. Spend a lot of time playing with them when they have a problem.

Here is my point. More than half of these commentaries, and these were the ones that were the most frequently cited, basically ignored teaching children literacy. This is not because the fathers find that it is unimportant, but because of their own issues and inadequacies around literacy.

What can fathers specifically do? They can engage children in what they need to study. Fathers engage children through language and oral communication by having a systematic approach to helping them. Talk first about the importance, even when they are not speaking Standard English. The point is to engage them in the back and forth of conversation, and if they speak a nonstandard dialect, so be it. It is the cognitive process that we are concerned with right now. Help them with more specific knowledge about children who are sounding out words, and teach them different approaches, specifically about helping children learn about the alphabet.

Give fathers a sense of the books that are engaging and the ways to read books. One assumes that middle-class parents actually do know how to do this. What one finds among fathers and mothers with low incomes is that both parents, when they have made a commitment to helping those children develop their literate abilities, in fact know to let the child see the whole page. There are some simple approaches to thinking about that. Engage children in practical tasks of literacy, like mapping out ways for children to do chores, and facilitate the relationship with school by teaching parents how to develop important relationships. Improvise with these approaches so that they can utilize curricula that focus on father-child activities without gender stereotyping. Be sensitive to diversity, and help fathers to identify the strengths of themselves and their children.

Lastly, there are research considerations. Where fathers have limited literacy themselves, how do we realistically engage them in children's early literacy? How can programs help fathers become effective evaluators of their children's progress in literacy? How might we build on historical relationships that fathers have with children? If play is such a breeze and all fathers do it, how can we integrate literacy into those activities and make it more of an experience? How do Head Start programs look at what is provided by nontraditional fathers, such as nonresidential or noncustodial fathers? In such cases, is there a role for fathers? What is Head Start's role in a different kind of transition? Is it helping schools prepare for father involvement? Is it also working to create a nexus with programs that are specifically designed for fathers?

Currently, work in areas such as family literacy should be integrated with federal and state funded programs. As research in the field emerges, how do we begin to uncouple the role of fathers as similar to, yet different from, the role of mothers? How do we build upon the shared goals of fathers as parents? How do fathers contribute to the environmental and social development of early literacy and serve as protective factors to allow children to learn literacy? How do we understand, utilize, and build upon this knowledge?

Natasha Cabrera: The presentations were insightful and provocative. I appreciated hearing about new work that is coming out in one of my favorite areas of research. I want to tell a father-son story before we go on, because it highlights some of the aspects that were discussed. The

other day, my son said to my husband, "I'm very lucky I'm not a male ant." I was eating breakfast and thought to myself, "I am happy you are not a male ant, too. It would have been very difficult to give birth to a male ant!" He continued, "Male ants die when they mate and they do not get a chance to be daddies. When I grow up, I want to be a daddy." It is a cute story, and it illustrates that children pay attention.

Before I begin, let me disclose some of my biases. I work at NICHD, and I have a mixed policy and research identity, so some of the policy/research biases may come through. My real intention is to use the papers here today to make some general comments about what father involvement is and whether there are universals of involvement. Then I will talk about why it matters. How is it linked to child outcomes? I will also talk briefly about men. What does involvement do for them?

What is father involvement? Is it universal for fathering? One of the issues that is important to consider when measuring something that is good for children is cultural sensitivity and ethnic awareness. How does one know what one is looking for? If a man from a different culture says hitting his child is okay and says he loves him, do we condone that? Is that part of our framework of thinking about father involvement? As we heard today, father involvement is a multifaceted term. It has multiple meanings for many people, given cultural and ethnic diversity. It has different meanings for different men.

However, there are tradeoffs. Parents cannot be all things to their children. Fathers with low incomes probably have different tradeoffs to make than middle-class fathers. There is much variation in resident versus nonresident fathers, old fathers versus young fathers, especially taking into account the context in which they live and the children they have. Sometimes, children and fathers are matched a little better than others. Fathers engage with the children at other levels. We have heard that they can make an impact cognitively, socially, physically, and always in the literacy area. We have different disciplines to conceptualize father involvement. We do not have a model that integrates all these perspectives.

Tamis-LeMonda talked about the many ways in which we can involve fathers, looking at the issue from different disciplinary angles. For example, if one is a nonresident father, the most important contribution is child support dollars, but other fields are telling us that money is only the beginning of a solution. We actually need the fathers to be involved with the children.

Although we understand that fathers have these multiple roles, we do not know how it plays out in the family, especially from a research perspective. What do we not know? Although we have several models of father involvement—for example, Lamb and his colleagues provide one of them—we do not know how they work and for whom. This model, in particular, was designed for a different audience from the one with whom we are now working, but in an absence of an understanding of what it is that we are looking for, we rely on what we have. Lamb's model of engagement, responsibility, and availability says little about the quality of that engagement, so that we can have positive or negative engagement, responsibility or irresponsibility, availability or unavailability. We need qualitative videotaped data to take a look at how the quality of this construct is playing out. In some ways, father involvement is being conceptualized in a nondynamic, inert way.

How does the child affect the type of father one is? Some children are more difficult than others. Some children cry more than others. Some children are easygoing. How does that have an impact on what the father does or does not do? After being sprayed a couple of times in a diapering situation, some fathers might say, "You do that, and I'll do something else." It does not mean that he does not love this child. It just means that the interaction with the child is context-specific, and we have not captured that in our research.

How does the mother affect the type of father one is? She might say, "Do not change the diapers, I can do that. Do not feed him, you might kill him." Much of the competence that we gain as mothers comes from winging it, but we pretend we are good at it. Mothers tell fathers, "You're not very good at it. Stay away, you can't do this." As a result, fathers feel less competent. How do mothers contribute to the type of parent that the fathers can be? How does context

determine father involvement? This is particularly relevant in school settings, where fathers and mothers are treated differently.

One can see this in the health care arena as well. When my son or daughter had a doctor's appointment, the doctor's office would usually call me to check to make sure that the children would get to the appointment. There is an institutional bias regarding how we treat mother and fathers. Having said all this, do we need a new model of father involvement that can accommodate the child, the mother, and the context? Are the models we have, that are basically coming from a different population, suited for families with low incomes? Can we modify them? That is one of the issues that we need to deal with before we make sense of what we are finding.

I obviously do not have the answers to these questions, but I have some ideas of where to look. One of those might be qualitative data. Listening to the fathers speak, we get a different picture of what they do, what they can do, and the barriers to their involvement. We need those qualitative data to generate hypotheses. Some researchers are beginning to hear in the men's voices what it is like to be a father from that side of the fence, without our own maternal lens.

We also need a theory and a model. We do not have a theory regarding what to collect, so when we go out in the field, we collect everything we can think of just in case it makes a difference. We find correlations to many things, but we do not have a map. With more qualitative data, we might be able to learn about the quality of an interaction between a nonresident father who has a child for 2 hours every Saturday, versus a social father who is trying to get together with the mother and become a unit. We need that qualitative information to get a sense of how a child is relating to these adults.

Children's language can also be attached to context. For a father who does not have much time with his child, is he going to miss some of the contextual reference? I am always intrigued when I listen to a child interact with a father. I was on the bus the other day and this 2-year-old was talking gibberish. I did not understand. The mother seemed to know everything he was saying. Oh, that was a green monster we read about yesterday. The father said, "Tell me—what is he saying?" The mother knew. She was there when the story was read. She knew the red monster and the green monster. The father was clueless. I knew his pain because I did not understand what the child was saying.

Therefore, the quantity of time the child spends with the father is also important. How does that affect the type of involvement the fathers have with their children? Qualitative data can also help us to understand how couples make decisions regarding children, money, and so forth. Who picks up the child today? Who changes diapers? Who takes the child to the doctor? Who goes to the PTA? When we measure things one at a time, we assume that if the father is not at a PTA meeting, he is not making the doctor's appointment. He is going to score low on the responsible construct. We need to understand how couples decide how to manage work, life, and children. It may be unfair, but we do not have a sense of what it looks like from that perspective. Before we start counting the number of things that fathers and mothers do for the children, we need to understand how they divvy up their work. It may be different in nonresidential families or residential families. Qualitative research can give us insights into these issues.

Another aspect of father involvement that we should consider is how the outside world—institutions, schools, work, hospitals—determines the ways in which fathers get involved. One needs flexible work hours if one normally leaves work at 6 o'clock and one's child care center closes at 5:30. Fathers out in the work force have told me informally that they do not get as many breaks as women. Women can say, "I am picking up my child," and they get excused, but fathers are immediately placed in the "daddy track." The assumption is that a father cannot be serious about work if he is leaving at 5 o'clock to pick up his child. There is some work written on this, especially in the corporate sector. Men cannot afford to be considered being on the "daddy track." As I said earlier, a school's policies can also hinder or promote parental involvement. Usually for parent-teacher conferences, meetings, or other school events, it is fine if only the mother shows up, making it seem as though the father is dispensable.

How do children view father involvement? We need more qualitative data to understand what they think when the father lives in Nicaragua and the child lives in the United States—he still gets to love his father, and he knows that his father is sending money. How do these children love their fathers when these fathers are not scoring well in the father involvement measures? How do a father and child negotiate a constructive relationship? How do these fathers forgive a child? How do they respect each other? All these ways of understanding father involvement are linked to measurement, data, and method.

Why does father involvement matter? How is it linked to child outcomes? Is it something about being a man, being a father? Can we replace this person? This is usually the million-dollar question for research and for policy. We are measuring many things, but we do not have a theoretical understanding of how these things are linked to child outcomes. When one looks at economic theory and child support dollars, the children of men who pay child support on a consistent basis have access to resources and are doing okay.

However, when one is looking further at those correlations, one finds that they do not explain everything. In fact, when one takes into account the father and the mother relationship, everything is better. If one looks at some of the legal research, courts have been considering joint custody in certain cases as well as family therapy to help the two parents coparent after their relationship has dissolved. The idea is that if the conflict is low, even divorce can be happy.

Further, we do not know how father involvement works. I need to emphasize that because we have much information from different fields—domestic abuse and child neglect—that there are some parents who do not do well by their children. Positive father involvement has consistent links to social competence, self-regulation, language, cognition, and emotional connection. What we do not understand is how that works. What is the mechanism? What role does a child play in this relationship? How does one make changing diapers or hugging a child a cognitive experience? We have a very dynamic model that can help us understand.

I will not say much about literacy. One cannot argue with literacy; reading is important. I would like to mention the work of Paulo Freire, a Brazilian educator, who talked about his function in literacy. In Brazil, he was on a quest to make sure that all the peasants learned how to read. At the end of 10-15 years, peasants were functionally literate. However, they were still socially and economically marginalized. My point is that in addition to focusing on reading, we also need to focus on text, comprehension, interpretation, and critical reading. How do we accomplish that? Include the adults in the family—the literacy of adults is important. If one is not looking for books, like all the methods that Gadsden suggested, one is not going to be exposed to important, complicated, challenging print.

The multidisciplinary approach is important. We still do not know how it fits. For example, look at evolutionary psychology. Men usually invest in their offspring. If one takes that theoretical stance, we can say that the social father cannot invest in other people's children, yet we have examples in our society where fathers adopt children and become great stepfathers. How does that happen? We need to challenge this vertical assumption. In Botswana and other cultures, men invest only in their biologically related kin. In this country, the social father is common. Different theories can help us to understand what a social father is.

What about men's development? Most mothers will tell you what it is like to be a mother. It is the most amazing experience in the world. It is exhausting, exhilarating, joyful, and scary. A mother feels competent one day and the next day she thinks she cannot take care of a plant. How is this process for men? What is it like for men to father when they do not have this 9 months of metamorphosis, when we are sort of keeping them away from the child? How is the process of becoming a father for a man? What does it mean to a man to have responsibility for a child? How does that process happen psychologically and physically?

We have some ideas, and qualitative data are telling us that some men want to take fewer risks when they become a father. They do not want to die right away. They want to stick around for their child. We heard some of the men saying, "If I want to see my kid, the only way is to

bring money to my child's mother. I do not have any problem selling drugs. I will do it just so I can have the money to pay. I want to be a good dad. I want to see my kid." What is that process? How do men resolve these issues? Some people have written about procreation and how it is tied to this evolutionary psychology idea. We do not know how the process of becoming a father is related to being a father.

Sherrod: I have never done research on fathers, but I have always been interested in fatherhood because I am a father, and my daughter is almost an adult now. One major source of compatibility my wife and I have with each other—one reason we stuck together for 25 years—is that we have relatively reversed gender roles. She likes sports and cars, and I like cooking and decorating. I was very involved in my daughter's upbringing, in part because I am trained in child development, so I knew what to do. I was not nervous, and I just liked doing it. Nonetheless, our daughter still comes to my wife for motherly things relating to nurturing and so on, and to me for fatherly things relating to practical advice. Somehow, despite our reversed gender roles, despite my heavy parental involvement, she still sees two roles of father and mother. There is something real there that these people are on to that is interesting and important.

Bob Bradley: What are the things that fathers do that are necessary but not sufficient for child outcomes, and what do they do that is sufficient, but not necessary? What have you found in your research that would enable us to better understand how fathers have an impact on children?

Cabrera: It used to be that if one paid, one stayed. If one paid, that was necessary, and in some cases sufficient. We have gone beyond that to say fathers are needed around for other things.

Tamis-LeMonda: That is the million-dollar question, and obviously none of us here has the answer. However, it is even more complicated, as one could imagine, when we think of development. Are we talking about what are necessary or sufficient aspects in infancy or during periods of emergent language? What about in adolescence? What about in adulthood? As adults, we talk rarely about the role of our fathers, so that becomes incredibly dynamic, because the answers to that vary by the age period as well as by the domains. If we are talking about language, fathers sharing language experiences with children might be necessary or not. It might be enough that there are other sensitive caregivers talking and reading to children. I would not think that their language development would be thwarted because fathers are not there talking. Some have argued that fathers are particularly necessary for emotional regulation for boys, and others do not agree. It is age-based, domain-based, and incredibly complex.

Cabrera: At NIH, we put out a new file on how to understand this sandwich generation when children or parents make investments early on for their own children. Then the parents get old—who is going to take care of these parents? In terms of resources and time, it is an amazing thing. How do we allocate resources later on as children become adults to our own parents?

Gadsden: Much of our work around caregiving has been general—what it means and whether it makes any contribution. It seems to me that we need to look at the different periods. Some have attempted to do that, and the presentations here are an example of looking at these stages of life and the nature of involvement. When one looks at those age stages, one gets a sense of what that might be, but I am not sure that we are clear about what we actually want. We talk in general terms about child outcomes, even those of us, including myself, who should know better.

What do we want? What are the socioemotional effects that we want to be able to see? What are the school outcomes that we want to see? What are the literacy needs and what are the approaches that we can use? In the literacy field, we have not done a good job of addressing

those issues, even in relation to mothers and other family members. It is also hard for us to disentangle what fathers, mothers, and other family members bring. It is something that we can look at, requiring a multimethod approach, one in which we have opportunities to map qualitative data against quantitative data.

Pamela Raya-Carlton: How do you test for variance between mother and father?

Cabrera: One needs good data, asking the same question of fathers and mothers. We were eager to start this father research. It is a learning field. We do not have the same wording for mothers and fathers, so it is a nightmare to even compare the two. We spent hours and hours thinking. We are not asking the same thing. Fathers and mothers respond differently. However, that is a good point if we had the data, but we do not.

We have been working with Lamb on how parents diverge and converge. When one looks at most studies of middle-class research, one sees that middle-class families generally agree, and the father will agree with whatever the mother says, and everybody is happy. However, families with low incomes have more disorganized unions, and the arrangements are more chaotic. There is much disagreement about everything.

Tamis-LeMonda: That is a great point. I would like to add two more points. One is the divergence/convergence issue. We asked what we thought were the most fundamental questions. Are you a resident? Do you live with your child or not? We asked that of mothers and fathers. At our site, we have fathers who say yes, I live with my child, I am a resident father. The mother says he is not or vice versa. When one moves beyond that to asking whether reading is going on, and so forth, the concordance is an important question and incredibly complicated. We were shocked to find out that partners do not even agree on if they are living together. What does that mean for when we are modeling residency versus nonresidency? Who do we use as the determining person when we run those analyses?

A second point is that we also have to be careful about imposing maternal templates or ways of thinking about what mothers do as a framework to begin thinking about that subject. We need to make sure that we do not leave out unique aspects—that having a priority framework might circumvent broader, flexible thinking about fathers.

Gadsden: I would like to share one point. This was mentioned in a talk several years ago, illustrating the idea that one does not ever get the same reports from two groups of people. A divorced father was asked, "Do you feel as though you have as much access and enjoy as much time with your children now as you did before you divorced?" The father said, "I miss them so much. It is just so painful. I never get to see them anymore. I had so many opportunities before, while I was still married." The children were asked and they said, "We have never seen him so often." The reason that they thought that is that the quality of their interaction is different. While he was physically in the house before, he was not interacting with the children on a daily basis.

My point is that there are these nuances and complex, intricate issues that are hard to disentangle. This is where the anthropological work might come in. The construction of masculinity and womanhood in Western society is complex. The image that society has of fathers as men is one that says they do certain things, and so it argues for thinking about these different approaches to understanding the issues. That issue is noteworthy and worth considering, as is thinking about the inherent complexities. My early work was just on mothers, and the reason I became interested in fathers was that I realized that even when they were not there, they were there.

Julia Mendez: I wanted to remind us that the men, particularly minority men, who are visible, who are involved fathers, are taking a tremendous risk to be in that place because of the lack of support. One of the outstanding things that Head Start could do is to bring together men who are not involved and show them that there are others acting on behalf of their children, because they feel so isolated, more so than mothers.

The challenge I wanted to pose is: Do you think as language researchers one of the easiest concepts to teach in undergraduate developmental courses is the notion of a critical period for language acquisition? Do you think that there is any utility to using the concept of critical period in the development of the father-child relationship, particularly for men? One sees the pain in older children who lack that understanding of who their father is. Why do they not have a relationship with their father? Is there some link? It strikes me that because you are doing such amazing language work and also fathering work, that could be a converging theme.

Tamis-LeMonda: I believe the attachment researchers would say that certainly those formative times are important. I want to distinguish the term "critical period" from the term "sensitive period." It is a very important distinction. Critical period would suggest that if something does not occur during that period, a person is forever doomed. It is a sensitive period of heightened saliency, when early formative skills and relationships are being founded. However, sensitive leaves open a potential for other points in time to also be meaningful or to modify or alter those earlier foundations. Thus I would be a proponent of a sensitive period while others would have more of a life course or life span approach; but certainly attachment theorists would suggest sensitive periods.

Gadsden: I agree with a sensitive period, and in talking to the fathers, they articulate the importance of the early years in terms of their participation. They understand the importance of getting children engaged in literacy activities early on. They watch television and hear things from other sources, and they know some about the importance of literacy. Then they try to reconcile what they actually are able to do and their ability to gain access and make a difference. However, I would also say that schools in many environments take on a critical period stance. There is a statement of the difficulty of teaching literacy past grade five or so and getting children to read if they have not, in spite of the fact that we have programs for adolescents and for adults. The expectations are relatively low for that.

While we are talking to these fathers, it is also a matter of thinking about the policy, systemic, and systematic issues of reconfiguring the ways in which institutions that are supposed to be providing services rethink the opportunities to engage them. If educational institutions cared about children and parents, they would take into consideration that these fathers, often with low incomes, often do not have the educational preparation to be able to support their children. Therefore, they pull back from opportunities to engage positively with them.

Fathers and Early Head Start: Methodological Issues in Research and Implications for Program Involvement

CHAIR: Hiram E. Fitzgerald
DISCUSSANT: Helen H. Raikes
PRESENTERS: Robert H. Bradley, Jean Ann Summers, Lorraine M. McKelvey, Lori A. Roggman

Hiram E. Fitzgerald: Although the study of fathers has increased steadily over the past three decades, researchers have rarely generated unique methodologies or theories to guide this work. Generally, theories of parenting are conceptually limited to providing explanations related to mothering. Similarities and differences in mothering and fathering have yet to be adequately explored, but as the 21st century opens, it is clear that researchers are dissatisfied with the mother-child relationship as the normative standard for the parent-child relationship.

There may be similarities in father-infant and mother-infant relationships that are guided more by infant actions than those of the parent. For example, either mother or father can meet the need for a diaper change, however, the nature of the interaction between parent and infant may differ, depending on the person who is changing the diaper. The same can be said of playful interactions between parents and toddlers. The toddler may initiate a playful interaction and receive different responses from whichever parent is the target of their playful behavior.

Similarities and differences between mother-child and father-child interaction are only part of the story. Four fundamental challenges confront investigators who wish to study the impact of fathers on infant and toddler development: (a) engagement (identifying and contacting the individual who fulfills the father role for a particular child), (b) involvement (convincing the father to participate in the research), (c) understanding (examination of one's biases about men as fathers and partners, and examination of the literature underlying theory and measurement), and (d) sustainment (maintaining the father's presence over the course of the research project).

The following papers explore aspects of these challenges and highlight parallel challenges for Early Head Start (EHS) programs. Thus, at the program level, the challenges are the same, that is, programs must address the issues of engagement, involvement, understanding, and sustainment.

Robert Bradley draws attention to historical approaches to the study of parenting and notes issues related to these challenges. His paper examines instruments used to assess fathers, including at the item level for particular tools. Jean Ann Summers follows this by discussing qualitative interviews with fathers, noting that if we allow fathers to tell their stories it may affect their relationships with programs like Early Head Start. Lorraine McKelvey focuses on father characteristics, assessing the similarities and differences between residential and non-residential fathers, and biological and social fathers. She also asks how functional fathers change over time and what impacts such changes can have on child development. Lori Roggman looks at differences in how fathers and mothers interact with their toddlers asking questions such as: Do parent-toddler interactions contribute uniquely to toddler behavior and development? Are some types of interaction more likely to help engage, involve, and sustain father involvement? Finally, Helen Raikes, the discussant, picks up the challenges described in these papers from a practitioner's point of view.

The Importance of Measuring Fathers From a Male Perspective

Robert H. Bradley

As we move into the 21st Century, there is renewed interest in understanding the role that fathers play in the lives of children. A key difficulty researchers face is that much of the literature is framed by a conception of caregiving built around maternal parenting, or what is called the maternal template.

In our study of Head Start fathers, we have grappled with how to measure key attitudes, behaviors, and beliefs in men. For many of the constructs we wished to assess there were measures developed for mothers, but not for fathers. As a matter of practicality, we looked at possible start-points. Every measure carries assumptions about the experiences, dispositions, and competencies of the person being measured. Therefore, we asked "Are most fathers likely to meet the assumptions for the measure?" Frequently the answer was "No!" The content was wrong, the set was wrong, or the response choices did not fit. For example, if fathers do not commonly perform certain caregiving activities, having response choices such as "almost always" or "daily," though strictly accurate, may result in inadequate (or unrealistic) involvement, perhaps leading to invalid responses. For most of the attitudinal measures chosen, we either modified or deleted items, changed the set-up somewhat, or altered the response choices. Partly as a hedge against accidental over-reliance on measures currently available, a series of open-ended questions were included. These questions were designed to allow men to define their perceptions about being a father in their own words.

In an era in which families are often formed without fathers and family dissolution is common, men find themselves in diverse fathering roles: non-resident biological father, step father, and traditional residential biological father are a few of these roles. Different roles, responsibilities, and demands may mean that two fathers think, feel, and act differently, while being equally committed to the well being of their children. Thus, the challenge is to measure the same, or at least similar, constructs in men who play very different fathering roles.

One might ask if "sensitive fathering" is reflected in the same behaviors for both resident and nonresident biological fathers, or if sensitivity in non-resident fathers includes more attention to indirect and supportive behaviors, and more consideration of the on-again/off-again nature of contact between father and child. For some parenting constructs, there are a small number of typical behaviors that adequately reflect maternal parenting. A much more extensive array of indicators may well be needed, since behaviors typical for mothers are not always typical for fathers. In order to discern men's different parenting roles, we asked about their involvement in a broad array of different activities.

Finally, we attempted to structure a data collection experience that suited the general dispositions and proclivities of men. Men tend to be less tolerant than women of activities they do not consider relevant or legitimate and are also less likely to engage in activities that are repetitious. Sensitive to response burden and inconvenience, we limited the number of measures used, and were flexible in the times and places where data were gathered. In addition, we allowed fathers ample opportunity to tell their own story in their own way, rather than completing numerous paper-and-pencil measures. We also arranged for fathers to provide data apart from the child's mother, on the grounds that the other parent's presence might constrain the fathers' responses. These efforts to meet men on their own terms have been successful, resulting in an experience that most men found acceptable, and many even found pleasant.

■ Methodological Issues in Qualitative Research With Low-Income Fathers: Switching to the Paternal Lens

Jean Ann Summers, Gina Barclay-McLaughlin

Although Head Start has been a pioneer in promoting parental involvement with children and with the program itself, the historic emphasis has been on women. Changing policies and evolving roles of men and women have led to increased efforts to encourage father involvement in Head Start services. For the same reasons, researchers have begun to look more at the roles of fathers. The embedded qualitative study, within the larger Early Head Start Research Consortium effort, is intended to learn more about the meanings and perspectives of fathers in order to understand the barriers and facilitating factors related to father engagement. The challenge was to design study questions and choose data collection methods that departed from mother-oriented investigative frameworks. Understanding how to shift from this perspective to a father-friendly lens is a critical aspect of learning how to meet the needs of fathers more effectively. We learned that successfully engaging fathers was not as simple as using male interviewers.

One framework for understanding how men interpret questions and, therefore, how we might engage them and understand their answers comes from the work of Deborah Tannen (1990; 1994). Tannen proposes that men use communication primarily to establish their credentials and convey facts, while women use communication primarily to establish connections. Viewed in this light, the very relationship between interviewer and respondent creates a "one-down" threat for men who are being interviewed. Our approach to interviewing needed to be organized around establishing the respondent's sense of equality in the relationship between himself and the interviewer. Tannen also suggests that men may make connections more by action and presence than by words.

This may explain fathers' emphasis on "being there" for a child, and acting as the child's role model. Also, Tannen's research suggests that men may not view a circumstance that they cannot fix as a problem, whereas women tend to talk about these circumstances as a way of making connections. Thus, when asked to identify barriers to parenting, some men may find the question threatening or meaningless if the barriers cannot be changed. These and other attempts to change the lens of our perspective on men's responses to qualitative interviews were discussed.

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■ Residential Status of Biological and Social Fathers: Impact on Father-Toddler Interaction

Lorraine M. McKelvey, Rachel F. Schiffman, Hiram E. Fitzgerald

Researchers studying the father's impact on child development must determine who takes the father role for a particular child. This determination is often dictated by the child's mother, who may control access to fathers, particularly the child's putative biological father (Fitzgerald, Mann, & Barratt, 1999). Furthermore, relatively little research attention has been given to the ecological factors that impact the father's connectedness to his family and his direct interactions with his children (Roggman, Fitzgerald, Bradley & Raikes, 2002).

The purpose of the current study is to address questions about biological and social fathers' interactions with their toddlers. The sample consisted of 121 fathers who participated in an

ongoing longitudinal research study of Early Head Start. The source of data for parent-child interaction is an observed teaching episode, the Nursing Child Assessment Satellite Teaching Scale (NCAST). The NCAST is a 73-item binary scale created to measure parent-child interactions and consists of four, parent behavior-related subscales, two infant behavior subscales, and the total scores.

Results taken from NCAST data collected at the child's second and third birthday indicated a general increase in the interaction scores of men and toddlers. Further analyses were conducted, using a subsample (n = 55) of men for whom data were collected at both time points, to determine the effects of fathers' residency status on father-child interaction. These results suggest that resident social fathers' (n = 8) behaviors improve significantly across time, specifically in responding to distress signals from the toddler and fostering their child's cognitive growth. The change in behaviors of resident biological fathers (n = 34) is irregular across scales, demonstrating increases in behaviors that foster cognitive development and decreases in response to toddler distress cues. Furthermore, the interaction behaviors of non-resident biological fathers (n = 13) appear quite consistent and demonstrate stability across the year from 24 to 36 months. Results from the child subscales demonstrated that children significantly improve over time in the clarity of their cues and their responsiveness when interacting with resident biological fathers. There was a trend toward an increase in toddlers' responsiveness to their non-resident fathers as well. There were, however, no significant changes in the child's behaviors when observed with resident social fathers. These results indicate that the interaction behaviors of men and their toddlers change in complex ways in relation to residency and father type. These differences in behaviors may be the product of the amount of involvement and investment in the family and are demonstrative of the more intricate relationships within the family.

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Observational Data on Father Play With Infants: Challenging to Get but Valuable to Have

Lori A. Roggman, Lisa K. Boyce, Gina A. Cook, Andrea D. Hart

Fathers are often recognized as infants' playmates (Lamb, 1997), spending more time playing than caregiving (MacDonald & Parke, 1986) and playing with infants in different ways than mothers (Parke, 1996). Fathers' play may offer unique and valuable contributions to infant development (Grossmann, Grossmann, & Zimmerman, 1999).

To include fathers in our Early Head Start (EHS) research, we faced challenges in identifying, contacting, scheduling, and setting up observations with them (Roggman, Fitzgerald, Bradley, & Raikes, 2002). Coding and interpreting the observations was also challenging because the behavioral definitions used for observing mothers did not always fit the behaviors observed in fathers (Tamis-LeMonda, Roggman, Bradley, & Summers, 1999). In spite of these challenges, we were able to videotape and code father-infant play sessions for 94 of our research families at 14 months, 80 at 24 months, and 69 at 36 months.

In our casual observations, fathers did many things similarly to mothers: They read books, played with toys, and showed affection to their children, but they did these things more physi-

cally, with more teasing and less talking. Observer ratings of mother and father response behaviors during play were coded for the local study at 14 months (% agreement > .90, Kappa > 0.75) and for the national study (Mathematica Policy Research) at 24 and 36 months. Mother and father sensitivity, positive regard, engagement, intrusiveness, and cognitive stimulation were positively correlated at 24 months, and their engagement and cognitive stimulation were positively correlated at 36 months. Fathers showed more negative response than mothers at 14 months, less positive response at 24 months, and less sensitivity at all three ages. The children showed more negativity toward fathers than mothers at both 24 and 36 months, and showed less sustained attention to the toys when playing with fathers at 24 months.

The cognitive level of children's play (Belsky & Most, 1981) was coded as an indication of the development of symbolic representation (% agreement > 0.90, Kappa > 0.75). Children playing with fathers (vs. mothers) showed a similar (and correlated) mean cognitive level of play at 14 months, a lower level at 24 months, but a higher level at 36 months, and more variability overall with fathers than with mothers. Our research suggests that this variability in complexity of play with fathers may influence development, because peak level of play with fathers (but not mothers) at 14 months predicted cognitive and language testing scores at 24 months (Bayley MDI total score and language factor score). Our results suggest a unique role of father-child play in supporting long-term pathways to future cognitive and language competence.

Research on fathers is challenging and sometimes frustrating. Nevertheless, the efforts made to obtain data from fathers in our EHS research has rewarded us with a clearer picture of the factors influencing early development. We still need to know what predicts variability in father-infant play behaviors and what supports their involvement in playing together.

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DISCUSSION

Helen H. Raikes: I reviewed the challenges presented by these papers, looking at them from the practitioner or program viewpoint. Many of the methodological challenges to studying fathers have parallels with involving fathers in programs. Programs have also sometimes relied on equating parents with mothers. Qualitative research aids in further understanding the motiva-

tions and aspirations of fathers in Early Head Start, which can be applied by incorporating fathers into program activities.

As research in this field has had "missing men," so too have some fathers been invisible to Early Head Start programs. As research seeks to generate unique methodologies or theories to study fathers, so too does the practitioner world seek to develop unique ways of programming for fathers. Some traditional ways of thinking about program theories need to be modified; it doesn't work to superimpose a mother-centric model onto father involvement.

A number of examples were identified in these papers. As researchers attempt to study parent-child interaction from the father-child perspective, practitioners need to rethink desirable outcomes and supports when it comes to father-child interaction. As researchers study the differences between biological and social fathers, so too are programs required to consider that, within the population of Early Head Start children, there are many types of fathers. The needs of these fathers must be considered for programs to successfully involve them.

As programs learn from the methodological challenges of research, research can also learn from the challenges and successes of programs. A study of father involvement in 261 Early Head Start programs revealed a number of challenges to father involvement, as well as strategies used by programs to help involve fathers. Two lessons from the program study are (a) that father involvement is a dynamic feature in programs and is likely to be so in the next decade, with implications for both programs and research; and (b) that father involvement has a very strong cultural component, the knowledge of which can only enrich programs and research in the future.

Promoting Family Relations

CHAIR: Gloria Johnson-Powell
DISCUSSANT: Natasha Cabrera
PRESENTERS: Lorraine Blackman, James Bray, Michelle DeKlyen for Sara McLanahan

■ The African American Marriage Enrichment Program: Empowering Family Leaders
Lorraine Blackman

■ Love, Marriage, and Parenting in Diverse Families: Influence on Young Children
James Bray

■ Strengthening Fragile Families
Sara McLanahan

Gloria Johnson-Powell: I am from the University of Wisconsin Medical School. Our presenters are Lorraine Blackman, James Bray, and Michelle DeKlyen.

Lorraine Blackman: I would like to begin out of my cultural tradition by first thanking my ancestors who bore the bullet of slavery so that I could be here and my parents in particular who put up with me so that I could be here as an adult. I would also like to thank giants like Gloria. I have read her work through the years and want to publicly thank her for paving the way for those of us who are following behind her.

I also want to express my thanks to Ralph Smith at the Casey Foundation, Theodora Ooms at the Center for Law and Social Policy, Dianne Sollee at Smart Marriages, and John Pride at the Administration for Children and Families. They have called me from the field to come and tell you about the work I have been doing to strengthen marriages in the African American community. I have been telling them I am not ready, but they said, "We need what you're doing and we need it now. We do not want to wait until the work is perfected. Please come and tell us about it now."

I am proud to have an opportunity to share my work with you. I have been talking with people from Head Start for about a year about this work and find that we have much in common. One of the things that we have in common is the goal of this conference: to improve services for children and their families. I come to this work after 30 years in the mental health and domestic violence fields as well as working at the Veterans Administration and being in private practice. Most of my clientele, until I made a concerted effort to find others, were middle-class and blue-collar people of European descent. However, when I went to church on Sundays, I found that people were wailing at the altar with the burdens of their lives, and yet were not coming for mental health services. I have, therefore, made a concerted effort in my clinical life to find my brothers and sisters and invite them into the clinical arena, because help is available. I have also tried to listen to them because all of my professional training has been in predominately European-oriented schools and out of European theoretical models. I made good grades in those schools and in those models, but I found that in listening to my people that I needed to do some things differently. Both my life as an African American woman and my practice as a clinician, therefore, inform my research now.

We need to improve services for various populations out of concern for where they are in their lives. I will talk briefly about that in a moment. This conference set up some interesting objectives. The first objective focuses on examining the developmental trajectory, because we are

concerned about the future success and well-being of children, not just about getting children through life on a daily basis. The parents who have informed my work are focused on day-to-day survival, regardless of social class. When I ask them about the dreams for their own futures or the dreams for their children's futures, their eyes glaze over. I am glad that this conference has asked us to look at children's futures, and think of them as people on the way to becoming adults. We will look at what it is going to take for them to become happy, healthy, successful, productive citizens, not just what is it going to take to keep them alive and out of traffic for the day. Our attention is drawn to family, community, and educational settings as a part of helping children prepare for their futures. It is not something that families can do alone and it is not something that educators can do without parents. This has to be a village effort. This makes me proud that I have been invited to a conference with this kind of focus.

Unfortunately, in the field of early childhood education, the importance of families is a late-coming part of the discussion. I want to point out for those of you born after 1960 that the conversation will sound a little different from the way that it sounds to those born before 1960. The cultural shift that has occurred over the last 40 years gives us different perspectives on the same world, so it can be difficult for us to talk. As an older person, it seems strange to me that educators of the last 20 years have assumed that they could rear children without family involvement or that family involvement is today being defined as parents coming to volunteer in the schools. I hear of educators who ignore the children whose parents cannot come and volunteer in the schools. If they would look at the research on this issue, parents do not have to be volunteering in the school for their children to succeed. They do have to instill in children a love of learning and a love for themselves, discipline, and make sure that they are well-fed, clothed for school, and have done their homework. That is what is important in terms of parent involvement. However, we have lost some things as we have shifted in the culture over the last 40 years. I am glad the importance of families is being brought back to the center of the discussion now.

Family diversity is also coming late to the discussion. We have generally wanted to see families as all the same. I have taken a lot of flack in the last 10 years since I have been doing this work on strengthening marriage in the African American community, as they say, playing the race card again. It has never been offensive to me as a Black clinician working with people of European descent to get into their cultural paradigms, understand the world from their perspective, and learn to use their language. I am from Tennessee so I can talk Southern when I have to. I am not offended when a White person says, "Hey, girl, how you doing?" because I have gotten accustomed to living within that paradigm. Some people of European descent find it offensive that I am asking them to understand the cultural perspective of African Americans. It should not be offensive. I want to understand you and you need to understand me and the people that we are working with or we are going to do them harm.

Now we are also focused on building strong family relationships. You may remember the good old days when mothers and fathers lived in the same house, either legally married or by common law. I only found in the last couple of years that common law marriage is now illegal in most states. That used to be a way of adding decency to what people were doing. They did not call it cohabiting. If a couple lived together for 7 years, had children together, and used the same surname, at the end of that 7 years, they had all the rights and privileges of marriage. That is no longer the case. We are now pointing fingers at people who have been doing something for a long time and have done it decently. Our children have no idea about how to have happy, healthy, strong marriages, because since the 1970s, we have watched divorce rates increase astronomically. We will talk about some of the reasons underlying that because until one understands the people and why they are the way they are, helping them is out of the question. As a scholar, I want to form the research by what we know about the people.

The work that I have done since 1987 as a doctoral student has come to be called the African American Family Life Education Program. There are two empirically based curricula that are

based in our culture and have sensitivity to issues of gender. Many of the models of marriage enrichment are wonderful models; however, the critique of them is that they have not been sensitive to the needs of women. It has been clear from studying the people that if we are going to develop a model that they can appreciate, it must be both ethnically and gender sensitive. It is also an empowerment-oriented model. When people ask me about playing the race card, I am not suggesting that African Americans come to understand who they are historically so that they can moan and groan about how awful life has been and how they can never overcome it. It is an empowerment-oriented model, so that once they understand who they are and why life is the way it is for them, there are some strategies for making life better.

Martin Luther King tells us that unless we are engaged in struggling for our own benefit we will be crazy. Even if one dies in the struggle, it is better to die struggling than to simply let the burdens of life fall upon one. I come to the work with an empowerment orientation out of the social work traditions that say we must teach people the knowledge, skills, attitudes, and values that they need so that they exercise more control over their lives. We have to open access to resources that they need so that they can control their lives. That is what empowerment means to me as I come to this work. It is also a family life education model so it is not therapy. We are excited about taking a public health orientation to issues that are relevant to families because it means that we want to start early. We want to begin educating people about marriage and parenting early in their relationships and in their children's lives so they are not waiting until they are at divorce's door or until they have already been involved with the legal system because of domestic violence.

Family life education is an entire field of practice. To learn more about it, look at the website of the National Council on Family Relations (NCFR). It is the accrediting body for family life educators, but one will get an orientation to the field of family life education. They have an annual conference.

The work that I have done has been designed for African American family leaders. The assumption has been that unless one prepares people for marriage, parenting, and citizenship, they will not know how to do it. There are no clear markers. There are no clear paths towards success in the United States anymore. When we were growing up, there were models at home and in the community. There were models on television that taught one how to become a successful parent, woman, man, adult, and so forth. Those models are not there so we are concerned about training future family leaders.

I have talked briefly about what it means to be ethnically and culturally sensitive. I want to underscore that I looked at the literature on what the troubles seemed to be in African American couples and why they were not able to pull together effectively to rear their children. One of the issues that came up repeatedly in men's as well as women's writings was the issue of fairness. Women felt that it was not fair, particularly African American women who have always been in the labor force in larger numbers than other groups of women. They did not feel that it was fair that they had to go to work and then come home and bear the larger portion of the burden at home, with child care and taking care of other relatives. All of that became women's work and they did not think that was fair.

African American women have not played a proportionately equal role in the women's movement because of issues of race within the movement. However, the issues have been just as salient for African American women as they have been for other women in terms of gender relations. As we moved together through the 1950s and 1960s on civil rights issues, the gender split became increasingly evident within African American families. The argument went something like this: If we are going to fight for justice for African Americans as a people, then we need justice in our relationships as well. Fair is fair. Again, Dr. King would tell us that injustice anywhere is a threat to justice everywhere. This gender issue, therefore, does involve a struggle.

There are some very powerful writers like Maulana Karenga who have said the problem with Black men and all the rage that they carry is that Black women will not get out of the way and let them be men. In one of his pieces, he wrote that if women would get out of the way and let men

be warriors we would have less rape, robbery, and pillaging in the community. It is hard to hear that. However, as I have tried to understand what this hostility is about—and there is a tremendous amount of hostility between African American men and women—I have to understand how men and women feel about issues and then be able to bring them together so that we talk about these subjects with civility and get past them. Social justice also informs this work.

Two curricula have come out of this research. The first is the "African American Marriage Enrichment Program—How to Make Your Good Thing Better." People seem to connect with the subtitle. Some of what they come to class with and call "good things" I would not call good things. But, it is a good thing to them and they want to preserve it. When they arrive, it is often with scores in the clinical range on the instruments that we use to look at levels of marital distress. They do not look very different on those instruments from people who used to come in for marital therapy. African Americans are much more likely to come for educational programs than they are for traditional therapeutic interventions. These are held in the community in a community center. Social work students who are learning to work with children provide child care. We have a caterer who knows how to make soul food and transportation is provided for those people who need it. It is an 8-week curriculum. They come and learn how to change the way they think, the way that they behave, their ideas of what a relationship is supposed to look like, and what the constraints are in the environment that prevent them from having the good things they dream of. It is capped with a commitment ceremony that is a wonderful, Afrocentric evening. They actually stand and read their vows to each other publicly. About one third of the couples have been not married. Some people find it offensive that we have invited unmarried couples to the table, but we will not ever get them back into the center of community life if we keep ostracizing them. These are often couples who already have children. We invite married and unmarried couples with or without children, who may or may not live together, and who may or may not attend church.

The second curriculum that one of our funders asked us to develop is a parent training program specifically for African Americans. I will not take time to talk about that now but know that there is a curriculum out there for African American parents as well.

We have to talk to the post-1960s people about what marriage is about and why we even need it anymore. When we look at traditional functions of marriages, we see companionship, raising children, a sustained love life, safety for women, help with housework, and financial security. The post-1960s people say, "I do not need marriage for that. I can have children by myself. I can have a companion who comes and goes. I can take karate classes. I do not need marriage for those things." However, we are finding that the kinds of relationships—the hooking up and the hanging out that we are finding among the post-1960s people—is not beneficial to them in their mental or physical health or their children's well-being. Once they learn what a good marriage is supposed to look like, the benefits are clearer to them. We found that some of the couples get married after completing the class. We do not pressure anybody to get married; we simply talk about what good relationships are and let them make decisions for themselves.

The men in the class are not willing to be pressured into getting married within that 8 weeks. The sisters come and they see that there is a commitment ceremony and they start thinking about a dress. The men are not going to be pressured in that way. They want to do it when they are ready to do it and they want to make sure that this is the right woman to do it with, although they have children together. The men who come to us often have children by more than one woman so this is a much more convoluted decision for them. They think, "Which woman do I want to make a commitment to? Is it anybody that I have children with or is it someone altogether different?" They do not know going into this what marriage is for, what a good one is supposed to look like, or how important it is for children's futures.

James Bray: I am a psychologist in the Department of Family and Community Medicine at Baylor College of Medicine where my primary job is to train family doctors about psychosocial

aspects of medicine. The work that I am going to talk to you about I have been doing for the last 15 years. It was supported by a number of grants from the federal government, two from the National Institute of Child Health and Human Development, and two from the National Institute of Alcoholism and Alcohol Abuse.

Some of the ideas that we thought were interesting 15-20 years ago are just commonplace now, so bear with me as I quickly go through some of those. At the end of my presentation, I would like to discuss some demographic trends that have been seen in the United States during the last 30 years. There are several that lead up to the divorce and remarriage phenomenon that we are seeing right now.

There is growing racial, ethnic, and cultural diversity. Household composition is changing. There has also been a big change in cohabitation rates. Marital rates, ages, and marriage duration have definitely changed. Divorce was on the rise—it is actually on the decline now. That leads to much more remarriage. There is also a decreasing number of children born outside of marriage. We know from the 2000 census that we have a change in the makeup of the United States population: The percentage of non-Hispanic Whites has decreased and we have a larger Latino and African American population. In particular, the Latino population has grown dramatically in our population. There are actually slightly more Latinos than African Americans now.

There is a growing foreign-born population. We have a greater share of Americans who speak a language other than English and who have no intention of making English their primary language. I am from Texas and one needs to be bilingual to function effectively in Texas because so many people speak only Spanish and have no intention of learning English. However, we have many other languages too. For example, in Houston we have a large Vietnamese population. In our community health clinics our signs are in English, Spanish, and Vietnamese, recognizing the diversity of our population.

We also know that there are fewer married couples, and more people are living alone than before. Oftentimes people are cohabiting, but we also know that people are just living by themselves more too. There are more unmarried-partner households today so people are increasingly having children outside of marriage. There are more multigenerational households, and much of this is due to immigration. Additionally, 2 million grandparents are caregivers for children. One of the big changes that we found in terms of marriage is that people are not marrying—they are living together rather than marrying, and that has increased in the last 20 years.

The data I am presenting are all about women because the government has determined that women are more reliable reporters than men are. For most people, cohabitation is not a permanent place; it is a weigh station rather than a destination. Only about half the people who cohabit end up getting married. People are in a number of relationships rather than getting married and staying married, which leads to the decline in the percentage of people who are getting married. Since 1950 we have had a fairly steady decline in the percentage of people who are getting married. These are the latest census data indicating the trend is continuing. We also know that people are postponing the age at which they are getting married. In 1970, the average age was about 22 for women and 24 for men; now the average ages are about 25 for women and 27 for men. People are postponing marriage for longer periods of time. What are they doing? They are cohabiting or they are living at home with their parents longer. When I was trained as a family therapist in the 1970s, there was a belief that there was something wrong with people who stayed at home, that they had a problem with individuation. We now know that that is not the case most of the time, and oftentimes people have to live at home for economic reasons.

The average length of marriage varies dramatically. Here there are many cohort differences. For example, my parents have been married 53 years, and in their generation that is common. In my generation, it is about 11 years on average for first marriages, 7–8 years for second marriages, and 5-6 years for third or more marriages. There are some ethnic differences. For example, White, African American, and Latino populations have a higher propensity toward divorce than Asian populations. Asian couples are more likely to stay married.

The divorce rate is basically mimicking the marriage rate. There is a general decline in the marriage rate. There is a decline in the divorce rate, particularly in the last few years. People are living together, but they are married—therefore they are "not getting divorced." One hears in the popular media that the divorce rate is about 50%. The most current estimates look like it is somewhere between 33–42%. There is varying discussion, but it is definitely not 50% anymore. I look at this a number of ways. One can take a slice of the American population since 1960 and not find more than 33% of the people divorced. What escalates the divorce statistics sometimes is the number of people who get married and divorced repeatedly.

Often other people are involved in the divorce. Hell hath no fury like the lawyer of a woman scorned. All of us need to be aware of the context in which divorce as well as marriage occurs, because there are other social systems involved. People are more likely to get divorced after a second marriage than a first marriage. The increase is about 10%. That is the best estimate that we have, although currently we do not have great estimates because the federal government stopped collecting this data about 5 years ago.

The only way to stop divorce is to stop marriage. Divorce has existed since before biblical times. We also know that people do not stay divorced; they tend to remarry. About 65-75% of women remarry and about 75-85% of men remarry, most within 3-5 years. In some cases, people do not get divorced. They just separate and then they begin a relationship with somebody else and that relationship looks like a remarriage. There is a higher percentage of African Americans that do that, and mainly that is because of the cost of divorce. However, they separate for long periods of time and then get involved in stable, cohabiting relationships that look relatively like a remarriage or a stepfamily.

We know that one of the things that is leading to increased numbers of stepfamilies and remarriage is the increase in the number of children born to unwed mothers. Since 1980, the percentage of all children born outside of marriage has increased from about 18% to about 33%. There are differences in terms of ethnic background, with about 11% of White children increasing to about 22% in 1999. For African American children, it was about 55% in 1980; in 1999 it was almost 69%. The percentage has increased for Latino children as well.

What types of factors contribute to children doing well after divorce? I want to review some of those briefly and then talk about remarriage, because there are many consistencies, but differences as well. We know that psychological adjustment of parents has some impact. However, psychologists often give too much weight to this. They frequently conduct psychological tests that do not predict very well how good a parent one is and how well one's children are functioning. One extreme case is that we know that schizophrenic mothers or fathers can raise healthy, happy children. We have documentation of that. Just because one may have a severe mental illness, be an alcoholic, or an abuser of drugs does not necessarily mean that one cannot also be a good parent. The likelihood is that one is probably not going to be quite as good, but that person can, in fact, raise healthy children. We know, though, that there are certain people with characterological problems, what are called personality disorders, who frequently have more trouble with raising children and often have more conflict, making it harder for children to be raised. When people are married or in cohabiting relationships, if there is a problem in one parent, the healthier parent can often buffer the negative effects. If they are separated, one finds that the children are dealing with the parent who may have some psychological problems and they are not buffered and, subsequently, have more difficulties.

Parenting skills and practices are probably the primary influence in how well children do after a divorce. Parenting skills is the strongest predictor of postdivorce adjustment. Parenting changes dramatically, particularly for men, after divorce. The correlation between men's parenting practices pre- and postdivorce is zero. That means that it changes dramatically. Some men who are very involved with their children before drop out of their child's life. Other men who were not very involved when they were married suddenly become super fathers and get very involved. On the other hand, women tend to be more consistent. About 90% of the time,

children live with their mothers after divorce, even though fathers have gotten more involved and are increasingly having custody.

There are interpersonal factors. The parent-child relationship is very important. The nonresidential parent-child relationship changes. Men are more likely to remarry faster than women are, and when men remarry, their contact with the children is more likely to decline over time.

One of the key factors in terms of children having problems is whether parents have a lot of ongoing hostility that involves the child. Believe it or not there are some adults who can fight and not include their children. There are not very many of them, however, so they usually include their children. If it does not involve the child, it does not seem to impact them very negatively, but if it does, that is a strong predictor of children having increased behavior problems.

We know that there are socioeconomic factors. All things being equal, if there are more resources in the family, for example, and they live in a safe environment, then children do better. We know that many children, when they live with their mothers, are likely to move to a smaller home and that can cause some difficulties. Continuity of care is also important in terms of the child care arrangements. In the last 15 years, with more women in the workforce, there are fewer changes in continuity of care because women have been working all along and the children are often in day care already or grandparents are raising them. It is not such a big shift. Thirty years ago when there were fewer women in the workplace, it was actually much harder for children of divorce. They not only lost their family but they often lost their primary caregiver because the mother was then forced to go into the workplace and was not able to take care of the children.

In divorced families, people do not coparent; they parallel parent. This means that the father does his thing, the mother does her thing, and they rarely work together. However, if people are going to work together, these are the key things: live close to each other, decrease conflict, have an agreed parenting style, and talk civilly with each other. If there are disagreements, do not put the other person down—just recognize it as a difference.

What about stepfamilies? Most people do not stay divorced; they get remarried. That leads to an increased number of stepfamilies. What are some of the outcomes? Children in stepfamilies have more behavior problems, more externalizing problems, and lower social competence than children in first-marriage families. That is both early in remarriage and 5-7 years later. In our study, we tracked children in stepfamilies longitudinally and found they have more behavior problems. If this is compared to national data, one sees that 75-80% of children in stepfamilies and in single-parent families function just as well as children in first-marriage families but the risk is double. In terms of other types of problems, 14-15% of children in intact families have an emotional problem compared to 30% in stepfamilies. In a recent longitudinal study of high school students, we found that children in single-parent families have more behavior problems. However, there is no difference in drinking behaviors. They all increase over time, but there is no difference based on family structure. We have done this in terms of ethnicity as well and there are also no differences.

There are four factors important in remarriage: parenting, marriage, dealing with the nonresidential parent, and different kinds of stepfamilies. The key issues about later remarriage are dealing with family identity, developing family rituals, and dealing with the nonresidential parent.

Michelle DeKlyen: I am presenting the work of Sara McLanahan, one of the principal investigators for our study. I would like to thank and acknowledge Sara for inviting me to work on this study and for her enormous contribution to the conceptualization of the paper that I will present today. I would also like to thank the Administration for Children and Families, the National Institute of Child Health and Human Development, and the National Science Foundation for crucial financial support. I was trained as a child clinical psychologist, although my very first work experience was in a poverty center under the Office of Economic Opportunity. I have also been a preschool teacher, directed a child care center, been a child and family therapist, and

a special education teacher. I am currently at the Office of Population Research at Princeton University, but a year ago I came from the University of Washington where I was in the Department of Psychiatry.

I am relatively new to this particular subject area, although the concerns have followed me since my earliest postcollege work experience. Given our theme today of promoting family relations, a prime focus of concern is the group of families who are the subject of the Fragile Families and Child Wellbeing Study. Let me explain what we mean by fragile families. As we have defined them, these are families that consist of unmarried parents and their children. They are families who are fragile for economic as well as social reasons. On average they are less well off than other parents. They are more likely to have marginal or no employment.

Why should we be concerned about these families? These families are of concern for at least three reasons. First, they are significant because of their number. As Bray already pointed out, about one out of every three births in the U.S. today is to an unmarried parent. Second, their children are potentially at risk because these families are more likely to live in poverty and to belong to a minority group and are less likely to be stable than marital units. Finally, they are the focus of major national and local policy decisions, which in the past have often been made in the absence of much factual information. The number and rate of births to unmarried women has increased geometrically in the past 40 years for the entire population, but in particular within the minority community.

The United States relative to other industrialized countries is in the middle range in terms of percentage of children born outside of marriage. However, American children of unwed parents are probably less likely to spend their childhood living with both parents than are children in the Scandinavian countries, if we can judge from the statistics about the percentage of children who live with their biological fathers as teenagers. However, until recently, no large-scale study had attempted to identify and track these families. That is why the fragile family study was proposed. The questions that it was designed to address are many: What kinds of relationships do unmarried parents have with each other? Why have they not married? Who are these fathers? How do the children fare? How do social policies affect these families? Do they strengthen them or undermine them? Do they make it more or less likely that couples will stay together or that children will thrive?

The fragile family study identified about 4,900 births in 20 large cities in the United States. Thirty-seven hundred of these births were to unmarried parents, and, for comparison purposes, 1,200 births were to married couples. The sample was chosen to be nationally representative. The cities were selected to represent a variety of governmental policy regimes so that the effects of welfare rules, child support enforcement, and employment opportunities could be assessed over time. The study spans 48 months with four waves of data collection, beginning when each mother was approached in the hospital shortly after her baby's birth. Parents, both mothers and fathers, are interviewed at each wave to gather information about a variety of subjects and there are supplemental studies on child health, neglect, and child care to provide some observational data as well.

We know that as a group these unmarried parents tend to be poorer and more likely to come from a minority ethnic group. However, they are still a heterogeneous mix, including some middle-class, college-educated men and women with good jobs. I am going to limit my comments to that subset of unmarried parents most likely to be eligible for an early Head Start program, namely, those who fall below the poverty line, the most fragile families. This amounts to about 41% of our total sample.

Who are the poorest fragile families? Let me start by presenting some basic demographic facts. Then I will describe the kinds of relationships these parents are in. Finally I will talk about why these families may not be stable. The poor, married families in our sample are compared to the poor, unmarried families. The unmarried parents are somewhat younger than the married parents. Both, by the way, are younger than their counterparts who are not poor. A large propor-

tion, nearly two thirds of the poor married parents, is Latino; in contrast, fully half of the poor unmarried couples are African American.

Looking only at the unmarried parents, what kinds of relationships do they describe with their coparents? We gave them a whole array of options of how to describe themselves. They could describe themselves as living together, which, as shorthand, I call "cohabiting." They could say that they are romantically involved and that they occasionally visit each other and spend the night with each other or that they are romantically involved but they do not spend much time with each other. They could say they are just friends. They could say, "Well, we have a little contact." They could say, "We have no contact" and so forth.

At the time of their baby's birth, 39% reported living together. Another 40% indicated they had a romantic relationship, often spending time with each other though they did not share a home full-time. Of the group that I have labeled "other," about 10% described themselves as just friends, and the remainder said they had little or contact. I might add parenthetically that only a small minority of mothers refused or were unable to identify the father.

Within this poor, unmarried group there are ethnic differences in how parents choose to partner. Remember that a significantly higher percent of African American parents than White parents are unmarried when they have children. However, if they are unmarried, African American parents are less likely to cohabit or to describe themselves as cohabiting and more likely to describe themselves as romantically involved than either White parents or Latino parents. Nonetheless, the total proportion who consider themselves involved with the other parent of their child is almost the same across ethnic groups. About 80% of all unmarried parents consider themselves to be involved with the other parent at the time of their child's birth.

Is this misleading? Does it indicate more commitment than actually exists? We looked at other indicators of father's involvement at the time of birth such as whether the father contributed money during the pregnancy, whether his name was on the birth certificate, whether he visited the hospital when the mother had the baby, whether he said that he wanted to be involved, and whether the mother wanted him to be involved. It is clear from these data that most fathers, even in this poor, unmarried sample, wanted to be involved. In fact, these numbers are virtually indistinguishable from the responses of more advantaged parents. There are no real differences among the different ethnic groups. Even in this economically disadvantaged sample, most couples were involved at the time of their baby's birth and most fathers wanted to remain involved.

What barriers stand in the way of enduring relationships between these parents? What are the obstacles to their getting married or at least living together as a family with their child? Four major barriers have been suggested in the literature and in the popular press. Some think that attitudes are the problem. One version of this, for example, blames the Murphy Brown Syndrome where parents do not believe that marriage is very important or desirable. Others raise questions about financial viability. Can these parents afford to live together? Do they have the economic resources to support themselves and their children? Still others worry about individual attributes of the adults in these families. Perhaps behavioral or mental health issues, criminality, depression, and substance abuse make these parents undesirable partners so that we should not press them to form permanent unions. Marriage may not be good for either the partner or the child. Finally, maybe it is a question of social policy: Do welfare rules, taxes, and child support laws undermine or discourage the formation of stable families?

Our baseline data address the first three issues. The fourth I will defer. I have opinions and I am sure that many of you do as well, but we should be getting some more information over the next few years as we follow these families over time. That is one of the main objectives of this study. With respect to attitudes, we asked mothers and fathers a number of questions about marriage. For example, we asked whether they thought marriage was better than just living together and whether marriage was better for children. The majority agreed with both of these statements. Of interest and perhaps counter to what one might have guessed, fathers were more likely to endorse the value of marriage than mothers were. African American parents

were more likely to do so than White parents were. However, these mothers were not so confident that they would marry these fathers—only a third thought the chances were very good. About half of the mothers thought there was at least a 50/50 chance. In contrast, fathers were quite optimistic.

These parents rate the desirability of marriage just as high as their economically advantaged counterparts do. However, the mothers indicate poorer chances of getting married. Why might this be true? We also asked these parents to rate how important various factors were to a successful marriage. Almost all said that it was very important that the husband have a steady job. The second highest ranking was given to emotional maturity or psychological functioning. A steady job for the wife came in third and good sex a distant fourth.

Now how likely are these parents to find what they are looking for in a partner? The employment prospects for these families are not good. Most have less than a high school degree and nearly one third of the unmarried fathers versus only 14% of the married fathers did not have a job in the week before their child was born. Looking at the rest of the data, this does not seem to be for lack of interest or lack of trying. Over 90% of the fathers said that they had worked at some point in the previous year, and over 80% of the mothers said this. However, for various reasons, they were having difficulty in maintaining regular predictable employment.

How about emotional and psychological functioning? The unmarried fathers generally had more problems than the married fathers. More were in jail both at the time of their child's birth and a year later, and more reported problems with substance abuse, depression, and anxiety. However, it is equally important to note that most fathers did not have such problems. These are data that I have not totally finished with, but when one looks at the issues of depression, anxiety, and particularly alcohol abuse, one finds it is in the White population that these rates are by far the highest.

There was one unexpected finding. More of the poor married mothers reported that fathers had hit or slapped them than we anticipated. This rate was higher than that of the poor unmarried mothers or that of the more economically advantaged married or unmarried mothers (unmarried includes cohabiting). At 12 months, the poor married mothers minus the few who had dropped out of the study by that time report a much lower rate of hitting. Frankly, I am still exploring the meaning of this. I should note that there is a fairly small number of these married poor families in the sample. One starts out thinking that, with 5,000 families, this is a big sample, but when one starts slicing it up, the numbers get smaller.

Data on mothers' conditions are not included here. We analyzed this and the trends are in the same direction but not nearly as strong as the differences for the fathers. My preliminary guess is that the effect between marriage, cohabitation, and no contact primarily seems to be carried by the father's behavioral and mental health issues.

We are still finalizing our 12-month data so findings are not complete yet. However, I will give a preview of where these families were a year later. Focusing again on the unmarried parents, seven percent had married, but more had slipped into the other groups of "just friends" or "little or no contact." The group that was most stable was that which originally indicated little commitment to a stable relationship. The group that changed the most was the romantically involved group, with about half becoming less involved, but a quarter becoming more so.

In summary, these most fragile families may be characterized as having high hopes, somewhat more realistic expectations, and relatively low resources. They believe in the value of marriage, especially for their children, and most want it for themselves. It does not seem to be their attitudes that are the problem. However, their resources for building and maintaining a stable family are poor in terms of education, employment, behavior, and, in some cases, mental health. They recognize those elements as crucial to a successful marriage. Education, job training and placement, and treatment opportunities would appear to be the logical target for interventions to strengthen these families. Another fact that stands out is that the time of birth is when almost all fathers are involved and hopes of building a family are high. This may be a magic

moment, a moment when intervention has the greatest potential for helping these families find their way to a happy ending for themselves and their children.

Gloria Johnson Powell: Now we will have a discussion of the three papers.

Natasha Cabrera: I am a psychologist and I work at the National Institute of Child Health and Human Development in the demographic branch. We fund mostly demographic kinds of studies, but also we focus on child development issues. My own personal interest is on research on fathers, child care, poverty, and the intersection between research and policy.

First, I want to thank all the presenters for all the wonderful and insightful presentations. It is a pleasure to hear information on how people in the trenches deal with this issue versus those of us who look at the numbers, and how they try to interpret what is happening. Marriage, healthy families, and children's well-being are critical national topics. Perhaps it is late coming to the table, but obviously it has always been on our minds.

Let me say a couple of things that have emerged from the three papers. How to promote healthy families is a very important theme and is based on the assumption and consistent data, at least at the national level, that children in married-couple families do better. They look better on cognitive outcomes and social competence. They become healthy adults and do not drop out of school. In general, they do better. The only qualifier that I would like to add is that we do not have much good data on the quality of the marriages. We like to say that healthy good marriages are good for children. The other side of the coin would be perhaps that good divorce could also fare well for children.

Let me return to some of the comments and findings that were presented. One of the keys to having healthy marriages might be low conflict. How do parents get along, either when they are living together or when they are not living together? That seems to be one of the common threads, but how does one keep families from not tearing each other apart? It is difficult to be in any kind of relationship. One always wants to be right. How does one resolve conflict in a positive way? That is very important for children. We have to model this behavior so we also need to worry about what type of marriages we have and what type of adults the children will become in terms of their own relationships.

The other interesting issue for me is this issue of recombined families. They get married, divorced, and then they divorce again and maybe fall apart. How do children do over time? Some interesting national data were presented, but those data do not take into account some of those recombined families. It is going to be difficult or at least interesting to see a child who may have had two fathers over time. How does a mother combine the relationship with the biological father and the social father into a healthy one? There is a case in California in which the social father was given custody of a child who was not his own by the courts. This is an historical case because generally biological parents have the premier right to children and here is this man who claimed that he became the social father because he had been with this child (it was his girlfriend's child) from the beginning. It is interesting to take a closer look at how recombined families stay together and what it means for children.

Another interesting issue is attitudes toward marriage. Why do people marry and why do people have children? I am not sure we have the answer to either of those questions. Why do we marry? The white dress sounds nice. The cake for me was nice. What is it about marriage that people want to do it? When one looks at ethnographic data, we see that mothers are saying things such as, "Why should I marry? I do not need a man to help me do that? I can do battle myself." Why would one want to be together when there might be many hassles involved, such as unemployment and education? Many mothers who are in cohabiting, common-law relationships and have children are saying "I want to get married. We are going to get married, but cannot do it now. We need money." However, they are living together, and they have a child. It is the idea of what marriage is that is interesting.

These attitudes towards marriage are interesting because they also reveal some gender differences. Women seem to be more realistic. Men, as you heard in the fragile family study, want to get married, but obviously it is not panning out at 12 months.

I like the common-law point that was brought up. We used to call them common law and it was a respected and even expected way. In fact, in other countries, such as Canada, there are still common laws where if people live together for 3 years, share an address, and file their taxes as cohabiters—even if they do not have children—they are considered common law. Is that different from cohabiting? Cohabiting seems to have an unstable kind of sound to it, as if they are only living together for now, but maybe there is a suitcase packed somewhere. Our terms, therefore, for explaining how people are in unions, how they stay together, and what unions are more stable are interesting in themselves. We do not have good, national data on cohabiting. We do not know the average age, why they do it, why they do not, and why it falls apart.

The interesting issue for me, as I have a child bias, is what does it do for children? How do the children fare who have grown up in stable, cohabiting relationships that last 7-8 years? How do they look versus the children in the marriage relationships? Is lack of conflict the variable that we need to look at? Is it that good, healthy cohabiting relationships and good, healthy marriages are good for children? That is an interesting question. As the trend for cohabiting goes up, divorce does not look so bad because we are not getting married as much. How does it strengthen families? It is the point of much of our research ideas and national agendas lately. How does one make a healthy marriage? What is a healthy marriage? I know that we do not like to talk about divorce, but is there such a thing as a healthy divorce if there are children involved? Can there be a relationship where the conflict is minimized? Can the parents be helped to coparent?

The trend in the legal world had been to award custody only to the mother. She decided who the father was and who could see the child and how often. Now the courts are beginning to acknowledge that fathers want to be and can be involved, and that they can be good for the children. We are beginning to see a trend in joint custody for fathers. It is not universal, but it is a trend that I hope continues to increase.

It would seem that if we want to have healthy marriages then the interest would be on focusing on the mother/father relationship and how we do that. From a research point of view, we have very little data on how mothers and fathers resolve conflict. In fact, if you look at some of the national data, we do not even have a good way of asking other than "Do you slap your wife?" or "Are you mean to her?" or "How do you resolve conflict?" Questions like these or ones about who takes out the garbage, who does the mundane tasks, or who does the most important tasks are not good indicators of how families resolve conflict on a daily basis. The point is that we do not have good data. I would love qualitative research informing the larger studies. How do we ask these questions to get meaningful data?

The selection bias is a big issue. Are those who marry different from those who cohabit? What is the difference? What is driving the difference? Is it a personality trait that says, "When I am in it, I am never getting out. I do not care how bad it is. I made a commitment. I am staying," or is it something else? Is that something else good for children and for the families? The selection bias in marriage and cohabiting is difficult to tease out. We do not know what is driving the relationship.

The other interesting point for me was the involvement of nonresidential fathers. When one looks at the national data, one finds that about a quarter of the children do not live with the fathers. If one looks at this national trend, it seems that these children have no fathers when, in fact, they might have fathers. The fathers do not show up in the national trends because if they are not in the household, we are not getting data from them. How absent are these fathers and what effect do these fathers have on their children's lives? It is very difficult to find these men and collect data on how these nonresidential fathers are involved with the children. For example, Irwin Garfinkel has done some analysis and works with Fragile Families. He found that

the fathers with lower incomes who are nonresidential must spend much more money to see their children than their counterparts. They may travel more, make arrangements, and buy other extra things. If one is down on his luck and does not have a job or much money then that is a big barrier to being involved. It may not mean that they do not want to; it is just that they are not able.

I was curious about the married fathers in Michelle DeKlyen's study. Married fathers look better than unmarried fathers, except for domestic violence. Is marriage making them better or do they arrive already better? What is it about these fathers that they look good? If one looks at her numbers on domestic abuse, it was higher for the married fathers. That is why I ask if the unmarried group is broken into "not living together" and "living together," which group would get similar numbers?

DeKlyen: You find that the ones with little or no contact have much higher rates on virtually all of those dimensions. The cohabiters in many cases look about the same as the marrieds, except for substance abuse where they look a little worse. Otherwise the real fall off is when one gets to the romantic relationships, and certainly for the little- or no-contact relationships.

Cabrera: If a father does not live with his wife or partner all the time and sees her once in a while, there is more of a chance for romantic bliss as they are not going to have much time to display conflict or negative feelings. Returning to your other comment, we find that in other data, too, domestic violence is a big issue. Because we worry about jeopardizing our response rates in the studies, we have not found a good way to ask about conflict resolution and its role in marriage and cohabiting.

DeKlyen: I am sure that those are all underestimates, in every case.

Cabrera: Moving to the final issue, how do we define parental involvement? DeKlyen had interesting data where fathers are involved with the "magic moment." Every human being, regardless of race, culture, ethnicity, or socioeconomic status, wants the best for his or her child. Nobody sets out to be a failure. No one says, "I want to have a child and abandon him." We all have good intentions. How do we build on that? Is it enough to say, yes, I want to be involved with you, yes, here's two hundred dollars for something, put my name on the certificate? What does it mean 12 months later? How do we define involvement? Defining involvement is important because it will give us an idea of how to intervene to help fathers stay involved.

Johnson Powell: Now we are going to open it up for some questions from the audience.

Question: This question is for Ms. Blackman. What is your response to critics of programs that promote marriage among African Americans, particularly those who are poor and receiving public assistance? What do you consider is the knowledge or the value base of promoting your skills program?

Blackman: There is a lot of criticism about promoting marriage among the poor. As I sit in bipartisan policy discussions, there is some warranted concern there. There are those who believe that marriage is a good way for us to live as a society. I am in agreement with that camp, particularly for people who want to be married. I do not think that we ought to force anybody to be married. The "behind-the-closed-door" discussion that concerns me and concerns many of the onlookers is whether marriage is the solution to poverty. I do not agree with that. As the keynote speaker for the Smart Marriages conference last year I gave a comment from my mother that reflects on why some people are opposed to the marriage movement. My mother said that two broke people are still broke. Marriage is not a solution for poverty, though some of the

discussion about economic efficiency makes sense. If we love each other, it is cheaper for us to pay one rental payment or one mortgage than two. We can buy a certain quantity of groceries more cheaply than eating separately every night. These are some of the efficiencies involved in living together. However, the discussion about forcing poor people to get married as a solution to poverty is offensive to many people and we have talked about that openly but behind closed doors. What we find repeatedly in talking with people and in the literature is that most people want the companionship and the context of marriage for raising children anyway. As you have heard from all of our work, you do not have to force people to get married. The issue is how do you remove the barriers either in their own heads or in their social context so they can be married.

Question: I was wondering if you have looked at any nontraditional families, like gay families and lesbian families. Are they included in this or are these just traditional families?

Bray: I work with mainly heterosexual couples so there are very little data about gay and lesbian couples. Lawrence Kurdick has done a wonderful longitudinal study on gay relationships. To my understanding of the literature, he is about the only one who has done such a high quality study. Some smaller scale studies have done some limited work on this.

DeKlyen: The Fragile Families Study does not address that. We are very aware of that, but you can only do so much.

Cabrera: Not even the census collects data on gay couples. There is a box where it asks if you have a partner, but if the partner has the same sex as the respondent I do not think that it is counted.

Blackman: We have had requests from gay and lesbian couples that they be allowed to come to the classes as they are structured now. However, African Americans tend to be very conservative in their views on sexual orientation, particularly African American men. We decided to not include gay and lesbian couples because of the homophobia within the community. I have a couple of graduate students who are interested in developing family life education modules specifically for gay and lesbian couples. Some of them are gay or lesbian themselves and say they have these same issues and also need help. I am interested in having students at the beginning of their studies who are willing to work with me to develop those offerings.

DeKlyen: Clinically I have worked with gay couples around parenting issues and relationship issues and they look relatively similar in many ways.

Blackman: That came up in some of my discussions with some Head Start people in Indianapolis. They do not want to exclude gay and lesbian families if they get into this marriage issue. We are talking about ways to configure things to include them.

Question: Bray talked about the mobility issue for the child when families are divorced or divorcing and reconfiguring. Do you have data on that?

Bray: We found in our work with stepfamilies that most of the time when people get remarried, they move, usually to a higher socioeconomic setting. From a parent's perspective, it is a positive stress because there is more family income available. From a child's perspective, it is usually a negative stress, because they do not see the moving as necessarily better. They often have to change schools and make new friends.

Some of the work out of California found that children were traveling 100-150 miles every other day or every other week to be involved with both parents at the same time because they

did not live in the same city. That put a lot of stress on children. It raises all kinds of other safety issues. For example, children are more likely to be in an automobile accident. One has to weigh what is better for children. Besides the moving around, the high divorce rate for stepfamilies is high, oftentimes occurring in the first few years after remarriage, and then children are impacted again with income frequently dropping at that point.

Question: I am from south Florida and in south Florida the families with whom we work are culturally diverse. How do you define African American?

DeKlyen: We let the families make the choice of identifying themselves as African American. We did not break that down further, although we do have several different categories by which we could subcategorize. We look at background, for example, we have some mixed couples in the sample, but not enough for most of these analyses. For these cases, because it gets so complicated, I was looking only at mother's ethnicity. There are a few couples who would have been considered mixed couples. This is a good question, which we as social scientists face when we deal with the numbers. When there are many small subsets, one cannot generalize, but when we are working clinically or personally with people it is crucial.

Bray: In research, one must also think about what the outcomes are that one is considering. For example, in the alcohol literature we know that the way ethnic groups drink varies. Within the Latino subculture and within the African American subculture there are actually differences depending on whether one is from Puerto Rico, Mexico, or South America. In other areas, however, there are not many differences in terms of outcomes. If one looks at only behavior, there are not many of those types of differences. We need to be sensitive to understanding and continuing to do research as to where there might be differences and where there might not be differences.

Comment: If you know how parenting patterns and styles vary across different cultures, it becomes a primary factor.

Blackman: That is quite right. One of the major things that goes on in the research, especially when it comes to African Americans, is that there is no attempt to desegregate the group. Because that has gone on, in health and human services we have a skewed perspective of African American diets in the United States. We are embarking on a national study of African immigrant families, a group of people who seem to be invisible within the African American or Black community. They have some differences because of their cultural background, the ways of believing and thinking in the world, and where they come from. That is extremely important to understand. We do not carefully desegregate the data on African Americans according to whether or not they come from the Caribbean. There have traditionally been some differences between Caribbean and U.S.-born African Americans. Indeed one needs to look at the whole diaspora in terms of understanding the varieties of marital relationships across the African Diaspora.

Johnson-Powell: I took a considerable amount of time in my dissertation, which was published in 1992, to lay out that very point because often it is a point of conflict within couples. Just because we are all of the African Diaspora does not mean that we see the world in the same way. In fact, one of the couples that comes to mind out of the study was a woman from Nigeria whose brother was born in Indianapolis. They were having a terrible time with world views.

When we began the project, we had a full day in-service on religious diversity within the African American community, because the staff who were joining the project were largely mainstream Protestants. They did not realize that if we invited people from the community, we

were likely to get a broad array of religiously diverse people. It was a wonderful day to spend with the staff and clerks from those religious groups represented in Indianapolis because we do not always recognize the diversity among us and how that could bring us into conflict with each other.

Blackman: One more aspect to understand about the African American population is that 43% of all Muslims in this country are African Americans. There are differences in the role of a woman as well as other issues in these families, so this is important to know. If one is going to do any research in Boston on the African American community, one has to understand that Black Protestants never speak to Black Catholics in Boston. I have some friends who grew up with me who are very prominent now but I never knew them as a child because they were Catholic. Understanding some of those differences that go on within the African American community is extremely important so that we do not develop racial profiling of who African Americans are. In terms of the Latino population, it is also important to know the differences. For example, it is important to know that the word Hispanic is referring to those who speak Spanish, and, for example, people from Brazil speak Portuguese. We have to begin to desegregate the data and look at some specifics.

Comment: I would say though that when we look at diversity, it is important also to look at what is basic human process. There is much research addressing our similarities as humans as well as our diversity. Making the assumption that it is all the same or all different puts blinders on us. We need to open our eyes and say there are some differences, there are some similarities, and here is where we need to be unique about this. That is an important research agenda as well.

Comment: Personally, I like to look at every relationship that I have with a person as a marriage, which is going to give me the chance to have training for marriage. In work, I see my relationships in the context of being married to the firm. I am learning how to deal with coworkers in a way that might apply to marriage. There is a spirit of uniqueness in knowing how to use this for this and that for that.

Question: What are the marital patterns of children of divorce?

Bray: The data indicate that one of the risk factors for divorce is if you come from a divorced home. It is not a huge effect, but it is a consistent predictor. There are not good data about whether people are more likely to postpone marriage and more likely to cohabit or not. If you look at Wallerstein's data, she claimed that children of divorce have fears about being married and that is a strong effect. However, if you look at other people's data utilizing children from first-marriage homes (i.e., non-divorce-homes), you find that people in general have worries about being married and potentially getting divorced. There are not huge differences, but it is a risk factor.

Question: First, what you have said is extremely relevant to the work in strengthening families, and I appreciate all of it. Based on the data that you presented, do you have any predications as to what might be happening in the near future with changing demographics, in particular the increase in the Latino family population in the United States or any other trends that you might be aware of?

Bray: What we know is that people are more likely to get married and stay married now. This is a real shift in the last 5 years. There are a lot of reasons. Some of it is the marriage movement and the work that people have talked about in pointing out that being married and staying married is good for children. We also know from our research on divorce that getting divorced

and remarried is no panacea. Often people carry the same problems into the next relationship and end up getting divorced again. The popular press in my opinion has done a good job of educating the public as to what the trend is.

Then we also have HIV/AIDS, which we have not talked about. HIV/AIDS is changing marriage in a subtle way, why one wants to be married and why one wants to be in a safe relationship. Now it is not only about wanting to love somebody or be loved and taken care of, it is a matter of life and death. This is particularly the case for fragile families where there are higher rates of HIV/AIDS and where having sex with somebody can lead to a deadly disease.

Comment: I wanted to add that women are getting married at an older age. When you are older, you have less time. You do not waste time with someone whom you think might not be appropriate. For women of all races, cultures, and ethnicities, if they are getting married when they are older, the likelihood is that they have more education. They will look toward a mate that is more like them. If we are leaving a good portion of minority men behind, then you have an issue of all these women who want to marry and have no one to marry.

Blackman: A group of us middle-aged women were talking about just that very thing. In the women's movement, everybody was talking about doing your own thing. We kept wondering how much further out we could go. Then came the 1980s when people started to look more conservatively at life. Then we have gone through the era of hip hop and now we are dealing with varieties of STDs that we never knew of before. Yet the young people, the 30-year-olds and younger, are looking retro even in their fashions. We are going to come back full circle to some more conservative views on relationships. Things are coming back to a more centrist position. We just elected an administration that can talk forthrightly about marriage and religion. Can you imagine we did that? With controversy, yes, but we did that. People are endorsing more retro views right now. I do not know where we will be with the next election, but I do not think that we are going to go far out again. There were some New Yorkers at breakfast yesterday who were talking about how in their city, people are behaving more communally, valuing relationships with neighbors and family members, and wanting to settle down a little more.

DeKlyen: I would add that the immigrant situation is one that we need to watch to see how it will change things. We have not had a chance to look carefully, but it is clear from our initial examination that there is a real difference between the immigrant Latinos and the non-immigrants. Latino couples with low incomes had a much higher rate of marriage than any of the other groups. That may be more driven by the immigrant element of the population. Attitudes across the population are different, but then as they come and assimilate, where do they go from there?

Question: In the fragile family study, is there any distinction made between people who indicate their pregnancies were planned versus unplanned?

DeKlyen: I am virtually sure that it was asked, but it is a piece of data I am not familiar with. I have done other research where we have looked at this question and it tends to be very interesting. However, there are many births in happily married families that are unplanned, so it is not necessarily a neat distinction.

Children of Incarcerated Parents

CHAIR: Gloria Johnson-Powell
PRESENTERS: Arlene Lee, Carl Mazza

Arlene Lee: I am from the Child Welfare League. This year the League entered into a cooperative agreement with the federal government to establish the first federal resource center for children of prisoners. Before I started with the League, I was Youth Strategies Manager with the governor's office in Maryland. I also have 15 years experience as an attorney representing children in child welfare and delinquency cases, and contested custody cases. The children of prisoners were ever-present in that work, yet no one was paying attention to the special needs of this population; how they were interacting in their social settings, school settings, communities, and families. I am delighted to be part of the "groundswell" now addressing the needs of this population. Before I talk about this particular group, it is important to talk about where we are with children in general in this nation. It is sort of good news–bad news, but mostly good news. Drawing on the Casey indicators used by *Kids Count*, which collects data nationwide on how children are doing, in most areas we are seeing significant declines in troubling indicators and increases in positive areas for most children. Nationally, we are still having problems in the areas of low birth-weight babies and single parent families, which are both increasing. However, teen births have fallen over 20% to their lowest level in 60 years. Adoptions have been steadily going up and are at the highest level in over 10 years. Juvenile crime has been declining. There was a 68% decline in juvenile homicide in the last 10 years, which is at the lowest rate in 20 years. Child poverty is at its lowest rate since 1979.

As we address the needs of all children, we are impacting those most at risk. After a while we reach a plateau, and in order to bring the numbers down further we have to address the special needs of particular populations.

Children of prisoners have been a neglected population for a long time, primarily because the criminal justice process does not look at the needs of children. The systems that deal with families affected by incarceration—the criminal justice system, the child welfare system—are all overwhelmed; and there are negative public attitudes and stigma regarding being incarcerated.

We do not have a common database in most states, much less nationally, to allow communication back and forth between agencies. You can have a child with a parent in prison and not have the school system know, not have the child welfare system know, unless they are dealing directly with that parent. These children fly under the radar. There are services that would otherwise be helpful to them that are unavailable.

Currently, 2.3 million children in the United States have a parent in prison or jail. We estimate close to 7 million children are affected, if you include parents on parole or probation. I think most people do not even realize we are talking about such a large number of children.

We have seen a significant increase in the incarceration of women. That means we have more children coming to the fore; people are starting to recognize that we have a population of children who have been separated from their primary caretaker, the person they look to for emotional stability and financial support. As we saw the number of women going into prison increase, we saw people beginning to pay attention to the needs of those children.

As women were entering prison pregnant and therefore having children behind bars, it forced the prison system to think about dealing with children. They had no choice. Shortly after we started having a significant number of women delivering behind bars, parenting programs became popular in prisons. "Popular" meaning that more and more systems are adopting them, and it has become a requirement in the federal system.

The majority of parents are incarcerated for more than a year. That is significant because if children are separated from their parents and in the foster care system for 15 consecutive months or 15 out of 22 months, they are automatically considered for termination of parental

rights. Now we are not only talking about children separated from their parent because of incarceration, but we may be talking about children who become legal orphans as a result of incarceration. They are placed for adoption, but depending on the age of the child, they may or may not be adopted into a permanent family.

It is reported that 10% of children of female prisoners and 2% of children of male prisoners are in foster homes. This is probably low: these statistics are based on a survey of prisoners. The data are probably skewed, because parents assume if their children are with a relative they are not in foster care. However, if the caregiver is receiving foster care payments, then the child may be considered to be in foster care, which then impacts the termination of parental rights timeline. We think that number is more like 30 to 40%. That still means the majority of children are operating or living outside of the child welfare system.

We know that these children are impacted by incarceration. Small pieces of research from around the country have told us a lot about what happens. We do not have major research yet, although it is being started. The research tells us that children are impacted by incarceration in a variety of ways, depending on a number of factors: age at parent's incarceration, length of the separation, health of the family, how disruptive the incarceration was, strength of the parent-child bond, whether they had been separated previously, the parent's crime, length of the sentence, and whether or not they have supports from family or community. All of these factors come to bear on how they are impacted.

We know from research that the trauma these children experience has a significant impact on them at different stages. It could be that they experience the trauma at a young age but do not display the effects until later. In other words, these children suffer from post-traumatic stress syndrome. The trauma can divert children from developmentally appropriate tasks; they may start suddenly sucking their thumbs or wetting their beds. Their language development reverts. Their coping strategies are suddenly impacted so that they are more withdrawn; they become clingy or begin soiling their pants. Taken out of context these behaviors may indicate a number of factors, but this population of children can demonstrate them as a result of trauma.

The trauma can vary according to age, where young children for example may display disorganized feelings. Children in their later years might display some maladaptive behaviors. Teenagers might display truancy or substance abuse. These outward expressions, diminished academic performance, or behavior difficulties are important to look out for because parental incarceration can result in significant impacts.

We know that while trauma is always present for children of incarcerated parents, its severity can vary due to a number of factors, including whether or not they receive intervention. Interventions that are successful with other children can be successful with these children as well: strengthening the child-parent relationship, having supportive adults around, being able to intervene early and often. These interventions can all help with this population of children, so that the following last piece of data can be avoided.

These data are specifically to show the cost of not doing anything. The cost of not doing anything is that these children are three to six times more likely to end up in our juvenile justice system, and 40 to 75% of them are likely to end up in our adult system. The single most expensive solution is to do nothing and allow these children to go through the juvenile system straight into the adult system.

These children have unique features because of the multiple traumas they experience. In other words, they are not just impacted by their parent's incarceration. They are impacted by poverty, parental substance abuse, parental mental illness, history of abuse or family instability, exposure to criminal activities either on the part of their parent or within the community, and child maltreatment. When you take a child out of their family and put them in foster care or any kind of institutional placement, the risk of maltreatment actually increases. Child maltreatment, therefore, is not necessarily abuse that may have occurred within the family home.

These children experience a combination of risk factors. They have the trauma of probably being present during their parent's criminal behavior. They may have witnessed the arrest of their parent, which can be a significantly traumatic event, and then they have all of these other factors.

Over the years, a small group of professionals around the country have been doing good work in this field. Based on their work we have learned a lot about how to help this population. Promising programs are targeted toward assisting the parent-child relationship, because the more effectively we intervene with the parent, the more likely we will be able to impact the child. The most effective programs, encouraged through the correctional system, as well as the school and mental health systems, have taught parents how to parent their child and have allowed parents to develop good parenting skills.

Girl Scouts Beyond Bars is an interesting program that started in Maryland, which takes a group of girls whose mothers are behind bars and creates a Girl Scout troop with them. They bring the girls in to have a troop meeting with their mothers once a month. Three times a month they meet outside in the community. They have a regular Girl Scout experience, and in the time between the monthly troop visits to their mothers, they are learning skills, using the skills, teaching the skills, and developing a bond with their mother. This program has been going on for a long time and is now in 24 states.

Strengthening Families is a center for substance abuse prevention and juvenile justice, as well as a delinquency prevention program. It has been researched and replicated and has been effective. The way it works is they have children come in to visit their parents for 14 weeks. They spend half an hour having dinner, then break apart for an hour to be in groups that are age-appropriate. They learn new skills. They come back together for an hour as a family and are able to practice those skills together. This is a program that has been researched at a variety of settings and is now being piloted in a prerelease unit.

Project SEEK is a case-management wrap-around program that has been in place in Michigan for the last 10 years. It has been demonstrated to improve academic performance, decrease delinquency and substance abuse, and strengthen the parent-child relationship. Again, it works on developing the parent-child bond to reduce the trauma the child is experiencing. It also builds community support for the child, works directly with teachers, social workers, and child welfare workers, and connects the family to various services in the community. It allows the whole family to experience the supports necessary to be successful.

MotherRead and Long Distance Dads are effective programs because they allow parents who are separated by long distances to still have some kind of bond develop with their child. Both programs allow parents to utilize technology.

In MotherRead, mothers read a book into a tape recorder, and the tape and book are sent to the child. The caregiver then uses the book with the child, who experiences the voice of their mother reading to them. We are developing the bond, improving literacy, and involving the caregiver, so it is a wonderful, effective program.

Long Distance Dads allows contact by fathers who may be separated by many hours. In fact, in federal prisons people come from all over the country, so you may have individuals on different coasts—family on one side of the country and father in prison on another side. It uses chat rooms to provide real-time communication. The fathers are also taking a character development program and learning literacy skills so they can write letters to their children. We are trying to find ways not only to strengthen the bond but allow them to learn new and effective skills.

At the Center we are trying to pull together pieces of information and let people know there is work going on, there is research going on, and that these children are in our communities and their parents are coming home at some point. We know that 500,000 inmates per year are being brought back into communities. If we do not have a good relationship with them, if they do not have a good relationship with their children, there are a number of problems that we are going to experience.

More important is the long-term impact on these children, and that is the message we are trying to convey. We are trying to spread as much information as we have and let people know what we need. We need people to join together because no system can do this on its own. We need educators to be working with parents, social workers to be working with education, school psychologists to be involved, and juvenile justice to become involved. We need to work across systems, because the children are impacted by so many different systems.

The bigger question is what to do about the children who are not in any system at all. That is most of the children that we are talking about. For them the advocacy starts with education. They are the ones that are going to experience the initial behavior problems, the developmental issues. Teachers are the ones that are going to need to figure out the first intervention. We asked education to be aware of the child's family situation. Teachers may not be able to do something directly, but they need to be able to know what is happening with that child and be able to communicate that with those who might be able to bring in services to help.

The resource center is collecting research, conducting evaluation, and disseminating information to be a resource to those frontline people working directly with children. It places an enormous responsibility both on the community and on the Center to make sure that we are working to address the children's needs.

First, we are working on public awareness. Letting people know this problem is out there, that this is a neglected population of children, and that every one of us has something we can contribute. We are coming up with Best Practices Toolkits; people can get in touch with the Center, and we can give them tools that they can use directly.

We are also working on the ASFA (Adoption and Safe Families Act) brief, to highlight what the timeframe for termination of parental rights means for this population of children and what the system might be able to do to ensure that we do not create a population of legal orphans.

We are conducting training programs to help people be more effective and sensitive. Law enforcement personnel need to be sensitive to the fact that children are often present at the time of an arrest. It behooves them to work quickly to get children connected with a relative or to time the arrests so that children are at school. We are working to train agencies to communicate to each other that a parent has been incarcerated so that support services can be put into place. We are working with corrections to increase visitation and communication opportunities.

We are doing more research on what is going on with these children. There are pockets or pieces of research, and it is good work. However, we want to conduct a longitudinal study to see what happens to the children over time.

Carl Mazza: I teach social work at Lehman College, which is part of the City University of New York. I have worked in prisons for the last 22 years. From 1980 through 1995, New York State had a massive prison college program. I taught social science classes for a Bronx community college. In 1995 George Pataki, as the new governor of New York, put in effect a campaign promise that was to eliminate all college programs in prison. He could not stop schools from coming to prisons, but he stopped all financial aid if you were in prison, which effectively stopped all the programs.

I have always loved teaching in prisons; it is a unique population. In 1995, I was hired by the Osborne Association to teach a parenting class at Sing Sing. At that time, it was the only parenting class of more than one session to incarcerated men in New York State. Our class was 16 weeks; in fact, tonight someone is covering my last class of the current session.

After that, I expanded my role at Osborne and started working with men transitioning from prison back into society. The third part of my background is that I have worked with families of incarcerated men: their wives, girlfriends, and especially their children.

All my experience is based on the prison system in New York. New York is a big state in terms of bulk, population, and geography. It has an enormous number of prisons. Last count was 68

state prisons, not counting county prisons. It has a lot of people in prison, and policies tend to be a bit more liberal than other states. New York is a good example because, despite the so-called pseudoliberalism, there is an enormous number of programs you cannot do with parents in prison, including the programs Lee spoke about, MotherRead and Long Distance Dads.

Prisons around the country do not like outsiders coming inside, particularly with a camera. You are allowed a camera in the visiting room, because it is much more open and there are no offices around. I wanted to get a camcorder into the visiting room to videotape each of the men in the parenting class reading a story so that their children could have a copy. That way, they could see their fathers reading them a story even when they are home. The administration said they were absolutely not going to allow a camera. We took it all the way up to the Commissioner for the Department of Corrections for the State of New York. They consistently backed up the administration. We then tried asking to make a cassette with a tape recorder. We were refused again and ultimately we were unable to do it.

A couple of years ago I was suspended from Sing Sing, which I wear like a badge. My students have to do a lot of written assignments. One night they had given me the assignments and I was leaving. Every now and then the officers do a spot check. They checked all my belongings and all my papers.

Often I have the men write personal experiences, particularly about their boyhood. I assure them confidentiality. Often the men put them in sealed envelopes to make sure others do not see them. The officer started opening some of the envelopes. In one of the envelopes was a copy of a man's court transcript, which he had put in with his assignment. Obviously I did not know about that. That was considered contraband, because I was there teaching parenting, not as an attorney. They took the transcript and held a hearing. It took about 2 weeks, during which I was not allowed in the prison. The man was convicted of child molestation and wanted to tell me about it. In prison, men convicted of child molestation are very low on the social pole. He wanted me to know about it, but could not talk about it in class. Apparently his way of doing that was to give me a copy of his court transcript.

To be reinstated I had to go for a hearing with the superintendent of security for the prisons. It is kind of like going into the principal's office. He reprimanded me. I acted contrite and very sorry about it. The meeting lasted about half an hour. He shook my hand and gave me back my ID card, then said, "Before you leave, I want you to step over by my window." I stepped over to the window that overlooked the yard in Sing Sing. It was free time.

He asked me, "What do you see out there?" I told him that I saw about 2,000 men. He said, "I see 2,000 uniforms. That is the difference between people like you and people like me. You see individuals; I see uniforms. When you start individualizing inmates, you start making exceptions to the rules. When you start making exceptions to the rules, you become a threat to security." He said that everything "we"—the Department of Corrections—do is to ensure security. They are not particularly concerned about the rights of individuals.

That helped me understand the environment in which I was working. Despite all my work with men in transition and their children and families, it helped me to understand that it is an uphill battle and you have to take small victories when you get them.

The following happened to me a couple months ago. A 3½-year-old boy's father had been incarcerated since August. His mother had seen a dramatic change in the boy's behavior: an increase in bedwetting; he also was increasingly moody. At times he was very clingy to her; at other times he wanted to disassociate himself from her. He spent an inordinate amount of time in front of the TV set, almost oblivious to everything going on around him.

The mother and the father were not together at the time of his incarceration, but they lived in the same neighborhood. Both of them worked. She worked during the day; he worked at night. The father would pick up their son, who would spend the day with him. He would drop off the boy at his mothers about 6 p.m. The father would get a few hours sleep and go into work about 11 p.m.

The mother was the first one to say that her son had a better relationship with his father because he spent all of his time with him. The parents were not particularly fond of each other, but had apparently been mature in working together for their son.

The second time I saw Anthony, I asked if he wanted to draw a picture. He agreed to draw me a picture if I would tell him what to draw. I said, "Okay, why not draw your family." He told me, "This is Mommy. This is Daddy. This is me." He also told me "This is the baby on TV," and then he said it was a Teletubby. The mother was about 4 months pregnant, and the baby on TV was the sonogram picture that Anthony had asked to carry in his pocket.

In the picture, Anthony and his father were exactly the same except for size. Both of them could see the world. They could not run away because they did not have bodies. They could not scream for help because they had no mouths. They could not hear what was going on around them because they did not have ears. They kind of floated around, vulnerable to the environment. Both of them had no power or control over the world to react to it. Both of them had no control over their lives.

The mother was very similar, but the mother had a mouth. Even though it was kind of crooked, the mother was smiling. The mother was engaged at the time, happy with her fiancé, happy that she was pregnant again, and had a rather good job. While she was still not in control in her world, she had more satisfaction than either Anthony or his father.

He is only 3½, but Anthony has a good sense of what the world is like for his father and himself. His father was taken from him, not because his father walked out, but because the police came and took his father away. His father cannot come back to Anthony; Anthony cannot live with his father. It is beyond the control of both of them.

If I may limit my comments to what happens in New York: When Rudolph Giuliani was first elected mayor on a platform of being tough on crime, he changed a long-standing process of arrest in New York. Prior to this, before the police entered a person's home, the children would usually be taken to another room so that when the handcuffs were placed on the adult they would not see that. Giuliani made this procedure one of his first changes. The police are now expected to put handcuffs on the person to be arrested as soon as he or she is seen. Thousands of children in New York City have seen the arrest of their parent by uniformed people in their home, which is the only safe place they generally know. They also have seen their parents—mostly fathers—go from being "Daddy" to being a criminal.

If you are watching TV, reading a book, or listening to the radio, and all of a sudden people come storming into your house to arrest a loved one, your sense of security and well-being is absolutely shattered. It is almost permanently shattered: If this happens to father today, what is to prevent this from happening tomorrow to mother? What is to prevent this from happening to grandmother? To me? To anyone that I love?

Once a person is sentenced in New York, the Department of Corrections can assign them to any place they want or any place there is room. New York is a big state geographically. A family in Brooklyn may have a father sentenced to a prison at the Canadian border, a 7 to 8-hour car ride away. The geography makes it almost impossible, in terms of time and money, for face-to-face visits on a continuing basis.

To go into prison, a child has to go through metal detectors; he has to take his shoes off; he has a magical wand scanning his body; and he has to show ID, proof of who he is, just to get in to see father. Visiting rooms in state prison are generally alike. They look much like school cafeterias with smaller tables. Generally when the family comes in, they are assigned a table. One seat is reserved for the inmate; all of the inmates face forward. In the front of the room on a tall desk is a corrections officer, who oversees everything.

There are different rules. For example, in some prisons in New York State, almost all inmates are allowed contact visits where you can touch a loved one. However, in other prisons, a father cannot hold his child on his lap. You can hold his hand or kiss him, but you cannot hold the

child on your lap. In many prisons, you cannot bring in anything from the outside, so the child cannot bring in a drawing or a Father's Day card. If the child is older, he cannot bring in a report card. Anything that would be done to encourage the father-child relationship is forbidden.

In New York you cannot bring in food, but you can buy food from vending machines in the room. The inmates are not allowed to cross the big yellow line in front of the vending machines; they are not allowed to touch money. It is bizarre to witness. A father and his child walk up to the line, then the child walks up to the machine, inserts the money, and selects the food items. If they need to be heated, the child walks to a microwave, and then serves the father. It is a complete role reversal. With young children you often see looks of confusion: "I used to go to the store to buy candy with Daddy and he always had the money; I picked the candy, but Daddy paid the man." In prison, it is the opposite. The child becomes the adult.

A child also picks up nonverbal cues in the visiting room. At different times during the day, they have what is called the count, where everyone in prison has to be counted to make sure that nobody escaped. If you are in the visiting room when they have a count, all inmates must stand and everybody else must sit. This means your father along with all of the other men dressed in green stand up. It is a rather humiliating process that goes on for 2 or 3 minutes until they count all the people there. The child starts picking up nonverbal cues between the father and the officers, very often anger or fear. The child associates the father's anger or fear to other people in uniforms.

Almost 100% of the children I have worked with, from very young children to adults in their 20s, talk about an absolute terror of people in uniforms. The closer they are to their fathers—I am speaking of fathers because that is where my experience is—the more that fear exists. Young people have to work to overcome that fear, particularly when they become adolescents. It can become self-destructive. I worked with a young man who at age 16 decided to smoke marijuana literally around the corner of a police station. He was caught and arrested. His mother went down to see him and bail him out. She said, "What were you thinking?" He said, "I just wanted to show the cops that I could do whatever I wanted."

There are two major ways of communicating between parents in prison and children. First is telephone calls. In New York State and almost every other state, phone calls are done through a contract system. The State Department of Corrections contracts with a phone company to provide all the phone services within the state. The phone companies pay a fee and vie for the contract. They are also supposed to give a certain amount of money to the communities where the prisons are located.

The only way a parent can contact a child is by making a collect phone call. They cannot pay for it; it has to be collect. You cannot bypass the contracted company; you have to use the state system. It is usually 3 times more expensive to call from prison than calling from a street phone. It is 8 to 10 times more than if you were calling from someone's house collect to another house. Phone calls add a huge burden to families that are already strapped financially. This also causes more tension and stress between the parents. The mother, who has to raise the children alone, deal with the stigma of the father's incarceration, and carry all the financial burdens and child-care responsibilities, has to now incur a tremendously high phone bill in order to have her children speak to their father.

Often the phones have a timing mechanism. It is kind of like Russian roulette, depending on who is working the phone system in the prison that night. A father can be in the middle of a sentence and the phone will just click off. Occasionally a little beep will let them know they have 30 seconds, but that is not guaranteed. A child can be talking to her father and in the middle of saying something gets cut off. The child's sense of abandonment is reinforced again.

The other major form of communication is letters. I personally find letter writing the better alternative because the child has something tangible. Children whose parents are in prison often sleep with the letters under their pillows. Letter writing assumes that the fathers are comfortable writing. Many men come to prison barely literate. For an adult who is unsure of their writing

ability, to write a letter is an emotionally draining task. Often letters are stamped with a red stamp saying that this letter was generated from a prison in the State of New York. It is a large stamp, taking up almost half the letter. If you live in an apartment building and your mailbox is not secure, this red stamp sticks out. It adds to the social stigma and can be embarrassing for children and their caretakers.

In my classes, the men often say that they write their children, but the children do not write back. For a child who is 10, 11, or 12 years of age, writing is seen as a chore, as an extension of homework. Think back to when you were 12 years old and your mother asked you how your day was. You said, "Okay." If she asked, "What's new?" you said, "Nothing." Not only does the child hate writing, he has nothing to say when he does.

During conversations between incarcerated fathers and their children, children will often ask when their father is coming home. The Number 1 answer is "Soon." Children have a different sense of time than adults do. I tell my classes to think back to when they were little and waiting for Christmas, their birthday, or the last day of school. It never came. Time moved very slowly. The parent is constantly raising the child's expectations. "Soon" to a child means this afternoon or tomorrow morning or at the very most, on Saturday. A more honest answer is, "I don't know." Few people are sentenced for an exact time. Most get out on parole, which is beyond the decision of an individual inmate.

Fathers have this need to tell their children there has been a mistake, and they are innocent. Whether true or not, it is extremely dangerous and damaging for the child. The children learn that if their father did not do anything and still ended up in this place, they can end up in this place as well. Or, mother can end up in this place without doing anything too. It makes the sense of abandonment from the lack of security when the father was arrested become an ever-present wound.

Lee: Not only do parents lie about how long they are going to be away, some lie about where they are. There are many children whose parents simply disappear, and mother, grandmother, or the caregiver simply says that the parent has gone away, and the children literally have no idea. There are many children dealing with a variety of lies centered on their parents' incarceration.

Question: We have an Early Head Start program serving women incarcerated for drug and alcohol abuse. The Early Head Start program is on the site of the in-patient program. Our staff is experiencing challenges in terms of how they view the mother and child versus how the system views the mother and child, in terms of not allowing the mother to visit as punishment. The mothers experience lockdowns, and there is no contact. Do you know of training resources, to work with the prison people toward mutually acceptable ways of dealing with this?

Lee: I can send some information to you. Some correction systems have begun to understand that training staff on the importance of the parent–child relationship helps with safety and behavior. There is anecdotal evidence that if prisoners have visits with their children they are more manageable. If you approach it from the angle of what is in it for them, you are able to get them to buy into it. There is training you can do with correctional staff to help them see what is in it for them. It also has to come from the top. You have to have a warden who is willing to support it, so that is where you start.

Question: Who are the inmate parents accepted into the program? How do you choose which parent is going to be allowed to see their children more or be more involved?

Mazza: In our program, it is any inmate who wants to participate. The facility generally has a cap of 40. Usually I start out with about 50, but in prison you lose a lot of men to attrition; some get transferred out, some get paroled, and so forth. We are the only program at Sing Sing,

and Sing Sing has 2500 men. Many of the men start the program without any contact with their children; part of their personal goal is to reestablish contact.

Lee: Most of them are volunteers. There is a waiting list to get into the parenting programs just so they can have contact with their children. The only screening that I am aware of has to do with whether or not they were abusive with that child or murdered a sibling.

Question: What about killing a parent? Or anything like that?

Mazza: Usually with the killing of a parent, it is left up to the child whether they want contact with the father or not.

Lee: I know a great story of a father and child who were recently reunified. He had murdered the mother, and the child was placed with the maternal grandparents. The reunification process started with the maternal grandparents, and then the child was brought in. A lot of healing was going on. I think that is important.

Question: Do you find there are differences within each group, for the children and their responsiveness to these programs with their parents? Younger children, I assume, just want to be close. As a child grows into adolescence and wants separation and independence, how does that affect reunification with parents when there are already abandonment issues?

Mazza: My sense and my experience is that those relationships that were strong when the child became an adolescent continue pretty well. It is more difficult for a father who has not seen his child in 13 years to start a relationship with a 15-year-old.

Lee: There are a lot of children who are growing up without their parent ever being part of their childhood. They are going into prison at 18 or 20, getting 10 to 20 years; so literally the children are toddlers when the parent goes in and adults when the parent gets out.

Mazza: I worked with three people in their early 20s, all of whom grew up with their fathers in prison from the time they were 2 or 3 years old. All of them had close relationships with their fathers. When they turned about 19, they started getting extremely angry at their fathers.

Two of them went away to college; one got his own apartment and worked. As they became adults, they saw how difficult their childhood was because of the incarceration of their father. All three stated that they knew it was a stage they were going through and their relationship would improve, but for now, they just could not stand him.

Question: Going higher than the warden: If there is evidence that children with good relationships with their incarcerated parent are less likely to have problems, how has this impacted on people making policies about incarceration?

Lee: As with everything, policy lags behind. It will take a while before policy makers respond to the research. Right now we are doing this in individual situations, settings, and communities. As the voices become louder, you might have policy makers responding.

Mazza: I have worked with people on the state level. I am always amazed at how incredibly candid they are when you meet with them individually. They say that to be reelected, they have to be tough on crime. Anything that gives the slightest perception of being soft on crime, their opponent will grab. Intellectually, they know these programs work and that they are helpful, but their job—and they honestly say this—is to get reelected, and they will not change it.

Lee: For whoever you are approaching, think about what is in it for them. For the policy makers, focusing on the children as opposed to the incarcerated parents may encourage them to make a change or support something different; because we can all support what is happening with children. You are not going to be doing something nice for a prisoner; you are doing something important for children.

Question: DC is unique in that our male prisoners are in all 50 states; female prisoners are only in 5 states. We do not even touch our prisoners until they come back to the District of Columbia, and that is a challenge in itself. I am sure there are people in DC who would love to travel 7 or 8 hours instead of 2 or 3 thousand miles. How do you keep children in the District of Columbia connected to their fathers, when the latter are incarcerated in Arizona?

Lee: Again, look to the dedicated professionals that have been trying to meet these challenges. In DC, Hope House and Family Ties have both been trying to break down barriers. Hope House set up a video-conferencing system with a prison in North Carolina and one in Ohio, so that the children can see and talk to their fathers. Certainly, closing DC prisons created significant hardship for families. The federal prison system is, however, trying to address this problem. They recognize that the DC population is unique.

You can also work with the decision makers. Talk about what is important to them: how to get people out of their overloaded system. Talk to them about how you can support their work and reduce their numbers, reduce their behavior problems, increase their success while getting access to inmates on behalf of their children. I would work at it from two angles: looking at what is working and how we could build on that, and looking at the policy and decision makers within the system.

Mazza: I had a student who was incarcerated near New York City. His daughter was about 8 hours away, and she was about 4 or 5 years old. He decided to work on weekly projects with her. Their first project was "Things That I Love to Eat." He went through magazines, made a collage of his favorite food, and mailed it to her. She did the same and mailed her collage back to him. It is certainly not the same as working on a project with your child, but it was an exchange the daughter looked forward to. She liked organizing them for her father, and it helped strengthen the bond between them.

Question: Is there any correlation between the new federal fatherhood initiative and the work you are doing?

Lee: The President and his administration are looking at how to strengthen fathers' roles in children' lives. The President talked about this population of children in his State of the Union address in January 2002. People are starting to pay attention to how you can strengthen that relationship and why it is important.

Comment: I am director of a Head Start program in Seattle. We find that, when we do an activity that is meant to include fathers, brothers, grandfathers, and a wide variety of other males come. We have never taken into consideration how we can minister to children who do not have a father or whose fathers are incarcerated.

Lee: People get creative. Mazza just gave an example of people within prisons finding creative ways to parent. Here is another story: A mother and father who were dealing with an adolescent with a lot of behavior problems set up a behavior modification program. If he did everything he was supposed to do during that week, he got the 15-minute phone call all to himself. That was very successful.

We need to find ways to encourage one-on-one activities or facilitate visitation. The barrier in terms of transportation is not just distance; it is physically how to get from here to there. Is public transportation available? Most prisons are out in the middle of nowhere, and families living under the poverty level do not have cars. If you are looking for opportunities to facilitate those relationships, getting them there is half the battle.

Question: Can either of you offer assistance about how to explain to a child why the parent is not there?

Mazza: We spend an enormous amount of time on that. There is no concept of family secrets. We often ask fathers to think back to when they were children and their parents kept secrets from them. It is healthier and more honest for children to know that father is in jail, and he has to stay there, because he did something he should not have done. Keep it general. If it is a horrible crime, there is no need to tell the child the specifics. However, they do need to know. One day some aunt, uncle, or in-law who does not like the father is going to tell the mother, "You know, that bum has been in jail for 5 years." The child needs to know beforehand.

That is an issue right now with Anthony. Both parents agreed that he should be told. He is going to a private grade school and the mother is afraid, because he is so chatty, of him telling everyone in class and being stigmatized by the other children. Because everyone else in the class is White she does not want to reinforce the image that Latino men are all crooks. She understands it is important for him to know, but she is fearful of the consequences. We are going to try to work on that in a family session.

Lee: The most successful parenting programs start with taking responsibility. That is session Number 1. I was at a federal prison last week where the inmates talked about why it was important to take responsibility for why they were there and be able to communicate that to their children.

Question: Is there any coordination between what the incarcerated father would say and what the mother says to the child?

Mazza: There has to be. It is confusing enough to the child. Despite how the mother and father feel about each other, they have to coordinate their efforts together and give the child the same message. If there is a difference of opinion, I usually negotiate that individually. I usually do not have a family session. I am doing a session with Anthony's family because there is an issue of why the mother does not want to tell the child. The reality is that the parent who is caring for the child generally has the final say. We talk a lot about that. The father is in prison, the child's mother has the child 24 hours a day, 7 days a week. The fathers cannot give back-seat advice of how they want the child raised.

Comment: I work with Head Start in Montgomery County, Maryland. Each year we have an estimated dozen children with an incarcerated parent. Our psychologists generally work with the mother to help her know what to say. However, we never know what is happening in prison; the only way to get to that is through the family.

Question: I am curious about programs that help the parent and child when the father or mother is released from prison. Like the case of Anthony where the father was the primary caregiver, he has problems adjusting to his father leaving him. Are there programs that help people in that transition?

Mazza: I just received a research grant on this issue. I am studying seven families for 6 months. I am looking at the expectations of the incarcerated parent and the expectations of the families and how these adjust in the first 6 months.

We tell the men they cannot make up for the lost time. Lost time is lost time. Second, they cannot walk into the household saying, "Daddy's home. Things are going back to the way they used to be." They have to adjust themselves to the way the household has become, whether they like it or not. Once the family starts reconstituting itself, all of the relationships are going to be affected and change will happen, but the change cannot come initially. They cannot decide there will be a different bedtime just because they want a different bedtime.

Lee: We are only just looking at reentry programs in general. The first glance was employability. How do we make sure people coming back into communities have jobs? Now they are starting to look at how to reintegrate them into their communities and families. People are starting to look at how they can do that, but there is no broad-based work taking place. It is an opportunity to be able to shape that effectively.

Question: In the research, the teacher component is coming up. Teachers have to learn to talk to and support children who want their teachers to know what the family may not want them to. How do you deal with those levels of communication? The next step will be that of including teachers as part of a system of care for children.

Mazza: Teachers have to become insightful and honest about what that stirs up within them. People tell me all the time that I am crazy, or that they admire the fact that I teach in a maximum-security prison. These people have never been in a prison. It is probably the safest classroom I have ever been in in my life. People have this image of what prison is like, what prisoners are like, what families of prisoners are like. We need to come to grips with our own potential prejudices, because that is going to influence our relationships with the children.

Lee: One of the best ways to put this is, "Why punish the children?" Our reaction to them and the stigma being attached to them is punishment of an innocent victim. We need to start there in our support of children of incarcerated parents.

Perspectives From Providers of Services to Families and Their Children Experiencing Domestic Violence

CHAIR: Harry Wright
PRESENTERS: Sandra Graham-Bermann, Alicia Lieberman, Joy Osofsky

Harry Wright: Welcome to the session on Perspectives from Providers of Services to Families and Their Children Experiencing Domestic Violence. We have a wonderful panel who has experience working with children and families who are affected by domestic violence. I will introduce the panel in the order in which they will speak.

Sandra Graham-Bermann is a professor in the Department of Psychology at the University of Michigan. She is also Director of the Interdisciplinary Research Program on Violence. She has a recent book titled *Violence in the Lives of Children*.

The second speaker will be Joy Osofsky, Professor of Public Health and Psychiatry at the Louisiana State University Health Science Center. She is also Director of the Harris Program and currently Vice-President and President-Elect of the Zero to Three organization.

The third speaker will be Alicia Lieberman, who is Professor of Psychiatry at the University of California, at San Francisco. She is Director of the Child Trauma Research Project at the university and her expertise is working with children with trauma.

Sandra Graham-Bermann: Thank you. I am going to talk about an intervention program for children exposed to domestic violence. I want to start by addressing the prevalence of domestic violence in the lives of children, some of the effects, and then, the intervention program that I directed.

The first studies that were conducted on the topics of domestic violence in the lives of children were in the 1970s. The research examined the issue of violence, particularly hitting or physical violence and childhood aggression resulting from childhood exposure to that form of abuse. The outcome data showed that an association existed between aggression and exposure to violence in the home. A direct effect model characterized those studies, however, we now know that there is more to the picture. An expanded model, still with a direct effect paradigm, shows that domestic violence includes a number of factors, such as physical violence, emotional maltreatment, and sexual assault, and that trauma may exist whether the child has been an eyewitness to these events, or not.

Outcomes can also be expanded to include whether the child who has been exposed to violence becomes more aggressive and if he or she suffers lags in general social-emotional development, for example, in social relationships with others, emotion regulation, regulation when exposed to trauma, and the development of resiliency. Are there some children who manage to survive relatively intact? Among those who have trouble in the beginning, do some become resilient? Are they better able to cope over time? Is there any way we can evaluate that aspect of the problem?

One of the first studies on battered women and their children, who were not living in shelters, consisted of a sample of people from the greater Washington community in Michigan. There were 221 families with children between 5 and 13 years of age. They were mostly low-income families, but there was variation between those who had no money and those who could get by. There was a range of ethnicities represented in the study, but half of the children, 48%, were from minority families; that is, African American, biracial, or Latino families. The average age of the children was 8½ years. The average age of mothers was about 33 years. Most of the mothers had completed high school and often they had some additional training, including technical training.

The measures of domestic violence exposure used for the study included the Violence Against Women Scale, created by Linda Marshall (1992), which is the gold standard for assessing violence in the lives of women. The evaluations were completed at three separate time points at five sites. We wanted to know whether children who had witnessed the abuse had experienced traumatic reactions, as there is a difference between having witnessed the violence and being terribly upset and damaged by it.

We then examined the violence demographics, which is a new area. How many violent partners has the mother had? Did the mother of the child become injured during the violence? How long was the relationship? How much did the violence affect the child? Is there still contact? We found that mothers may leave the abusive partner, but that the children often remain in the relationship with the abuser.

These were some of the significant findings. Mothers reported that 96 times in the last year there was an incident of coercion, that number breaks down to approximately twice a week. Again, the children are witnessing the coercion. Threats occurred 46 times a year, about once a week. Now realize, a threat can have the same effect as continual abuse by someone. If you raise your hand to someone after they have been abused or beaten, it can retraumatize the person and have a terrible effect. Sexual assault, ranging from unwanted touching to rape, happened about every other week. Mild violence, meaning pushing, shoving, slapping, or hitting happened 19 times a year. The number of events of severe violence, that is, beaten up or injured, was 11 times per year or nearly once every month.

Our sample of mothers were those who were severely exposed to violence, which is unusual. Often, people study domestic violence and they include arguments that all of us have in our relationships. We should, therefore, be cautious about what is being measured. Interestingly, the length of the relationship was almost the entire life of the child. The average age of a child in the study was 8½ years and the average length of the relationship with the abuser was about 10 years. Eighteen percent of the mothers were still living with a violent partner and 69% had contact every other day on average.

Even though the mother has left the batterer it does not necessarily mean that the child is no longer exposed to the violence. Some mothers told us that the abuser was the child's babysitter, so how could they ask him to leave. The fathers are part of the picture, whether or not the mothers consider themselves to have separated from the abuser.

There are many types of exposure to violence. Thirty-six percent of the children in our sample were physically abused and 4% were sexually abused. The history of family violence as well as the context of ongoing mild violence, coercion, and threats creates an environment for the child that is difficult to cope with and that hinders the child from recovering. People talk about post-traumatic stress disorder (PTSD) as though the traumatic event happened once and then ended. That is a misnomer. PTSD is a chronic condition for children who are growing up in families with violence. What is the impact on the mother? We know that a number of women die when they are beaten and abused. Eight women in Michigan die each month from domestic violence. That number has not fluctuated significantly over time and it is not unusually high.

We are beginning to study injuries—the effects of injuries and the kinds of injuries that women have as a result of domestic violence. Numerous studies by emergency room care workers are starting to document domestic violence injuries, and certainly anxiety. Seventy percent of the mothers and 12% of the children in our study had an injury that required attention, 0.05 % of the partners did. So, when we read that there are equal amounts of conflict between men and women the results of those conflicts are hardly even.

Most battered women are emotionally traumatized, particularly in the more severe cases. Women who are battered tend to have lower self-esteem and the violence they experience negatively impacts their parent efficacy. It is much harder for them to maintain a household. Imagine trying to save your own life on top of trying to keep order in the house and trying to keep things quiet. In that context, parenting becomes incredibly difficult and stressful. Mothers are depressed and they are often socially isolated. I had a graduate student who did her disserta-

tion on the work of battered women. She found that many of the women were restricted from leaving the home to make money and advance their lives.

We have come a long way in understanding the impact of domestic violence on the child. At least half of the children exposed to domestic violence show symptoms in the clinical range for internalizing problems such as depression, low self-esteem, and anxiety. There are trauma symptoms and actual PTSD. PTSD victims tend to have more difficulty with social skills. The ways that these children have seen conflict resolved is unproductive and inappropriate when it is transposed to the school setting.

In our current study of 3- to 5-year-old children enrolled in Head Start programs in Jackson, a town in Hillsdale County, Michigan, approximately 40% of the families were affected by domestic violence. About 38% of these children are also exposed to severe violence in their communities and these are small cities and urban rural communities. Therefore, it is a salient issue for children in Head Start, as well as for their families.

Children who grow up in a family with violence have different expectations about their future than children from better functioning families. They have an unusual perception of what it means to be a man or a woman, a mother or a father, and a boy or a girl. Most children in the intervention program present a rosy picture when asked to describe their families in the future.

However, we also have children who are traumatized by what they have experienced. They cannot imagine a normal family in the future. One 8-year-old girl who lived in a shelter in Ann Arbor told us that she did not want to get married because she was afraid that she would pick the wrong man. There was a 6-year-old boy who drew a picture of his family with two people in it. We asked him who the people in the picture were. He answered that is was he and his mother. We asked him what they were thinking. He told us that his mother was happy because she had a nice family. He said that he felt silly because it was weird to be dead. When asked what his mother was feeling, he said that his mother was sad because he was dead. We asked him how he felt, and he said that he was mad because he was dead. We asked what happened before, and he said, "I was alive. I was happy. I died of cancer and my mom got hit." There is this conflation of negative things happening in the family.

I want to discuss the results from two studies of traumatic exposure. The first study was with children living in shelters in the community, a combined sample. The second study was an intervention study of children from families afflicted by severe domestic violence. We asked mothers to talk about 17 symptoms that are listed in the DSM-IV to describe their children's traumatic reactions. This is not the most reliable measure, but it is one way to obtain relevant data. Since then, we have begun to develop more age-appropriate measures.

The DSM-IV criteria for PTSD are based upon mothers' reports of children exposed to violence and disturbed by violence and the symptoms that persisted in the children past 1 month. According to these criteria, we found that 52% of the children in study 1 and 77% of the children in the intervention study had symptoms of traumatic reexperiencing. These symptoms included nightmares, flashbacks of events they did not want to remember, intrusive play, suddenly having themes of violence occur, and being able to complete a given task.

It is difficult for children to avoid being exposed to domestic violence because they are taken to places by their parents and are ultimately under their parents' supervision. They do not necessarily choose or decide where they want to go. We have found that they avoided people or situations that reminded them of the violence. In one of our studies, 60% exhibited avoidance behaviors. Think of the children who witness abuse every other day. They do not have a chance to recover or avoid the circumstances.

For studies 1 and 2, 42% and 85%, respectively, experienced traumatic arousal. They were physiologically aroused and startled easily when reminded of circumstances related to the violence. To put these numbers in perspective, 13% of the children in the first study and 51% in the intervention study had full-blown post-traumatic stress disorder, which is defined as people who have seen horrific events outside the realm of normal human experience. These children go to school everyday and they try to move on and deal with their lives. This makes the case for

specific forms of intervention that are curtailed to each child and their needs. Some children seem to be coping. Others are in trouble. How can we make sense of that?

We clustered particular outcome measures of child behavior, checklist scores, the Child Development Inventory (CDI), depression, and positive outcomes of self-worth and social self-competence from children's self-reports. Teachers and mothers evaluated their children on the Child Behavior Checklist (CBCL). We found five different profiles of child adjustment. Younger children are more at risk for having severe problems because of their age. They cannot make sense of the abuse and they cannot get away from it.

Twenty-four percent of children in the study of 221 families had severe problems. They had high internalizing problems, high externalizing problems, moderate levels of depression, and low competence. This is compared with about 2% in the national average. Eighteen percent had moderate-level problems. Nine percent had only depression. These children had low internalizing and externalizing problems, low competence, and they were clearly depressed. A number of these children were suicidal. You may not think about young children as having this type of an outcome, but it is possible.

About 25% of the children in our study appeared to be doing fine. They did not show particularly high self-regard, but they did not appear to have many problems as well. Although we cannot predict their future, at the time of the assessment they were managing. Twenty-two percent displayed high regard, but they also had some serious problems. This is an interesting group of children; They had false positives. They report that all is going well even though this is not supported by their scores.

To determine if a child needs help is not a straightforward task. When assessing the effects of violence on a child's adjustment, there are numerous factors that determine the outcomes in a child. The risk factors can include temperament issues of the child, poverty, community, exposure to violence, and lack of resources.

Our intervention program consists of 10 sessions and a parenting component. We are currently adapting a few more sessions for children who are in shelters. In the Kids Club, a program with a component for both 3- to 5-year-olds and school-age children, we try to improve children's social skills and help them to identify their feelings and their fears. We want the children to enhance their coping skills and safety planning skills. We help them understand conflict resolution, placing an emphasis on the fact that the abuse is not their fault. The self-blame issue is a salient one. We try to help them think a little bit about families and what they can be like in the future.

For these children, having a chance to share their issues and receive support from others is important. In one study, 52% of the mothers reported that they did not talk to their children following a violent episode. These children receive no information about the event. About 10% of the mothers implied that the child was to blame. In my opinion, in addition to working with parents, the group paradigm is essential for working with children.

In our children's group sessions there are two group leaders, five to seven children in each group, and the groups run about 45 minutes to 1 hour. There was real success when the mother was included in the treatment. We were with these families for a number of years and we learned much about their lives. The children were assessed at three time points: (a) before the intervention, (b) at the end of the 10-week program, and (c) 9 months later, which is approximately a 1-year follow up.

We were able to reduce the children's internalizing symptoms such as anxiety. There was also success with externalizing symptoms. Trauma symptoms decreased significantly for children who participated in the intervention. They were able to identify their anger, although this technique is considered controversial. The children were more cooperative, able to show more support for the people in the group, more likely to be included, and more likely to show empathy towards other individuals. These are all important social outcome variables.

However, we were not able to affect depression. The high-regard group displayed a significant change over time, where their problems replaced the high esteem that they had reported prior to

the intervention. That was something to examine and consider further. These children do not present with many problems, they look like they are doing well, but they may get worse. In addition, there were some areas related to temperament, such as impulsivity, reactivity to other people, and getting frustrated, that the intervention program did not address. Overall, the program made significant changes in children's behaviors and their emotional outcomes. It reduced severe problems by more than half and affected approximately half the children who had moderate problems.

The results to the longitudinal study with preschool children are not available at this time. The study examines community violence and media violence as well as family violence.

Joy Osofsky: The title of my presentation is "Community Outreach for Children Exposed to Domestic Violence: Relevance for Head Start." I will begin by talking briefly about the broader violence intervention program I am involved with in order to provide the context and, then, discuss specific aspects we focused on in our work related to education, consultation, treatment in child care, and Head Start programs. I will finish by talking about an unusual program in Miami for which I am a consultant. This will give you a sense of the different types of activities in Head Start.

The Violence Intervention Program (VIP) for children and families uses a systems approach to prevent violence. VIP works with the whole community: (a) schools, (b) parents, (c) child-care centers, (d) police, (e) religious institutions, and (f) community agencies. The underlying belief of the program is that there must be change in communities in order to prevent violence. The program started in 1992, and it has been 10 years since our initial needs assessment of police, children, parents, and teachers in which we attempted to measure the level of violence in the community.

A program for educating police about the impact of violence on children was developed based on the needs assessment. Most of the training is done during their roll call and when we talk to them about how violence impacts children. We use the officers' experiences of going out on calls in which children have been traumatized; it has been an effective approach. We also have a 24-hour hotline for families and members of the community.

In 1998, VIP joined Cops for Kids, a summer program that was started by the police.

They were concerned about the children who were out of school and contributing to juvenile crime. The program is based on what the police officers had heard during our talks—how children are affected by violence and what can be done to help them. The children in the Cops for Kids program range from 6 to 17 years of age. In the morning, they work on academics or character-building activities. In the afternoon, they are taken on trips to places outside of the area where they live.

Over the first two summers of the program's implementation, Cops for Kids found a remarkable decrease in juvenile crime. During the first summer they found a 45% decrease and in the second summer there was a 55% decrease in the additional areas impacted by the program. The police said it was a result of the children's raised level of awareness about violence. In 2000, the program was expanded through Safe Start.

Safe Start is a program designed to reduce and prevent exposure to violence from 0-5 years. It provides training for police officers, community agencies, and child-care providers. There are services for young, traumatized children, especially those exposed to domestic violence. We trained professionals working with the program to pay more attention to the children who were present when responding to a call and not only the women. If they identify a child who has difficulties, they can refer the child to us for treatment or overall case management and services.

We also have an initiative with the child abuse unit of the police department where we provide training, consultation, and services. Most of the child abuse cases handled by the unit involve young children, so this program has an early impact on the child. In addition to training units in the New Orleans police department, we conduct training sessions with school resource

officers. We have given presentations with trained police officers at the Department of Justice and we also provide national consultations for Safe Start and violence prevention programs.

Recently, we have expanded our work with the police and have become involved with the Early Trauma Treatment Network. This network has four sites around the country and is pioneered by Alicia Lieberman in San Francisco, Betsy McAlister-Groves in Boston, and myself and Charles Zeanah at two sites in New Orleans. We are attempting to develop state-of-the-art assessment and treatment protocols for young, traumatized children. The other area of expansion comes from a Packard Foundation grant, and studies the co-occurrence of child maltreatment and domestic violence. We are attempting to develop protocols that can be used within police departments to gather the information that will allow us to identify and reach children at an earlier age. Our interventions with young children who have been identified take place in our infant and child clinic as well as schools, Head Start, child-care centers, and other locations in the community. The aim of the intervention is to decrease violence through early intervention; counseling; services to victims; and education forums for police, parents, children, teachers, and child-care providers.

I want to share some of our police data from 1999. The majority of the 464 police officers we surveyed made referrals to VIP. Only 43% of the officers had not made a referral. We provide all of our services free of charge. Usually the police go into the community and hand out VIP cards and hotline call cards. Then, the families will call in, which is the most appropriate way to receive referrals. Fifty-five percent of the police said that most of the time children were present during the violence and only 22% said children were rarely present.

One of the purposes of the Packard Foundation grant, where I am working jointly with John Fantuzzo and Wanda Mohr, is to adjust police protocols to obtain more information about children who are exposed to domestic violence. The revised protocol that we have submitted contains the following questions: (a) Are the children present? (b) What is the age and sex of the children who are present? (c) Are the children in the same room when they witness the event? and (d) Are the children also victims? The answers to these questions give us better data from the police department in order to provide optimal services.

When we asked the police if children who witnessed domestic violence show the same signs of distress as children who are physically abused, 64% stated that this is the case. They agreed that domestic violence has as significant an impact on children as child abuse. Seventy-five percent of the officers disagreed with the statement that babies are not affected by witnessing violence, as they are too young to understand what is happening. It is not clear if this perception resulted from the training, but it does appear that with training the officers become more aware of the effects on violence on children.

Our training for Head Start parents and staff included the following: (a) reviewing types of violence and how children are exposed, (b) discussing the impact of violence on young children, (c) addressing how certain factors will influence the intensity of children's responses, (d) teaching how to respond to an exposed child, and (e) learning when and where to refer for professional services. We feel that Head Start is a highly appropriate group to train as there are many young children in Head Start centers who are exposed to violence. Through Safe Start, we conducted 15 training sessions with 115 staff members, including 16 home visitors, 30 directors and supervisors, 42 social workers, and 27 teachers, and 99 parents at eight different centers. After the training our qualitative evaluation found that 72% of the staff said they were much more aware of the effects of violence on children and 66% found the information useful. Sixty-five percent of the parents reported that after the training they were better equipped to protect children from exposure to violence. Almost the entire group of parents and staff understood that if children are affected by violence, they should talk with them about it.

Those of us who have been working in the area of trauma know that what happened in New York City and Washington, DC was awful, and a huge number of families and young children were traumatized. Children who live in communities with violence are traumatized

every single day of their lives. It is a different type of experience, but terror does exist in their communities. People need more education about how to identify trauma in children and help these children earlier.

Starting Secure, a program funded by the Louisiana State University (LSU) Tulane Medical Centers, is another program that provides intervention and services for child-care facilities. It is essentially an intervention, evaluation, and treatment program that provides an array of clinical services, such as individual treatment, consultation, and close observations. About 75% of the Starting Secure work is with eight Head Start or Early Head Start centers. At these, many of the children, approximately 580, are considered high risk. All the services are provided on site.

I want to talk briefly about Safe Start in Miami, because it is a unique program. The project director is Lynn Katz, and Judge Cindy Lederman provides the court oversight through the 11th Circuit Juvenile Court. The implementation plan was to establish and maintain the first juvenile court and early intervention collaborative program for infants and toddlers who have been exposed to violence. The program works with a Head Start program that is devoted to children who come through the court system.

Many of these children are referred to Dependency court, which is for children who are abused and neglected. The majority of the children are under the age of 5 years with an overwhelming number under the age of 1 year. The goal of the program is to expand services to the over 300 Head Start children and their families. The program includes several components: (a) parenting workshops, (b) integration of the Safe Child Program (an education program) into the Head Start curricula, (c) resources for mental health referrals to Head Start clinicians, and (d) community support of the site activities in Head Start centers countywide.

The Safe Start model involves the training of Head Start staff on the Safe Child classroom curriculum for 3- and 4-year-old children and the administration of a 3-hour training module on infant/toddler mental health, developmental issues, and effects of exposure to violence on children. They have built in a research component for these court-referred cases and there is IRB approval for pre- and postevaluations. The results are shared with the Head Start social worker for case planning. This training model has been disseminated. The Safe Start team and the Head Start team work to connect eligible children with Part C services. They also work on a smooth transition from Early Head Start to Head Start.

I want to leave you with a few points in regards to working with young children exposed to domestic violence. First of all, patience is needed. Trauma requires patience; trauma also requires a supportive group of coworkers because the work itself can be traumatizing to the caregivers, to the day-care center providers, and to all the individuals working with the children. Also, recognize that survival is the initial issue for mothers, so the initiative to help the children may be difficult until mothers' lives are stable. Finally, remember that services should be made available to families across the continuum of events and points of contact with police, courts, and shelters that involve a domestic violence case.

While working with the police, we noticed that immediately after a domestic violence call, some of the mothers were too traumatized to request services. In this case, our services should be made available to them. In order to reach the children and families you have to go out into the community. If you wait for them to come to you, then you risk the cost of delay. It is best to reach a traumatized child within a few months of the trauma, especially if they are young. Intervene and help the family and keep into consideration the support structures already in place. This way, we are less likely to see 8-year-old children with conduct and antisocial disorders.

Alicia Lieberman: As I was listening to Drs. Graham-Bermann and Osofsky, I was reminded of a recent case that was referred to our program. A mother brought her 3-year-old daughter and told us that during the past year, she had become increasingly more withdrawn, had developed multiple fears, and had become frightened of separation. The child found it increasingly difficult to say good-bye to her mother when she went to preschool.

As we talked about how all this began, the mother told us that she had experienced a horrific battering at the hands of her boyfriend, who had subsequently left. The mother became depressed by the violence in the relationship and, then, by the loss. The mother sought psychiatric help for her symptoms. She told the psychiatrist that she was worried about her child who had witnessed the violence. The psychiatrist said that it was better to leave her child alone and not discuss the incident with the child because she was so young and she would forget.

This story is a reminder of how it is not only parents who, in order to protect themselves from tremendous guilt or responsibility, will try to believe that children do not understand, will develop resilience against, or will forget an episode of violence. Some professionals want to deny that young children can suffer to the extent that they do when exposed to traumatic situations.

I direct The Child Trauma Research Project at San Francisco General Hospital. It is located in the heart of the mission district, which is a neighborhood composed primarily of immigrant families from the working and lower classes. The San Francisco General Hospital is the trauma center for all of Northern California and there are referrals for both physical trauma and for psychiatric trauma.

The program is mandated to develop and evaluate different forms of intervention for children of 0-5 years of age who have been exposed to a variety of trauma. Currently, our focus is on the specific trauma of witnessing domestic violence. When the families are referred to the program there is a prevalence of maternal depression, punitive parenting, chaotic or violent family relationships, parental mental illness or substance abuse, and family trauma. By family trauma I mean intergenerational difficulties where, for example, the grandparents have witnessed domestic violence or had a history of abandonment, physical abuse, or contact with the foster care system.

Every immigrant generation has experienced some kind of exposure to violence. Sociocultural dislocation occurs among these families for many reasons; some have witnessed war in their native countries while others suffer the difficulties of being dislocated from their cultures of origin. As these immigrants come to this country they try to adjust to difficult circumstances and pervasive poverty, which I believe exacerbates exposure to other risk factors. Poverty in this country is not moderated by a safety net that protects families from exposure to crime-ridden neighborhoods, inadequate schools, inadequate housing, and lack of transportation.

In addition, environmental risk factors have an effect on the children in particular areas. One is the disruption of biological rhythms. We have found that the youngest babies referred to us, who are 3 weeks old, show an inability to regulate their states. They may exhibit inconsolable crying, difficulty sleeping, vomiting after feeding, lack of appetite, or turning away from the bottle instead of turning towards the bottle even after crying for hunger. In a chaotic environment where there is unpredictability and inconsistent care, these babies are unable to develop a secure, predictable relationship with their own bodies. That, in turn, is manifested in the disruption of their biological rhythms.

Disturbances in the quality of attachment are a second manifestation of early trauma. One point we need to remember is that the parents are also traumatized. Parents who are traumatized are sometimes unable to get out of their own self-absorption in order to look, understand, and respond appropriately to their children's needs; the parent's psychological manifestations of trauma can include preoccupation with self, survival, and personal well-being. Another manifestation of adult trauma is a tendency to get easily overwhelmed by emotional responses. These parents are often so busy trying to cope with the demands on themselves that they cannot tolerate their own children's demands on them. As a result, they respond either by ignoring their children's efforts to get support from them, or by reacting in a violent and punitive fashion, which in turn, leads to the children feeling that they cannot rely on their parents.

Another environmental factor disturbing quality of attachment is the way the parent, instead of being a source of protection and security, becomes the source of danger due to the

unpredictability of domestic violence. A behavior that we have observed in the children and families in our program is that parents can suddenly change from being empathic and loving to being irritable and punitive. The child never quite knows when to relate to the parent or when the parent will change. That is one of the main ideological factors for recreation of disorganized and anxious attachments.

The combination of disruption of biological rhythms and disturbances in quality of attachment leads to social/emotional difficulties including impassive and uncontrolled behavior, aggression, defiance, multiple fears, and hypervigilance. These children always need to monitor what is happening in the environment for signs of danger. There is also a constriction in the range of affect where these children show a predominance of withdrawal, fear, and anger and diminution of the developmental milestones of curiosity, pleasure, joy in living, and joy in learning. This lack of affect leads to impaired readiness to learn.

In our present study with preschool children, we are finding that the mean IQ of the children exposed to violence is 90, which is 10 points lower than the normative IQ of 100. How did we know that this was a result of exposure to domestic violence and other traumas rather than a result of the loss of socioeconomic status of the children? We had a control group and a comparison group matched for ethnicity, maternal education, and family composition. The children that we were studying were exposed to violence and living in the mother-headed households where the perpetrator had left the home. The children in the control group were also living with single mothers.

We found that the children who were equally poor and lived in equally violent neighborhoods displayed the same range of risk factors. Yet those children who were not exposed to domestic violence had an average IQ of 100. We concluded that exposure to domestic violence represents a specific risk factor that impairs readiness to learn.

We developed a form of intervention called Child/Parents Psychotherapy, which acknowledges the parent's integral role in the treatment we deliver to the children. In the majority of the cases it involves joint sessions with the mother and the child. We are expanding our present model to include fathers and in some cases, mothers, fathers, and children together. At this time, the core of our model is mother/child psychotherapy where the child has been exposed to the mother's battering.

The primary goal is to promote normal development by encouraging an engagement of the mother and the child with present activities and future goals. Sixty-five percent of the mothers in our sample had a diagnosis of PTSD and 85% presented clinical levels of depression. These women find it difficult to engage in the normal activities of waking up, working, going outside, taking their children to day care, and making a life for themselves. A great deal of the focus in the treatment is going back and forth between the needs of the mother and the needs of the child and trying to be simultaneously available to both members of the dyad.

We talk to the mothers about their strengths, their achievements in the past, and the opportunities that are available for them. We often go with them to sign up for courses or to teach them how to interview for positions. We try to create an atmosphere of hope and possibility. We remind them that they can do things to feel better, maintain regular levels of effective arousal, and find ways to cope with their unpredictable isolation of affect. We talk about activities that we all engage in to make ourselves feel better when we are losing control, such as exercise.

We establish trust in bodily sensations. Many of these children and their mothers are afraid of feeling because it is associated with anxiety and panic. We sit and talk with them as they experience feelings and provide emotional support. We intervene in the mother/child relationships to translate to the mother and the child what each of them is feeling. This approach softens misunderstandings, misconceptions, and negative attributions. There is a capacity to look at each other from a more empathic point of view.

Some of the other goals specifically related to trauma include: (a) accurate assessment of danger, (b) differentiation between reliving and remembering, (c) normalization of the trau-

matic response, (d) placing the traumatic experience in perspective by balancing it with the positive aspects of life, and (e) creating a safe environment.

There are six main modalities of the intervention. We often model protective behaviors because of the tendency to underestimate or overestimate danger. Unstructured developmental guidance involves talking to mothers and children as they become able to use language to express their needs. What is normal development? I cannot overemphasize that when we talk to the mothers it is heard by the child, and so, in the process of conversing with the mother we are also doing an intervention with the child. We use play, physical contact, and language to achieve developmental goals. Interpretation of linking past and present is certainly an important component, but it is one that can be used judiciously. We provide emotional support and concrete assistance with case management and crisis intervention.

Much patience is necessary during the intervention because often we make slow progress and get discouraged with the existent amount of emotional support. I think that cooperation between mental health professionals, teachers, and important people in the child and parent's lives is necessary to help children overcome the effects of trauma. Thank you very much.

Wright: We have time for a number of questions.

Hiram Fitzgerald: My question is for Graham-Bermann. Are there phenomena that require more time in order to show substantive changes? Secondly, what is your responsibility as a researcher relative to that setting?

Graham-Bermann: Good questions. Essentially, children present with numerous problems regarding how they think about families; how they act socially; how they regulate their emotions; and what they know about violence, normality and abnormality, expectations and so forth. There are, therefore, many approaches to intervention with children. Some are focused, such as the programs around trauma where a specific set of symptoms are addressed, but there are still underlying issues. Though it is complicated, the broader goal is to include the entire community into the solution to the problem.

There is a complex set of problems to address with each individual child. It is not expected that every single child will have the same problems on entry, the same level of problems, or the same duration or history. It is also not expected that the program will be able to help every child with every problem. It is important to know that there are few evaluations of interventions for children exposed to domestic violence.

There are some interventions that have been done with sample sizes as small as 10 subjects. Others are conducted without control groups or comparison groups. How do you know these children are different and in what ways? How do you know it is the treatment that makes the difference? The circumstances differ for each child; it may be that they just moved or it may be that the batterer left.

Evaluating is essential because we need to know whether our program is effective in general. Global measures such as total symptoms are used to assess effectiveness, but for whom the treatment has been effective remains a question. Who in those clusters is going to get help and who will be left out? Trying to find out whether certain conditions can be addressed is not definitive, so it is important to be able to just identify them. It is enough to say that you can help most of the children to improve some aspect of their difficulty. You might be able to ease a child's severe problem into a moderate problem. But a child's situation still needs additional forms of assistance.

Identifying who is in trouble is what we look at in the parenting intervention part of the Kids Club Program. Part of our program attempts to identify additional needs and sometimes it takes the whole 10 weeks with the family and child to get the picture. For example, using standard measures in an evaluation study you can obtain scores on suicidality to find out who is in the

clinical range. We had suicidal children in the Kids Club, and this became evident immediately instead of at the end of the 10-week program. There should be clinically trained evaluators and clinically trained intervention specialists working with the children. We included clinical training in the evaluation of this program to ensure that parents get feedback and mental health services beyond what is offered at the program.

These people need help in a number of areas and so referrals should be made for lawyers, for psychiatric evaluations, for hospitals, and so forth. Since our program was implemented in a community setting with existing shelter programs, mental health programs, and Catholic Social Services, there was a network of places where the resources were available to get the job done.

Osofsky: I have a comment about that issue as well. One of the interventions that we did was in response to a shooting at a preschool involving a domestic violence situation. We did an immediate intervention, talking about the trauma that the children had experienced. For the most part the trauma diminished within a week, except for family members of the perpetrator as well as for several teachers who had been severely traumatized.

It may be that the data are being affected by the people who have had more trauma, severe trauma, the chronic kind of loss that has gone on over time. Differences in a person's affect can be a confounding factor in situations where there is domestic violence, which is difficult to control for.

William McGuigan: I have two questions. In Oregon, it is against the law for domestic violence to occur in front of a child. It warrants an automatic arrest for both parents and is catalogued as child abuse. I am wondering if any of your sites operate under this rule. If so, how well does police discretion work? What we have found in Oregon is that, although we have passed this law, the police have a lot of discretion to decide what "in front of the child" means. If the child was in the other room, or if the child was asleep, is the domestic violence still considered in front of the child?

My second question refers to some work that I have done in an evaluation of a home-visiting program. We have looked at families that have experienced domestic violence over time and found that both mothers and fathers in a domestic violence situation developed progressively more negative views of the child. Have you looked at the parent's view of the child in some of the research that you are doing?

Lieberman: I would like to answer yes to your last question. I have read a lot about negative parental attributions. For the parents, children often represent aspects of themselves or of a situation that they cannot tolerate, and they project that onto the child. We have seen children enacting what the mother is saying about them. I think there is a tremendous need for children to believe that the parent is right, to believe the parents. So, it becomes an extraordinarily complex clinical problem. One of the interventions that we do is to talk with the mother about how her son or daughter is only a child. It takes a long time because these are often manifestations of deep-seeded mental health problems in the parent.

Osofsky: The dual-arrest policy varies state-by-state. It is an issue that has come up recently, and certainly, the domestic violence advocates are concerned. Often, the mother is implicated for failure to protect when she is a victim herself. I am suspect of that policy and wonder what kind of training police officers have when they must evaluate these situations. In our community, as I mentioned earlier, there are trainings for police, however, police are not allowed to make dual-arrests without a supervisor present. We have domestic violence detectives in each of our police districts. On the one hand witnessing violence traumatizes the child, but on the other hand, a policy like this can create a situation where children experience double loss, they lose both parents. Certainly, the training of police officers is very important under those conditions.

Graham-Bermann: In Michigan we have not had this particular crisis with the law, though the government has posed difficulties in other ways. I want to address the issue of parenting. The parenting support groups that are part of the Kids Club Program take a much different approach to solving the issues around parenting for mothers exposed to domestic violence. We have the women meet in groups to talk about their struggles, their concerns, and their hopes. It is sometimes hard to keep them focused on the topic, because they are trying to find places to live, jobs, and a way out of a difficult situation. But we find they are interested in talking about the parenting stresses they experience. They are full of ideas, thoughts, and advice about what works and what does not work. We try to bring the women together so that they can support each other and receive education from group leaders. It is a different paradigm in that it comes from the women and empowers them to go out and try something new.

Question: I have two questions that relate to this. First, is there any way that we can utilize the vast clinical work that Graham-Bermann is doing to help our teachers? Most of the children I work with need help with these strategies. The second question relates to the staff that are working at Head Start programs. We have found that the staff in Early Head Start programs are often victims of domestic violence themselves. How can this clinical material be used to help them as well as the teachers?

Osofsky: It is very difficult sometimes. Even police officers have personal experiences with domestic violence. Working with clients on these issues in the way that Lieberman described is difficult to administer except by skilled clinicians. In our programs we have skilled clinicians go out, do training, and work with the children on-site as well as with the child care providers. There is a continuum across and between service providers. What are your thoughts about that Alicia?

Lieberman: I believe in the concept of creating a continuum across service providers and the importance of having a range of interventions. These children need an environment that is going to be responsive to their symptoms not reactive, where the solutions are not to expel the child or make him/her feel "nobody wants me." This probably has a lot to do with the dropout rate in school in later years. Sometimes preschools have an active program of mental health consultation with day care; a dialogue between the classroom teacher and the mental health provider can be important. To echo what Osofsky said, we need that continuum, we need to borrow from each other's skills and we need to know when to refer as well.

Question: I was interested in Lieberman's comments regarding work with the fathers. I was wondering what kinds of programs of which you are aware that might work with fathers not just as an intervention, but as a way of continuing to deal with their family relationships?

Lieberman: The Family Prevention Fund is a national organization that runs a program located in San Francisco. They are interested in the question of prevention and helping men and boys talk with each other about issues of anger management and how to express anger and distress in their relationships. They are in the process of developing intervention programs that can be disseminated in communities. There are, at least in San Francisco, several anger management programs for men that are beginning to incorporate components that alert clients to the impact of domestic violence on children. The programs also teach ways of speaking with children about anger. These are new steps in this direction though I agree, as you say, that much more is needed.

Osofsky: Oliver Williams, at the University of Minnesota, is working to develop programs for African American men. His program works to connect the men with leaders in their communi-

ties who can guide them, give them some feedback, and join with them in trying to make changes in their families. His paradigm stresses that it is useful that men give the message to each other. I think some of the police programs work well because of that component. If a policeman says, "This is not acceptable" to the abusive husband, it goes much farther than a female therapist sitting down with the wife. It is a different approach. I think his idea of bringing it back to the community is important. It is the community's responsibility to provide resources for families who are struggling with domestic violence, as well as with other issues.

Question: I was interested in Graham-Bermann's category of high regard and how those children appear to get worse as they are exposed to an intervention.

Graham-Bermann: People cope in a number of ways with tragic events, trauma, and difficult circumstances. We all cope and deny in our individual ways. We all have our intellectualizations. We manage to get through tough times, and children are no different.

The children in the high-regard group tend to move to the moderate-problems group, meaning that they do not change in the amount of problems they experience. That they lose the illusion that everything is going to be fine is part of the intervention; that is, we help children recognize and talk about what is happening and how they feel about it.

What has happened is that the children are not getting worse; they are just getting more in touch with what is going on. They do not tend to slide into the severe group. Many of them actually went into the "doing-okay" group, where their problems were reduced while their defenses dropped. One could say that they have in fact become stronger.

Interestingly, the groups were not differentiated by the amount of violence that occurred or the history of violence in the family. One of the big differences is whether the child witnessed it and had a role in it. Did they call 911? Did they try to stop the fight? Was this the kid who got an injury? Those were the children with the more severe outcomes.

Assessment of Parental Emotional Availability: Ramifications for Children

CO-CHAIRS: Kathryn Barnard, Harry Wright
PRESENTERS: Jo Ann Robinson, Harry Wright, Rebecca Shahmoon Shanok

Kathy Barnard: Jo Ann Robinson is going to talk about a constructive emotional availability that she and several other people have been working on. Rebecca Shahmoon Shanok will discuss her work in providing mental health consultation to child care and Head Start agencies in New York City. Harry Wright is going to present work that he is doing in his agency, both with the rehabilitation center and the hospital, and also in working with autistic children.

I was interested in looking over the findings the national study of Early Head Start with 17 sites that some of us having been involved in. I found it interesting that in terms of mental health services there was no difference between families use of mental health services in the control group and in the intervention group. Twenty percent of them had access to mental health services. Yet we know from working with these populations that probably well over half of them have mental health issues.

We have to learn how to address this issue in terms of the resources within our community and within our programs of care. Therefore, we have tried to select for presentation some of the areas that might be of help toward that end. We thought that it might give you some ideas about where resources are available for doing further thinking and training among your staff.

One of the areas that I have found particularly fascinating in the past year is the concept of assessing the emotional vulnerability of both the parent and the child. It seems to me, in the work we have done in Early Head Start, trying to influence relationships attachment, that if you do not have emotional availability of the dyad with each other, it is hard to get anywhere. We asked Jo Ann Robinson to give us a summary of the work that she has been doing on emotional availability, particularly in thinking about the construct about how to inform front-line workers in public health and child care on making observations that will help them understand emotional availability.

Rebecca Shanok: I am going to lay the groundwork for the discussion on emotional vitality. The program I have been running for several decades will serve as the context for discussing what relationships mean. We often talk about relationship building in Head Start, but what do we mean? What do we mean by relationships that build and grow over time?

We are now working in three Head Start agencies in New York City on a project called Relationships for Growth. I am going to share what the work has taught me. I will include what it is that we are all striving for when we work with children to help them get ready for the rest of their lives, after they leave us at around the age of 5.

I would like to begin by having you focus on some young children that you know, children that you have confidence in, that you think are going to "make it." Begin to visualize them in your minds, and then call to mind that child's primary relationships. Just picture him or her, allowing your mind to drift in and out as you are following the sound of my words. Picture the interactions between that child and their primary care givers, from the mother diapering the child, to a tantrum in a supermarket, and anything in between. Picture the day-to-day events. The child that you are calling to mind could be your own child.

Emotional availability is the foundation of relationships. It is, as we are defining it, vitality. It is communication. It is what makes for meaning and it is what brings children into the human community or not. It is alive. I decided to name my presentation "Circles of Vitality: Relationships of Meaning."

Head Start-Early Childhood Group Therapy: Relationships for Growth Project. The Early Childhood Group Therapy (ECGT) program is 36-years-old. It began in New York as a way of bringing mental health services into day care centers, and eventually Head Start agencies and other preschools. We have worked with just about every ethnic group there is in New York as well as inner-city Chicago. Over 5 years, we have had the chance to integrate Early Childhood Group Therapy into the Ounce Of Prevention Fund's Beethoven Project in the Robert Taylor Homes.

We did not have any research until recently, when we formed a partnership with the Administration for Children's Services in New York (ACS). Therefore for the last 3 years, we have been able to run a pilot project with all evaluation components to demonstrate what we have believed was true all these years.

Our mission is to seamlessly interweave mental health that is individualized, developmental, and relationship-based into Head Start on a demonstration-basis to benefit both at-risk and typically developing children and their families.

We are trying to take mental health knowledge and transfer it to Head Start staff at all levels: family workers as well as teachers and teacher assistants. We are training staff members and also placing some of our staff in Head Start centers for many hours per week. One of our staff members is there 12 hours a week, another worker 10 hours a week, bringing reflective supervision and reflective practices to the Head Start programs.

Ninety-nine percent of parents, from all the intervention groups served by the three Head Start agencies, who were offered peer play groups for their children accepted it. Traditionally, if there was a child who was having difficulty, that child would be assessed and then referred for outside treatment. Frequently, those referrals did not work well. The statistic—99% of families of all ethnic groups accepting referrals to an onsite peer play group, with virtually no withdrawals—is in itself, remarkable. In Year 1, we treated 95 diagnosable and at-risk children; in Year 2, 91 children, and in Year 3, 125 diagnosable and at-risk children. The parents, families, workers, teachers, and directors work closely with our staff and with the Head Start staff who receive training.

Our program evaluation team is composed of researchers from LaSalle University and Columbia University, Mailman School of Public Health. Preliminary analyses of the research indicate that children who were selected for the groups had, as one would expect, lower scores on protective factors, attachment, initiative, self-control, and play interaction. They also had higher scores on problem factors—behavioral concerns, disruptive play behavior, and disconnected play behavior—than their non-group peers. Change scores for girls participating in the play groups showed, on average, significantly more change in the desired direction on disconnected behavior play interaction, initiative, attachment, behavioral concerns, and total protective factors than girls not participating in the play groups.

Let me tell you briefly about the play groups. The modality that we use is small peer play psychotherapy. We call it peer play groups in Head Start and the families do not have to pay for it. To them it seems like it is an extension of Head Start center and the classroom because it is a small group.

Parents like the idea of helping their children and they feel that they are getting personal attention, but it is not coming from "your child has this problem and therefore, he needs to get this diagnosis." Our emphasis is not diagnosing, although for ourselves we are certainly evaluating and trying to see what it is that the children need. However, based on classroom observation, we ask, who is not making it in the variety of ways that children need in order to succeed? Who is not paying attention? Who does not have friends? Who is irritating the teacher? Who is wild? Who does not have language? Who is lying on the floor and not able to arouse himself?

Whatever the range of difficulties, we take the children into a group. We may not know, when they come into play group, exactly what the underlying problems are. We continue to evaluate, and engage the parents and the teachers as we are beginning working with the children. The

children accompany a person who has become familiar because they have been sitting in the classroom watching them. They attend a small group twice a week for 1 hour.

That is the basic intervention. Of course, we are also working with the teachers and parents in the classrooms. We are setting an irresistible context for change, because the teachers are beginning to understand children's needs. They come to understand them more intimately and more constructively.

Parents also come to better understand their children's needs. Some parents who are initially resistant to having contact with us come to like us because their children like us. The children love to go to group. They cannot wait to go once they get to know it and they get to know the person who is leading it. Many times parents, who have been wounded by their own earlier school experiences, come to see the person who is their child's group leader as a person who is there for them and their family. They come to trust us through the children.

It is different than the typical mental health model where we say we need the parent before we can work with the child. We are not waiting for the parent. We have had the experience that even getting written permission from parents does not guarantee accessibility.

We do outreach in all possible ways, but we do not always get every parent to join in the work. Yet, we have been able to see that we can make profound differences for children with this modality. We have the impression that when the child grows, he/she sometimes can find a different relationship within his/her own family.

Let me finish telling you about the preliminary results of the evaluation. The change scores for boys participating in the play groups also showed, on average, significantly more change in the desired direction on self-control and behavior concerns, with change in total protective factors not quite reaching significance, compared with boys not participating in the play groups. The girls seem to be taking advantage of this modality more than the boys. However, these are preliminary data only.

To my mind, not being a researcher, even more critical than the evaluation instruments we are using, are the impressions of teachers and parents. The teachers and parents unanimously feel that their children are growing, and that they are growing in appropriate ways. They feel optimistic about the children's potential, and their chances for "making it" when they get to kindergarten. It is the way that we talk about our work and it is the way that they understand it.

We are also documenting what we call the "ripple effect." We are trying to not only mentor staff, but also train them directly. We are also having trainee staff mentor other staff. The goal is that over time these mental health attitudes will become seamlessly intertwined with classroom practice so that there will be more individualized work with all children in a classroom, not just with the children who have designated challenges.

As I think back on the numbers of children that I have seen over my years being associated with this program, I have sometimes wondered to myself, why does peer play psychotherapy work as well as it does? We have always thought that if children were going to get therapy, they ought to get individual therapy, because that more closely replicates the original attachment relationship, particularly for young children. I have been struck repeatedly that many of the children make profound developmental leaps in a relatively short period of time. Additionally, we are a training program that works with professionals who have little therapy experience. They come from all different backgrounds, so they are not only mental health trained people; they are also coming from occupational and speech and language therapy, special education, and early childhood education.

I began to realize over time that when there are other children in the therapy, the adult needs to control much less. Children fight with each other, grab from each other, pull each other's hair, pinch each other, get in each other's faces, and get jealous of each other, so that the atmosphere in a peer play psychotherapy room is nothing if it is not alive. There are events happening all the time, and it can be quite intense. There is something about that intensity and vitality that often does not happen between an adult and a child alone. It does in a family, but traditionally we are constantly trying to avoid that.

Parents, educators, and therapists often prefer to work with children when they are calm, pliable, and responsive; when they are in a well-regulated state. However, several types of troubled children, by definition, find it difficult to achieve such a state while others maintain calm, or they do so at a great cost to their emotional expression. New clinical data indicate that it is growth promoting, at the level of brain functioning, for children to communicate and relate while in states of high affect, in part because that affect is their intentionality and initiative. This is what the terrible two's are about. That struggle could not be there in everybody if it was not serving an important purpose. There is something about the vitality of those exchanges that is critical.

Many times when we talk about vitality in relationships, and certainly when we talk about attachment in relationships, most of us fade into, "things are nice and calm and everything is sweet and loving between people." However, we all know from our own families that the argument is just one step away. Terrible or terrific, volatility or vitality—it all depends on how we look at it.

Particularly for the younger the child or the more vulnerable the child, what I am saying is true. If we think our job is to help children become pliable, to help them to sit still, pay attention, to eat, and to rest on schedule with 10 to 20 peers of the same age, we will definitely think that some of them are going through a terrible stage. Even worse, we are going to think some of them are terrible. However, if we recognize that every child is different, that every child needs to discover her own boundaries, his own creativity, her own patterns within relationships available to her on a daily/hourly basis, then we are on our way to recognizing what is terrific in each child. Children are supposed to be filled with gusto, animation, triumph, the discovery of boundaries, and the play of language, which we call symbolism.

The last two are the hallmarks of what it is to be intentional. I work with autistic children in my private practice. There is nothing more chilling than to see a child who has no intention or does not want to do anything.

An intentional child does not want to wear her jacket when it is freezing out. She is alive. There is something about intentional children that is vibrant. The interchanges that are going to take place with a caregiver are going to be alive and vital. We want that kind of intentionality and vitality. They are supposed to have that gusto and animation. These are hallmarks of what it is to be an engaged and intelligent human being. You cannot imagine somebody having curiosity and intelligence, unless they have drive to do something and they want to go for something. We want people who are curious, and who can grow up to love learning.

This cannot happen by being constantly docile. Think of what we expect in our classrooms. Think about the wonderful children I asked you to picture in your heads. They do not always want to sit still at circle time. They do not always want to follow directions. The younger they are, the more vulnerable they are, and the less they will be able to achieve what we are expecting in many of our classrooms. It can be messy, noisy, bumpy, and it feels alive. It is fair to say that the early years of life may bring children safely into the human community or not.

Between people there will always be mismatches, misunderstandings, and conflicting desires. One person wants the shade up, the other wants the shade down. It is too hot for some, too cold for others. I think he is driving too fast. He thinks I drive too slowly. What do we do with the mismatches? With children, what they need are adults who are dedicated to repair and who have the capacity to respect the child. These adults must be willing to negotiate over many issues, although not over everything, and not in every circumstance. There is something about the vitality of negotiating, which helps children discover their boundaries, helps them push through to their language, and helps them drive through to what they want to figure out about how to deal in the wider world.

In these intense exchanges, each child feels that he has an impact, even if his behavior has to be limited. It is the depth of engagement of these highly motivated negotiations which often propel children towards more organized expressive and communicative abilities. If one is having

an argument with somebody, they are closing circles of communication. That communication is going back and forth and the child must think about how he will reach his objective. In an argument, one is sharing attention in a vital way. We take the attachment, warmth, and supportiveness part for granted. I am not suggesting that we live only in the worlds of arguments and volatility. I am suggesting that our classrooms need to be responsive enough and individualized enough that these kinds of human dimensions can emerge. We cannot constantly try to get children to behave because that squeezes the life out of them. When we value children's intentions and help them find acceptable ways of getting what they want, there is no reason for them to develop aggressive, angry features.

I would like to close by briefly discussing "The Emotional Foundations of School Readiness," which is a Zero to Three publication. It is a policy publication, but in the development of the publication, people on the board and staff spent several years trying to come up with what we think children need to have in order to be ready for kindergarten. There are the seven emotional/social characteristics that people from many different perspectives agreed upon as being critically important.

Making a difference in the lives of children ultimately means helping them succeed in school. Seven competencies were identified as critical to learning in school: (a) relatedness, (b) the capacity to communicate, (c) cooperativeness, (d) confidence, (e) curiosity, (f) intentionality, and (g) self-control.

I want to call your attention to one competency in particular: confidence. We usually think of this as something people have within themselves. I particularly love this list's definition of confidence: a sense of control and mastery of one's body, behavior, and world. A child's sense that he or she is more likely than not to succeed at what he or she undertakes, and that adults will be helpful.

None of these characteristics exists in a vacuum. They exist in relationship to the world outside, and children need to feel that the adults around them know them and know what it is they are intending—what their goals are for the moment, for the hour, for the day. They need to feel that the adults will partner with them in ways that feel alive, even when the adult has a different idea than they, and that the adult will be respectful enough to let their individuality emerge.

Jo Ann Robinson: Shanok and I share a core set of beliefs in the importance of emotional vitality. I will try to hit on that periodically as I take you through the framework that I have adapted from a series of scales created by Zeynep Biringen, Robert Emde, and myself in the late 1980s and early 1990s. I call this a clinical application of the Emotional Availability Scales because it is a much more holistic and dyadic way of considering relationships. It was adapted from a set of scales that were developed for research.

First I am going to give a little background about emotional availability, and discuss those scales. I will take a dyadic approach of conceptualizing the concept. Emotional availability has been written about for quite some time, originally by Margaret Mahler, referring to the support or presence of the mother as evident during the practicing sub-phase of development of the child going away. That involves turning around, coming back, looking for mother, looking for reassurance, coming back, and then getting that support. The mother is emotionally available to the child during that time, and she communicates this to the child. That is, the child has the confidence that she will be there and that she will be open and supportive upon return.

Emde began talking about emotional availability, initially discussing the importance of emotional availability as reflecting the emphatic presence of the therapist. The role of the therapist is to convey that emotional availability, that sense of acceptance to their client, shaping them in a way that is constructive, and does not continue to repeat the harmful experiences that they may be dealing with.

Emde began thinking about the importance of the mother's availability to the child and wrote a couple of papers. He did some manipulations where mothers read newspapers, and he

observed what the children were doing during that imposed unavailability. One of the innovations introduced, when referring to emotional availability, was the concept that it is a dyadic construct. It is not the property of an individual. It is the property of a relationship and it is being continually recreated, rebuilt, and re-experienced in a relationship.

It is important to know that while I may think of myself as an emotionally available person, I am not emotionally available all the time, with all people, in all situations. There are some people and some circumstances in which I can be highly available, and others in which I feel more threatened and my availability is retracted. It is not extended so easily. It is important to have that in mind when we begin looking at relationships, either with co-workers or between mothers and children. There are circumstances that support availability and there are circumstances that detract from it. It refers to the openness and acceptance of the dyad to emotional communication. I have already alluded to that when I mentioned Emde's work in the therapeutic context. But this is very much a part of parent/child relationships—whether or not an adult, a parent, or a caregiver is willing to hear negative affect and negative communications. Those are the kinds of communications that adults tend to want to shut down, to quiet, to calm because they arouse emotional experiences for themselves that they may be less comfortable with.

The dyad's interest and pleasure of engaging each other is the hallmark of an emotionally available relationship. You see children getting into a playful rhythm with their mothers, whether it is introducing peek-a-boo in late infancy, or catching their mother's eye in order to communicate a desire for food or drink.

They are delighting each other. They are acting in ways that they know are going to make each other happy. One only does that in a relationship in which one expects that to happen. If one is not certain of whether or not one can bring a smile to someone's face, one might not take the risk to do it. If one knows that it is not acceptable, one will not do it at all. Those are features of dyadic behavior on which I am particularly intent when observing a relationship.

I want to talk about the dyad's motivation to be in the interactive space. The interactive space is the space between you and me. It is not here with me or there with you, but rather, it is this space in between. I am in it and I have a vitality that I am trying to bring into it to keep the other person there with me, reacting to what I am doing, giving me some feedback. What is happening between us is in the interactive space. If I turn away, and I start working on my computer, that is not particularly of any importance to our relationship, except insofar as it keeps me out of the interactive space. We want to have the space between two people as our focus, not necessarily one person or the other.

A second feature is the expression of affect in the dyad. We are looking at the timing and the rhythm of affect as it is expressed by the two partners, either sequentially or jointly. A paper that I published in 1993 in *Merrill-Palmer Quarterly* looked at the issue of maternal sensitivity with sons and daughters. One of the more interesting findings was that more sensitive mothers of sons tended to follow their son's lead in matching affect. Little boys got excited and their mothers got excited. That happened over and over again when mothers were more sensitive.

However, more sensitive mothers of daughters actually let their daughters match them. The mother would show something to the little girl and she would get delighted. Then, the mother would move onto something else, and the daughter would become delighted again. What was particularly interesting in those data is that we repeated observations 6 months later, 18 months later and, then 24 months later.

We found that daughters matching mother's affect was predictive of mother's later sensitivity above and beyond what her sensitivity already was at 18 months. Daughters were really helping to create the emotional availability, and the sensitivity of their mothers.

In a similar but differently patterned way, mothers and their sons were creating a different pattern, which many women will resonate with when they think about their adult relationships with men and how much they applaud, support, and encourage the men that they are with. This is something that may be predictable and expected from men who have had sensitive mothers.

The third feature is the dyad's ability to sustain rhythmic and pleasurable interactions. The hallmark of a sensitive mother and an available child is that they can engage in little rituals, games, or moments of shared pleasure. The child is initiating something that she predictably knows will bring joy to the mother, and the mother, similarly, will act in ways that delight the child.

I am going to show you a videotape to illustrate these three ideas: motivation to be in the interactive space, expression of affect in the dyad, and the ability to sustain rhythmic interaction, give and take. [referring to the videotape] That is a 12-month-old girl. She is the first-born for her mother. This is a moment of shifting agendas. The child is becoming interested. Mother is starting to focus in on the sorting toy. Is mother going to come back and follow the child's lead or is she going to persevere? Mother is still trying but she is not being intrusive about what she wants to do, and she finally goes to where the child is.

What you were seeing in terms of rhythmic interaction we would call "closing communication loops," where the mother would say something, the little girl would echo, and the mother would come back one more time, and provide a coda to that communication. The mother saw something, the little girl echoed, and the mother put closure to it. When the squeaky door opened, the little girl turned around and mother was right there commenting on it, and giving her a feeling of being with her while she was wondering what was going on with that door.

The mother was more often following the child. She spent a few moments preparing the sorting task. Were we to watch further, we would see the mother gently bring the child's interest to the sorting task. They were never out of rhythm. There was a period of time where the rhythm slowed down, as they were both directing their attention elsewhere, but then they came back, with the child turning the page and the mother making these wonderful gentle comments on each page.

Now other dyads are much more of the sort to which Shanok was alluding: highly expressive, very emotive, and quite vibrant. You are seeing the gentle version of emotional availability, particularly the little girl's use of these interesting bids to mother about what she was seeing in the book.

In the research scales that were developed there are five sub-scales: three parent and two child. I want to highlight the parallel between parental sensitivity and child responsiveness. We are looking at parent sensitivity to actions that the child initiates, child responsiveness to actions that the mother initiates, parental structuring, child involvement of parent, and child coming into the interactive space.

We are always looking at coming into the space—the initiations of it and then the responses to it in the dyad. When we talk about parental sensitivity at its highest or more optimal level, we are talking about expressions of genuine positive affect that are congruent across verbal and non-verbal channels. With families that are in distress, often words and affect do not match, or actions and words do not match.

However, when we are talking about sensitivity, they are congruent, so that there is an accurate reading and contingent responding to the child's expressions and feelings. There is acceptance of the child's ideas and expressions that are reflected in imitation. There was much imitation in this dyad of the mother commenting on the book and the child echoing a slightly hybrid response.

The mother would pick up that rhythm and she would imitate it back to the child. When I am concerned about mother sensitivity or father sensitivity, I am looking at whether I am seeing any imitation and elaboration of the child's actions or expressions. Parental sensitivity also includes ideas about timing, and this mother had beautiful timing with this child. It was not hurried nor was it so spacious that one wondered when somebody was going to do something. Rather, there was a clear motivation to continue interacting with each other.

There is an ability to negotiate and resolve conflictual aspects of interaction. This is particularly true in the therapeutic play situation, where children are brought to a sense of trust and security when they realize that there is a way out of conflict that is not necessarily hurtful or

punitive. They realize that one can move through conflict and come back to have pleasurable interaction with somebody again. Of course, that requires a fair amount of flexibility.

When we think about parental structuring, we are talking about the extent to which the adult, or the caregiver, can scaffold activities for child success. When this mother was playing with her child, she was not asking very much of the child. The child opened the book pages at her own pace, and then the mother would give a little comment that might sustain the child's attention. Or the child might make a comment, and then the mother would elaborate or imitate, again sustaining interest. The mother followed the child's lead in play.

We look to limit setting to regulate behavior. In Shanok's tape, the therapist said, "Oh, not so hard." That was limit setting. She did not want the behavior to continue to escalate and repeat some hurtful experience for the child. We also look at parental hostility: primarily covert and overt. With covert, we see this frequently with depressed mothers, where they will be impatient with the child and be fairly abrupt in the way in which they handle materials. There may also be some teasing of the child. With overt sarcasm, we are seeing teasing with an edge that is making us uncomfortable as observers, and we may see physical roughness.

Turning to the child side, we are looking at the child's acceptance of parental bids. Are they eager and interested in what the parent or the caregiver has to offer? The little girl, especially in the first few minutes, was watching wherever her mother's hands went. When they went near the bag, she was looking and ready to be interested in what came next. They did have a period of less engagement, but then they came back together. We see in the responsive child, in the emotionally available child, an eagerness to engage with the parent. That eagerness is reflected in pleasure and the sustaining of interaction, as well as a willingness to be involved. When we share visual contact with someone, we are doing something that is quite intimate, and we do not tend to do that with people from whom we are disconnected. We only do it with people with whom we are trying to have connection. That leads to the child involving the parent, and the question of whether or not the child makes the parent an audience. This child is very verbal, although she is not using words yet. She has a lot of jargon, and even if that jargon is not directed to the mother or caregiver, it is a way of making the parent an audience to them. It is saying, "I am making a comment. Do you hear it?" A sensitive parent will hear it and reflect it back, so that almost anything that the child utters can become an intentional moment of communication. It is the parent that communicates the intentionality because if the parent ignores it, the child's interest in creating that moment with the parent slowly fades away. Do they use the parent as a resource when help is needed? Do they use clear communicative bids that include visual, vocal, and gestural cues?

I am going to talk briefly about the dyadic way of thinking about these scales. I have taken you through the individual way, which is what we had to do in order to get reliability for research purposes, so we could have reliability for each of the five sub-scales. For clinical work—and I am viewing clinical work as training with therapists, public health nurses, educators, early childhood educators, and social services workers—I want you to grasp a general idea about what the dyad conveyed. This dyad was communicating high emotional availability to us, the first categories. They appeared to be motivated to interact. They had an abundance of positive affect. We did not see negative affect, but when it happened in a high emotionally available dyad, it did not derail the interaction. They were able to sustain rhythmic interactions that included moments of shared pleasure. No hostility was observed.

I have this philosophy. It is kind of reductionistic, but it is basically that two-thirds of the world's parents are good enough in terms of emotional availability. They are not necessarily spectacular. They may not have a completely consistent motivation to interact with their children, but they are often, sometimes too often, ready and able to be there with the child. They may have lots of neutrality in their interaction, but they may also have these moments where the light goes on, and you can see that the child enjoys those moments with the parent. They may be occasionally able to sustain rhythmic interactions, and brief shared pleasure is

observed. There have to be some of these moments of delight in an interaction in order for that experience to be good enough for a child. They do not have to be all the time but they must be enough to sustain development in a positive way. This is the good-enough emotional availability category.

The third category is mixed emotional availability. We are heading into the zone of families at risk and families and children who are struggling at a particular point in time. With a mixed dyad, they may appear to be mismatched. I see this most commonly in foster parent and child relationships, where you may have a child who feels turned off and a foster parent who is working hard to be sensitive and available to the child in a fairly therapeutic way. Similarly, I have also seen children who are working with a foster parent to engage them and to make them available to them, and the foster parent is fairly turned off.

Another hallmark of mixed emotional availability is the mixture of affects that may include some pronounced negativity, particularly of the child having an explosive moment of frustration directed at the adult, or the adult having an explosive moment of irritation or frustration with the child. Rhythmic interactions are only attained briefly, if at all, and the interaction falls apart when either of the members challenges it. Both covert and overt adult hostility can be observed. This category for clinical practice or for intervention is particularly interesting because we can identify where the points of strengths and vulnerability are in the relationship, and begin to work with the strengths that we are seeing.

We are highly concerned about a dyad that falls into the last category, low emotional availability. We are concerned about the lack of motivation to interact with each other, the flatness of affect, the abundance of negative affect, the inability to sustain rhythmic interactions, and/or the level of hostility. If they are not in some kind of therapeutic context, we will want to recommend that they begin therapy. These interactions cause great pain to observers and, therefore, are quite easy to identify. More difficult are some of the distinctions between a good-enough dyad and a dyad that is quite high on emotional availability, or alternatively, a good-enough dyad and a dyad that is showing mixed emotional availability. With this clinical framework, I can become much more descriptive and intentional in adapting them for use in clinical practice.

Harry Wright: I am going to talk about the clinical applications of some of these concepts in different settings. The overwhelming majority of our families will probably fall into the category of mixed or low emotional availability. Very few of the dyads that we see in our settings would fall into the high emotional availability cluster. Much of what we want to do with our trainees is to help them understand something about emotional availability and how to intervene to increase the emotional availability within the dyad and address the parenting issues. In our training and our teaching, most of this is discussed through the parenting aspects.

Also keep in mind that in our setting, most of the trainees are physicians and others who have had a lot of experience with individual children. However, they have hardly any experience with parents and no experience with dyads. Much of the work we do is to help them gain an understanding about the dyadic relationship and what is happening in it.

That is the background, and I am going to talk about a situation in a preschool that is somewhat similar to what Shanok discussed. Our preschool is in a pediatric rehabilitation center, which is a different situation for how we go about trying to infuse mental health concepts into the work with therapists who work with children with significant developmental difficulties. Most have not had much experience with young children. Therefore, we talk about how there is an interactive process between parents or caregivers and children and how that impacts the child. The other issue is that most trainees, particularly physicians, want the answer for how to do it. One of the issues we have to work on is talking about how there is no single cohesive theory about this. However, there is some consistency in how people think about adequate parenting versus inadequate parenting. Additionally, the parent/child relationship is distinct from the characteristics of the individual parent or the individual child. Certainly a majority of our work has to do with the major goal of our programs, which is to improve the

quality of the parent/child relationship. We also talk about the separate observations that people have of the parent's and of the child's behavior.

However, we want them to learn how to observe the dyadic relationship, which they have not been accustomed to looking at—the relationship between the individual parent and the individual child. We do it in a way where some people are in the room and some are behind a rotating mirror. If one is behind the mirror, he or she will get the advantage of being able to have a dialogue while the process is going on. They also spend some time in the room. This is in the context of sustenance, a categorical way of looking at parents and children, and trying to help them think about the dyadic relationship.

These are issues that they normally think about, as well as physical care, and social and cognitive stimulation. We want them to think about the relationship with the caregivers, the parents, the preschool teachers, and the other care providers (e.g., in the rehabilitation centers where therapists provide services to parents). All of this is getting our particular population of trainees to focus on the dyadic relationship rather than the individual child and the individual parent.

Let us move to thinking about the various components of our assessment, in looking at culture and subculture, and how that impacts economic adversity. A large percentage of the children in families we see are from poor families and are influenced by the larger family system as well as by siblings and by others. We have a group situation in our therapeutic program and so there are peers present who are preschool children. Genetic influences are certainly an issue for us in our medical setting.

I am going to discuss several of the clinical settings in which we see young children, specifically, the therapeutic preschool programs and the pediatric rehabilitation center. Our preschool (this is our 26th year of having a preschool program) is a program for children 2-5 years of age and it is usually skewed in one age direction or the other at any particular time. It is usually not the whole age range. It is 3 hours a day and the children stay up to 12 weeks in the program. Most of the children are also involved in another program because they are often referred from Head Start, a child care program, a preschool program, or a pediatric or mental health clinic. The program includes a range of features similar to what Shanok discussed earlier: primary care providers within the preschool, and a number of other people who come in and out to provide various services for the parent, for the child, as well as for the parent and child together. Our trainees are involved in every aspect of the process.

The best way to talk about some of this is to talk about it within the context of two different cases in the preschool program. The first is a 3½-year-old African-American boy diagnosed with autism. He has an older brother of 7 who also has a diagnosis of autism. This is a family that is fairly stressed, having two children with autism. This child was referred from a preschool program when he was just turning 3 because he had significant difficulties in participating with other children, and was also having tantrums every 5 minutes.

Basically they were at a loss for what to do with this young boy. The mother saw him as not having severe difficulties at the preschool because the older autistic brother was much more severely affected. In terms of looking at the younger son, she saw his behavior as much less problematic and was befuddled by the preschool's comments. He had no or few verbal words, although he communicated non-verbally reasonably well. However, the preschool and others did not appreciate this non-verbal communication and that was one of the issues around the tantrums that he had—people missed his non-verbal cues. They were not sufficiently observant to see his attempts at communication. When he came to our setting, we had a staff of two people in a group of typically five or six children. Our staff was not appreciating this child's attempts to communicate non-verbally and in other ways either. We worked with our staff because we wanted them to be at a point where they could work with the mother and the other preschool. We did this as part of our process of looking at the interactions between the child, the parent, and the caregivers. That was our first effort to look at that.

Our staff understood the importance of giving him time to respond, and then looking for the response. Once they began to do that, it became clear that many of the tantrums were related to the mismatch between observing his responses and what he was trying to communicate. When that happened, his tantrum behavior went from every 5 minutes to once or twice a day in our setting. However, it was still happening in the other settings at a significant rate. The next step was to work with the mother and the preschool program to find ways to enhance the communicative process. Over a period time they were able to do that and improve.

Over a period of 6 weeks, he went from being a child who was having tantrums all the time to having, maybe, one tantrum a day. He approached people when they came into the preschool program and communicated in the way he knew how, non-verbally, by being excited and showing people the activities that he was doing. Our staff was amazed at the dramatic improvement that he made. The emotional availability of people and the corresponding responsiveness is the concept around it. Just working in that setting with this young boy was more helpful than anything else we could have discussed. That is one example.

The other example in the preschool is a 4-year-old who did not talk. She had elective mutism. She would talk at home with her parents. One of the most difficult experiences for professionals who work with young children is dealing with the children who do not talk or do not eat. The person has no control over a child that neither eats nor talks. Often, others speak for a child who does not talk. It is hard to be able to look at what is going on with a child who is not talking. Many times you begin to see it as oppositional behavior, when in fact, it is anxiety. Part of working with staff and parents is that it usually is not an issue because the child talks with parents. In working with the staff of the preschool and our own staff, it was important to get them to think about the idea of "not talking" in a different way. Instead of seeing the child as being oppositional, they had to consider that the child could be feeling anxious for some reason. We had to address why the child was anxious in those settings.

In this situation, the mother was also very anxious, and in settings where the child did not talk, she was so anxious that she would not look at the child's attempt to communicate and the child's anxiety. Part of our work with the mother was to help her look at the child's anxiety and lok at how her own anxiety interacted with the child's anxiety, which created a situation where it was less likely for the child.

In our situation, we were trying to create an environment where there was a better match. In other words, we were trying to change the emotional availability of the parent/child dyad and of the other caregiver/child dyads.

The next example is a slightly different group, a pediatric rehabilitation center where young children who have cerebral palsy and other developmental problems come for speech and language therapy, occupational therapy, and physical therapy. The therapists have been trained to work with children in this setting. We got involved with the rehabilitation centers because of a research project that we had done earlier to identify the major problem that parents of children with behavioral and developmental problems were having.

A second issue for the parents was that they had multiple appointments each week with their child. Our idea was to try to work with therapists to help them address the behavioral and developmental issues that came up during therapy in a way that would be positive for the family and for the therapists. We surveyed therapists and they said that mental health problems always came up. However, they would usually change the subject to something else because they did not want to address the issue. They thought that they would have to fix it immediately. Consequently, a big part of our work with therapists had to do with helping them look at the relationships that they had with the child and with the parent, and with the parent and child in the therapy setting. It took us 1½ years to work with therapists so that they felt comfortable being able to address mental health issues that came up. We also created a situation where they were no longer out there alone. They always had a backup person to call if something came up that they felt they were not qualified to address.

We also created a situation where they could easily refer families to a mental health setting. However, that rarely occurred over the long-run, as Shanok mentioned. Over a period of time, we would have meetings with the therapy group twice a month to talk about the families and their therapy. Initially, there were many questions and conversations between those of us who were the consultants, and the therapists. Over the course of 1-2 years, it became a situation where the therapists were problem-solving for each other. The consultants were there, but we were observing. This was the ideal situation to get to, in terms of their feeling comfortable in that setting. Their relationship with the parent, and their relationship with the child, also improved the relationship of the parent and child. We did a research project there and one of the interesting results was that we thought there was going to be change in the problem situations. It turned out there was no change over the course of the therapy in the number of problem situations, but in looking at the relationship in parent/child relationships, parents (about 68%) had an increase in their comfort level in dealing with the situation with their handicapped child.

We thought that was great even though we had no change in the number of problems that children were presenting over the course of time. Trying to get our trainees to focus on the relationship was the major focus of both these programs.

Barnard: We have heard about constructive emotional vitality and emotional availability, and how they have been utilized in peer play, as well as in terms of looking at parents in a population of community cases and in a rehabilitation center.

Question: Do you think it is possible to adopt this kind of training for parents whose children are involved in abuse?

Shanok: We do not think of the work that we do with parents as training. We think of it as outreach. We come to parents from a strength-centered perspective. For example, to parents who consider their child to be aggressive, we would say, "Your child is filled with energy and get-up-and-go. What is it like for you at home?" However, we do not do the introduction ourselves. The introduction is made by whomever in the center knows the parent best and then we come on the scene. We try to understand how the parent feels. They may bring it up as a problem, in which case it is easy to say we have an intervention that will help. However, if they do not, we stay where they are. That is the beginning. Then we try to help parents to want to come to us.

We see a wide range of children and a wide range of parents. With some of the cases, we find that before long we identify that the reason that the child has problems—and this is an extreme situation—is that the child is being abused. How we do outreach with that kind of a family, where we are increasingly aware that the child is between a rock and a hard place and that we have to take legal action, calls on us to respond in a different way.

We are working with parents as individuals, and increasingly working with the Head Start centers as they are getting to know us and trust us enough. We are hoping to begin doing more general parent programming, parent meetings, activities with fathers, and so forth. I do not think of it as training, and the population of parents—the sub-group within Head Start that we are identifying—are all people who have some specialized challenges. Either there is something that is happening with them that is part of the reason that the child is having some difficulties, or they have a child with significant constitutional challenges that have been relatively ignored. They are living with the problem in their house, and we are trying to find a way of helping them to be as responsive as they can to that child. One of the reasons that we can sometimes be quite successful is that we get to know, from the parent's angle, what they are struggling with. Then it becomes easier to pass on guidance, because the guidance is something that you know is working.

Sometimes we move into working with the parent and child together. Let us say there is a situation where both the parent and the child witnessed some sort of trauma, which is not an unusual situation for us to find out as we get to know the parent. Many times they have not

digested it—neither one of them alone and certainly not as a couple—so they are unable to support each other. We work with the parent and the child. Then we offer to work with the parent and the child together, to begin to acknowledge that somebody went to jail or whatever the loss or trauma was. We work with them so that they can bring communication into their relationship.

We are working with different ethnic groups. I learned some things about new immigrant Chinese that startled me: In New York City, a fair number of the people with whom we are working have their infants here. Then they send their infant to China at the age of a couple of months with somebody who is a stranger to the child. The family knows them, but the child does not. They send the child to one or another set of their parents. The child is raised by those people for 2-2½ years. As soon as they get a place in Head Start, the child is sent back with another person who is a stranger to them, they arrive in the United States with no English, and they are in Head Start the following week.

Just imagine! Those children do not know their families. They are coming in and living in one room of a several room apartment that is being shared with other families. One must be aware of this history, and then begin to work with the child to get some language. Then we work with the families so that they can come together and acknowledge some of the history, supply us with a photograph and a book about their history, and so on.

Barnard: It is quite common in China for the grandmother to come and take care of the infant because the women in China all work. They do have this particular history.

Shanok: Yes, but to send them to China and then bring them back. It is a series of profound separations for the child, which do not get digested.

Barnard: In China, there are overnight preschools where children are dropped off on Monday and then go home on Friday. Is it right or wrong? It is a cultural way.

Shanok: I was astounded. They are just abruptly removed from one place and put somewhere else without it making any sense to them. There is sense to it, but not particularly to them. They are removed by a stranger and placed with people who are virtual strangers to them. I would not say that all of those children end up with problems. They do not all end up with problems. It is digestible at some level, and many of the children can bounce back. However, small group work would help them make that transition more smoothly.

We have had much success with children who have communication challenges, whether it is elective mutism, lack of speech development, or a different language. The language tends to come in because they want to communicate with their peers so much.

Barnard: It is certainly my sense that in Early Head Start and Head Start programs, we will probably get much further in meeting mental health needs of families and children by working within the program, rather than expecting referrals to an outside mental health facility.

Shanok: My background is in early childhood education. I got my degree in social work and then in clinical psychology. Although I did not quite know why I was studying all these different fields, I think it was because I had the sense that none of the professions knew enough. Each time I had the inspiration to do some more studying, I wanted to go somewhere else. Mental health workers need to learn about education. It is not a one-way street. Many people come in to do mental health consultation as experts who have knowledge, and that knowledge is only shared up to a point. There is not the sense that anybody else can have it. That is something that we are trying to shift.

Comment: Regarding emotional availability on the part of the therapist, including the professional, when he comes in, he needs to think about emotional availability issues. As a consultant, that is the bridge that one is trying to build within a certain group.

Comment: I have been in Head Start for a long time. We started a mental health on-site service in our program in the last 5 years. At any rate, I see it as an outreach model, but in the naturalistic setting of the Head Start right after the program ends, or as an at-home visit, building these relationships, being available, and having patience. It takes a lot of effort. There is a lot of pain involved in just being there through some of these difficult times. Many people that I meet may be in the mixed emotional availability range. That is maybe where the change could come. So they go from mixed to good-enough and that is thrilling.

Robinson: Clinically, most of us have only used it to take a family up to good-enough. Nobody is going to pay you to take a family to high emotional availability, but to get them to good-enough—it is a wonderful place to go with them.

Depression in Mothers in Low-Income Families: Implications for Children

CHAIR: Martha J. Zaslow
DISCUSSANTS: Jane E. Knitzer, Sandra Graham-Bermann, Rena Mohamed
PRESENTERS: Mary Jo Coiro, Martha J. Zaslow

■ Maternal Depression and Family Stress as Predictors of Child Behavior Problems Among Low-Income Children

Mary Jo Coiro, Anne W. Riley, Marina Broitman

Children of parents with major depression are at increased risk for psychopathology, behavior problems, and impairments in social and academic functioning. However, some of this correlation between maternal depression and child well-being may be due to factors associated with, but not unique to, maternal depression (Fergusson & Lynskey, 1993; Hammen et al., 1987a, 1987b). This paper examines the extent to which levels of life stress may be more important than maternal diagnostic status in explaining behavior problems and social competence among children of depressed mothers.

This issue is addressed with a sample of low-income, minority mothers and their 4- to 10-year-old children. Eighty-six mothers had major depressive disorder, while the remaining 50 had similar socioeconomic status yet did not have depression. Mothers were participating in a randomized controlled trial of the effectiveness of treating depression among low-income women (Miranda, 1996) and a longitudinal study of the effects of these treatments on their children (Riley, 1997). Mothers were on average 29.4 years of age and primarily minority (52% Latina immigrants, 44% African American). Ninety-four percent were receiving some form of income assistance. Children were on average 6 years of age and 46% were boys.

Women were screened for depression at several primary care clinics and in social service settings serving primarily low-income families. Following the screening, the Composite International Diagnostic Interview (Robins et al., 1988) was administered by phone to confirm either the current diagnosis of major depression or that the woman had never had depression. Next mothers and children participated in an in-home interview that included a checklist of stressful life events and a measure of child behavior problems and social competence (Behavior Assessment System for Children [BASC]; Reynolds & Kamphaus, 1998). Children's fathers or father figures and teachers were interviewed by phone and administered the BASC.

The following hypotheses were examined: (a) Children of depressed mothers will have more behavior problems than children of nondepressed mothers; (b) Children of depressed mothers will have experienced more stressful life events; and (c) Much of the association between maternal depression and child behavior problems will be accounted for by stress levels.

As expected, bivariate analyses indicated that children of depressed mothers had significantly higher behavior problems and significantly lower adaptive skills on the BASC compared to children of nondepressed mothers, according to mother, father, and youth report (but not teacher report). Depressed women and their children also experienced significantly more stressful life events in the prior year. However, in regression analyses the effect of maternal depression on BASC scores was only slightly reduced and remained significant when life stress was accounted for. There was also no evidence that life stress moderated the association between maternal depression and child behavior. At the 6-month follow up, mothers whose depression had remitted reported a decline in the number of stressful events experienced, but this decline was not related to children's behavior problems or adaptive skills. Implications for preventing and treating behavior problems in this high-risk group of children are discussed.

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Child Outcomes in Light of Maternal Depressive Symptoms and Low Literacy in a Sample of Families Receiving Welfare

Elizabeth C. Hair, Martha J. Zaslow

As welfare caseloads decline, it is increasingly important to understand the characteristics of families continuing to receive public assistance. In this study, we focus on two characteristics of mothers receiving welfare that may impede the transition to employment: maternal depressive symptoms and low literacy. Previous research suggests that these characteristics are more prevalent among mothers receiving public assistance than the general population (Danziger et al., 1999; De Temple & Snow, 1998; Moore, Zaslow, Coiro, Miller, & Magenheim, 1995). Among potential barriers to employment, there is some evidence that these factors may be the most prevalent (Olson & Pavetti, 1996).

Factors characterized as "barriers" to employment in the welfare literature often emerge in the developmental literature as risk factors in children's development. We seek to build on existing research by asking whether such potential risk factors have implications for the development of children in these families as well as for the employment outcomes of the mother. We also ask whether the co-occurrence of these risk factors is associated with particular patterns of outcomes within the two generations.

Data come from the JOBS Observational Study, a study of mother-child interactions embedded within the Child Outcomes Study of the National Evaluation of Welfare-to-Work Strategies (McGroder, Zaslow, Moore, & LeMenestrel, 2000). Children in the 351 families of the sample were between 3-4 years of age at the start of the study. Outcomes for both mothers and children were examined in a 5-year follow up.

When examining the role of maternal literacy and depressive symptoms, we found that those mothers with low literacy and moderate to high depressive symptoms were the least likely to have ever worked during the follow-up period. In addition, we found that children of these mothers scored lower on reading and math achievement tests. Furthermore, we found that children of mothers with moderate to high depressive symptoms had more internalizing behavior problems.

Structural equation models provide evidence that parenting behavior mediates the relationship between the maternal literacy and depressive symptoms and child outcomes. For example, we found that high maternal literacy through the active and supportive engagement of the mother and child produces children who score higher on math achievement. In contrast, we found that maternal depressive symptoms activate a less supportive relationship with the child and, therefore, the children tend to score lower on math achievement. In addition, we found that the pathways from depressive symptoms through parenting to child outcomes are stronger when maternal depressive symptoms co-occur with low maternal literacy.

The findings raise the possibility that it may be important to examine maternal depressive symptoms in combination with other key factors rather than in isolation when considering child outcomes and mother-child interaction in families receiving welfare and other low-income families. The co-occurrence of depressive symptoms and low literacy may be a particularly important combination. Head Start programs seeking to address issues of mental health and literacy among parents may want to consider how these two factors operate jointly and how they affect both the parent and the child generations.

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DISCUSSANT: Sandra A. Graham-Bermann

This symposium addresses an important topic, understanding contributions to young children's social and emotional adjustment. The two studies have selected maternal depression as the lens with which to view children's adjustment. Previous work in this area has not focused on mothers in low-income families, on minority families, or on mothers with children in Head Start programs. The first study highlights the role of family stress and mothers diagnosed with major depressive disorder in accounting for child adjustment. This study relies on a comparative design with a second group of nondepressed but similar mothers. The second study relies upon depressive symptoms, broadly construed, and mother's parenting and level of literacy to predict child behavioral problems.

Each study takes a different approach and, hence, offers a different explanation of the ways in which maternal depression influences children's problems. They also come to different conclusions—in the first study there was a direct effect of maternal depression on children's problems. In the second, there was no direct effect but an interaction effect of depression and maternal literacy on children's problems. What can account for these differences and what is left out of

the picture? The sample in each study is sizeable and well selected. The populations are all low-income families. In one study the mothers have already sought and/or accepted treatment for depression. In the second they are in work-related programs. Yet each study has selected one or two additional variables to include in the analysis and they are quite different variables at that—mother's literacy, family stress, and parenting skills.

There are many more possibilities that could be used to account for children's adjustment in the face of maternal depression and that could better help us to understand the course of appropriate intervention with these families. By applying an ecological systems perspective with a developmental psychopathology approach, we can understand both the risk and protective factors at each level of the child's environment that serve to mediate and moderate children's adjustment. That is, there are individual child factors, such as intelligence or temperament that can affect the outcome for a child with a depressed mother. Similarly, there is a host of family-level factors (beyond family stress) that are important contributors to both maternal depression and child adjustment problems, such as social support or family violence. At the community level, the child's and the mother's exposure to violence but also to community resources can make a difference in how mothers and children fare. Individual, family, and community strengths also work to ameliorate the effects of risks to the mother and the child.

A much broader and more balanced perspective could allow us to get the full picture of both the risks and the strengths of individuals, of families, and of communities that, in concert, contribute to the welfare of both mothers and their children. Without this additional information we may be overlooking crucial data, which can render our services less effective.

The Real Question About Home Visiting: What Happens?

CHAIR: Carla A. Peterson
DISCUSSANTS: Jon E. Korfmacher, ReNae Torbenson
PRESENTERS: Gayle Luze, Kere Pond Hughes, Lori A. Roggman, Carla A. Peterson

Recently, Guralnick (1997) suggested that in the effort to enhance program effectiveness we needed "second generation" research focused on determining which components of early intervention are most beneficial for individual families.

Home visits are being pervasively used as a vehicle to deliver interventions to young children and their families (Gomby, Culross, & Behrman, 1999; Roberts, Akers, & Behl, 1996; Roberts, Wasik, Casto, & Ramey, 1991) and, therefore, are particularly in need of this "second generation" research. Interventions provided via home visits have targeted many different populations and a variety of goals. Despite pervasive use of home visiting as a model of service delivery for prevention and intervention efforts, the efficacy of home-visiting programs for children's future success and well-being has been questioned in recent reports (e.g., Gomby, Culross, & Behrman, 1999). However, few studies have provided information about the actual process, content, or quality of specific intervention services delivered via home visits. Researchers seem to assume home visiting is provided by program staff and received by families in a homogeneous manner.

Evaluations of home-visiting programs have produced equivocal results. Some studies suggest that parent-directed programs are not as effective as child-directed interventions (Gomby, Culross, & Behrman, 1999). Other studies have found the parent-mediated intervention to be superior to the therapist-implemented intervention (e.g., Kaiser, Hancock, & Hester, 1998). Home-visiting models, however, continue to be critically important. Many Head Start and Early Head Start programs use home visits because they are the best service delivery option for particular communities and/or families. A program's philosophy regarding the most effective ways to assist families and children in meeting their goals may lead to the incorporation of home visits. The question, following Guralnick's reasoning, should not be whether to engage in the home-visiting intervention model, but rather how to make this model effective

This symposium presented new methodologies and instruments designed to document the implementation of specific interventions, the responses by families, and the associated outcomes. Specifically, the first presenter will provide information about observation instruments developed to examine the complex interactions that occur within home visits. The second presenter will describe a study attempting to implement routines-based early intervention in a program serving infants and toddlers with disabilities. Here, implementation was assessed using a Fidelity Checklist designed for observers to determine the degree to which the home visitor utilized components of the model. The third presenter will provide information on (a) the process of defining "program quality" within a home-visiting program, (b) the use of that definition to guide program implementation and evaluation efforts, and (c) the enhancement of

program quality using resulting data. The fourth paper will present findings regarding the relationships between specific intervention processes and outcomes. Discussants will reflect on the implications of this work for program improvement and future research efforts.

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■ The Process of Home Visits: Different Views of What Is Happening

Gayle Luze, Carla Peterson, Su-Yuen Wu

Providing services to families in their homes is a common model of service delivery for many programs serving young children and their families. Home-visiting programs often use a systems-theory model of interventions that views child outcomes as resulting from parent-child interactions and the experiences that the family provides. Programs working from this perspective use home visits to work with families to improve parent coping, parent-child interactions, and child development.

While a variety of models and programs are utilized, few models have corresponding data on overall effectiveness, let alone on the effectiveness of specific model components with families of different characteristics, strengths, or needs. Interventionists may plan to implement a program but meet with barriers when attempting to turn plans into action. Additionally, families may not perceive the interventionists' efforts as intended and thus respond in unexpected ways.

Guralnick (1997) indicates that while early intervention has been generally found to be more effective than no intervention, a specific understanding of which components of early intervention are effective for whom are not yet known. Many recent evaluations of home-visiting programs have used rigorous experimental designs but have failed to document the actual content of home visits and the populations being served (Gomby, Culross, & Behrman, 1999) as well as a theory of how a program works (Weiss, 1995). A more systematic study of how intervention activities and contexts are related to outcomes is needed to guide intervention implementation and policy development (Connell & Kubish, 1996).

This paper presents preliminary results from an examination of Early Head Start home visits over a 4-year period. Program and research participants were 95 families enrolled in an Early Head Start (EHS) program that serves families in a rural area. In this program, both a Child Development Specialist (CDS) and a Family Development Specialist (FDS) made home visits with each family. More than 1100 home visits were observed during that time to analyze the amount of services as well as the type and intensity of services provided for families.

An observation system was developed to examine three components of home visits: the primary interactors (e.g., interventionist, mother, child), the content of the interaction (e.g.,

child's development, functioning of family members, employment), and the nature of the interventionist's role (e.g., direct teaching with the child, coaching and supporting the parent-child interaction, listening, paperwork).

Analyses of these data examined the amount of time spent in various activities with the families as well as how the interventionist worked with the families to implement the intervention. Preliminary analyses show that most home visits involve the parent and interventionist talking about child development with the CDS and family issues with the FDS. There was little modeling or coaching of parent-child interactions even though this was an important goal of the program.

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■ Examining the Fidelity of Routines-Based Intervention Practices During Home Visits

Kere Hughes, Jean Ann Summers

The routines-based model for early intervention with infants and toddlers with disabilities embeds learning opportunities within the activities and routines of everyday life. It is analogous to activity-based approaches in curriculum instruction. Lave and Wenger (1991); Ballard (1986); and Dunst, Hamby, Trivette, Raab, and Bruder (2000) describe these learning experiences as "situated learning." The basic premise of this approach is that family members can provide ongoing intervention to their child if they see it as functional and easily embedded within the daily routine (Woods-Cripe, Hanline, & Daley, 1997). The concept is quite compatible with Early Head Start's emphasis on helping families learn to incorporate strategies for being involved with their children into everyday family routine.

The routines-based approach has not been adequately evaluated, primarily because we do not know the degree to which it has been successfully implemented (the "fidelity of implementation") in programs adopting this model. Carta and Greenwood (1987) point out that it is not possible to make statements or policy decisions as to the value of an intervention when the fidelity of its implementation is unknown. This study examined the fidelity of implementation of routines-based strategies in a local early intervention program and investigated potential barriers.

Twenty-five interventionists participated in a routines-based intervention training conducted by the Family Guided Routines-Based Interventions (FACETS) program (Lindeman & Woods-Cripe, 1997) and were observed during home visits over the course of 30 months (189 visits across 51 families). Interventionists were rated with a Fidelity Checklist, a checklist containing a

series of 22 items that focus on both general, effective intervention strategies and strategies specific to family routines and parent collaboration.

Results indicate that strategies relating specifically to parent collaboration and routines were not implemented with the same quality as items relating to direct child teaching. While there was variance among the interventionists, on the whole they remained child-centered rather than family-centered in their approach. Transcripts from eight staff interviews were analyzed to produce themes on the barriers that prevented facilitators from incorporating training into practice. These fell into three categories: (a) interference or resistance to change due to previous training, experience, and expectations, (b) practical or administrative barriers, and (c) expectations and beliefs about the parents they were serving. In the case of the last barrier, interventionists feared they might lose parents as clients if too much were expected of them, or, they believed parents might not always be capable of engaging in interventions. In regard to this specifically, the study found that perceptions of low parent engagement were not supported by the data and that ratings of parent engagement during home visits (as part of the fidelity measurement) were relatively high overall. Furthermore, the study found no relationships between level of parents' engagement and family risk factors, suggesting that staff concerns about engagement in more challenged families were not necessarily warranted.

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■ Home Visit Quality: Changes Over Time in Relation to Future Child Outcomes

L. A. Roggman, G. A. Cook, L. K. Boyce, A. D. Hart

Few studies have assessed home-visit quality within home-visiting programs, and even fewer have examined changes over time in home-visit quality. Many Early Head Start (EHS) programs use home visits to individualize services or to target long-term changes in parent behavior. Whatever the reasons for using a home-visiting approach, evaluating home-visit quality is valuable for both programs and policy makers. For individual families, changes over time in home-visit quality may affect the impact of the program.

Bear River EHS (BREHS) is a home-visiting program serving low-income Utah/Idaho families. This program's primary goal is to influence parenting and child development by developing

positive home visitor and parent relationships. BREHS home visits were evaluated in multiple ways: staff report, program documentation, and direct observation by researchers. Staff ratings were obtained from paper and pencil instruments completed annually by each home visitor on each family. Program documentation was obtained from forms completed after each home visit. Direct observation ratings were obtained by coding videotaped home visits.

Home-visit data revealed wide variations and, after feedback to program staff, year to year improvements in the quality of home visits. Researcher observations of home-visit videotapes showed average increases on a 5-point rating scale from 2.7 to 3.6 in home visitor facilitation of positive parent-child interaction and from 3.6 to 4.1 in parent engagement during visits. Researcher observations also indicated increased average duration of interactions involving home visitor, parent, and child together from 41% to 48% of home-visit time. Program documentation showed increases in average visit duration from 64 minutes to 89 minutes and for average time spent on child development topics from 69% to 76% of home-visit time.

Across individual families, staff ratings of home-visit quality were related to more complex symbolic play by children, more supportiveness of children's play, more trust in close relationships, less depression, and more use of social support by mothers when children were 3. The average changes in staff ratings of home-visit quality over time indicated only small, and not statistically significant, increases. However, increases in home-visit quality for individual families were related to higher cognitive-test scores, more complex symbolic play, less aggression, fewer behavior problems in children, and more parent involvement in play. An aggregate home-visit quality score (alpha = .86) that was computed using multiple variables (number of home visits, number of groups attended, visit duration, child focus of visits, family participation in EHS activities) was correlated with less maternal depression and more maternal supportiveness of the child's play at age 3.

These results suggest that EHS program staff can benefit from feedback on home-visit quality to improve their program. Furthermore, better quality home visits lead to the increase of positive outcomes in young children and their parents receiving this service.

■ Relationships Between Home Visiting Intervention and Outcomes

Carla A. Peterson, Gayle Luze

Home visiting has become a pervasive model of service delivery for prevention and intervention efforts with young children and their families. According to a recent survey, 86% of early intervention services include at least some home-visiting component, and many of these early intervention services are provided exclusively through home visits (Roberts, Akers, & Behl, 1996). A strong rationale for intervening in the home is provided by developmental theories (e.g., Bronfenbrenner, 1977) and empirical research findings demonstrating that optimal child development occurs within the context of home environments where all family members have adequate instrumental and social support to function adequately. This would suggest that if home-visiting programs are to foster the child's development effectively, they must include two essential features. First, intervention strategies must address a wide variety of family needs including social support, family member development, meeting basic needs, and parenting information. Second, specific parent-child interaction behaviors should be targeted for intervention. This comprehensive, yet flexible approach is based on an ecological model that views the parent-child relationship as embedded within the context of other social relationships and the personal well-being and development of the parent/family as interrelated with the child's development and well-being (Halpern, 1993).

This presentation describes efforts being made to document various aspects of home visits as well as examine the relationship between amount and scope of intervention services received

and outcomes realized. The Mid-Iowa Community Action, Inc. (MICA) Early Head Start (EHS) program serves 75 families in a rural area of central Iowa. The MICA EHS Program has embraced a two-generational approach to delivering services targeting both parent/family and individual child outcomes via services delivered by both a Child Development Specialist (CDS) and a Family Development Specialist (FDS).

Observational data to describe the process and content of home visits was collected via the Home Visit Observation Form (HVOF) that enables coding of three aspects of the home visit during each 30-second observation interval: (a) primary interactors, (b) content of the interaction, and (c) nature of the interventionist's role. EHS program staff members have also documented the amount of time spent in home visits with each family. Data from these two sources have been combined to describe the overall amount of time that families have received services directed at specific goals.

These data reveal few systematic relationships between early indicators of child and family functioning and content addressed or processes utilized during home visits. However, intervention efforts directed at child development content are related systematically to better child outcomes in cognitive and language development at 36 months. Conversely, intervention efforts addressing family's basic needs is related to less optimal child-development outcomes at 36 months. These results suggest that interventionists could benefit from training to facilitate their collaboration with families on setting goals and keeping intervention efforts directed toward those goals. In addition, home visitors could benefit from supportive feedback regarding how they allocate available intervention time and resources. Implications for research efforts to document the intervention delivered (the independent variable) when examining intervention outcomes will be discussed.

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Perspectives on Quality Child Care—Does It Matter Who You Ask?

CHAIR: Lisa Klein
PRESENTERS: Helen H. Raikes, Susan M. Hegland, Jean Ann Summers, Michael Godfrey, Lisa Klein, Doris Hallford

Lisa Klein: Research has shown that there are strong systematic relationships between quality child care and developmental outcomes. We also know that even in these days of tight budgets, there has been increasing public investment in child care. Unfortunately, over 80% of our children are in either low or poor quality care. Today, we have four presentations from representatives of the Four-State Midwest Research Childcare Consortium. They are going to discuss quality child care from four perspectives: (a) the provider, (b) the director, (c) the parents, and (d) the children themselves.

Helen Raikes is an early childhood and youth research specialist with the Gallup organization in Lincoln, Nebraska. She also serves as a visiting scholar with the Society for Research in Child Development and is a special research consultant on the Early Head Start Research and Evaluation Project through the Administration on Children, Youth and Families (ACYF). She will speak about the correlates of quality indicators from the provider perspective, based on data from direct observation and self-report of providers.

Helen Raikes: I would like to speak to you on provider perspective. I will discuss our study and address the issue of learning about quality from the provider's point of view, from at least three different angles: (a) what we can learn by observation about quality at the provider level, (b) what we can learn about quality from providers through self-reporting of their practices, and (c) what we can learn about quality through other available indicators on providers. Some demography-related issues we have seen are either proxies for quality or at least indicators for quality. Overall, there are many different ways that we can learn from providers.

Before beginning this discussion, I want to point out the many ways to define "provider." One can define provider at the level of the program, classroom, teacher, or home provider. One can even define provider as the director, so it is necessary to focus on exactly who the provider is. In our case, we zeroed in on the person who is working with the children, which was the home provider or the teacher in the classroom.

I also want to give a brief overview of the child-care research we are conducting in the Midwest Childcare Research Consortium. This four-state consortium represents the Department of Health and Human Services (DHHS) Region 7, which includes Kansas, Nebraska, Iowa, and Missouri. We have consortium representatives both on the panel and in the audience, and I want to acknowledge Kathy Thornberg and any others who represent our consortium. We have a rather large consortium of researchers and program partners who are child-care providers in the four states where we are involved, as well as some early childhood divisions. The consortium is into its second year. We have a 3-year child-care research partnership grant, and we are funded by the Childcare Bureau with additional support from the Kauffman Foundation.

In addition to learning about quality, I want to share the purpose of our research. In Year 1, we wanted to learn about quality across our four states from a representative sample of all providers, to establish a baseline understanding. In Year 2, our current year, we want to learn about quality from a parent's perspective. In Year 3, we hope to do something rather magical. We have not determined quite yet how to do it, because we have a need to track quality over time. What we had originally intended to do was to develop a set of indicators that our states could use to monitor quality on an ongoing basis. At this point, we want to measure it one more time and then help them do it. Our states are generating creative proposals, such as developing a list of risk and protective factors that they might use on licensing visits to collect data.

For our sample, we started with the child-care state licensing lists in all four states, with a pool of 40,000 names. We then focused on the month of October 2000. From that point, we selected 10,000 names that were stratified according to state, type of care, subsidy or no subsidy, and whether or not they were Early Head Start partnerships. We sent letters to these 10,000 names, alerting them that they might be called and asking them to participate in the study. Then the Gallup organization called 2,022 of those providers and completed 12½-minute interviews on basic indicators of quality. Most people cooperated with us, and 88% completed the survey. We then conducted in-depth interviews with those survey respondents willing to participate.

For quality measures, we reviewed factors such as education and wages that had been associated with quality in previous child-care quality studies. We included a number of self-report quality factors in order to learn more about what providers are perceiving in terms of their own quality practices. We completed observations of quality in 365 of the sites and used the gold standards: the commonly used Infant-Toddler Environment Rating Scale (ITERS), the Early Childhood Environment Rating Scale (ECERS), the Family Day Care Rating Scale (FDCRS) and the Arnett Caregiver Interaction Scale. We also pilot-tested and created initial validation data for an informal child-care observation form that was developed at the University of Missouri, because we are not sure if the FDCRS is the best way to measure quality in family and formal child-care settings.

When we used traditional forms of observation in measuring quality, we found fairly comparable quality across four types of care. The average ITERS score was 4.39, which is quite good for infant-toddler center-based care. The average ECERS score was 4.56 across four states, which is fairly common for ECERS scores today. We had a 4.38 average for FDCRS scores for licensed family child care, showing that it was fairly comparable and consistent with the other forms of care. Our score for unregulated care was 3.61, which is not unexpected for unregulated care. We did not have a good sample or a good response rate in our unregulated care sector, so that is a factor to consider. Encouragingly, from the figures Klein quoted earlier, 20–40% of the care that we observed was good quality; the rest was in either the mediocre or poor quality categories.

A benefit of using observations as the provider's source of data is that the ECERS/ITERS/FDCRS are great global assessments of quality. They are well-validated, associated with child outcomes, and used in many studies to compare one's findings with those of others. There is no question that these measures are at the heart of quality assessment today. A "con" is that the assessments are expensive to administer and gaining reliability is no small matter. It is difficult to get an adequate sample size in order to answer all the questions that you want to ask. Since important information emerges from subgroups, a larger sample size is needed. Another considerable factor is who refused to participate in the study, which can skew the results toward higher quality based on the respondents. We sometimes found that providers did not believe that the things we were measuring were the important components of quality, so there is face validity to those people who are involved in the study.

In terms of self-report, we had good cooperation in the 12½-minute phone interview, learning from providers by asking them to report on their own use of quality practices. Several people had conducted telephone interviews in the last couple of years with varying levels of success. We took some of our items from this work. I regret now that we did not ask people directly how good they think the quality is that they are providing. We thought the social desirability of that question would preclude people from giving us honest answers, but I am not sure they gave us honest answers anyway. We asked participants 14 questions and formed three factors from those questions.

I will tell you which ones worked and which ones did not. The factors that laid out beautifully we called "reading and learning centers." We had one item on parent communication and another on space and materials. Items that were positively associated with quality were responses to the following statements: "Every day, every child in your care is read to," "At least once a year, you are able to talk formally to each parent about the child's progress," and "In the

child-care setting where you work, there are areas set up for learning." The factor that incorporated reading and learning centers and that was also associated significantly with observed quality dealt with space, toys, materials, and the number of children in the provider's care.

A positive aspect of using self-report of quality is that it is easy to measure and allows for large samples. Four of our items correlated with quality, but interestingly enough, four of the items going beyond even the list that I gave you correlated with observed quality on the FDCRS. Gaining access to family child care is difficult, so there might be some possibility for using self-report of quality in those situations. A negative aspect, however, is that we did not have much variance, and there was a social desirability report factor. We had enough variance that we could see relationships, but none of the significant relationships were large. Our reporting may not be the same thing as quality; we may not yet be tapping into what we were asking about.

There are many things about providers that we know are good predictors of quality or that associate highly with quality. We were eager to learn in our own states whether we could measure these things over time and have a read on whether the quality was going up in our states, particularly as a function of some new training initiatives implemented by the states. With some of these proxies, we learned that certain initiatives seem to impact some providers more than others. Overall, there were still some things that tended to cut across all the states and all types of care, which we are now beginning to think about less as proxies for quality and more as risk and protective factors around quality. Therefore, if several of them are clustered together, they might provide a good context for quality.

In our sample, the things we found to be positively associated with quality were similar to findings from other samples. Education tended to associate with quality more for family child care than for center-based care. Training hours at certain levels—up to 12 hours which most of our states set as the requirement—was associated with a jump in quality. We thought maybe 20 hours would have a better result, but we had to wait until reaching 24 hours of training before we saw another jump in quality. An interesting discovery in our Midwestern states was provider participation in U.S. Department of Agriculture (USDA) food programs, because whether or not the provider had a CDA was one of our strongest predictors of quality. Another predictor of higher quality was provider participation in an Early Head Start or Head Start child-care partnership. Three of our states are implementing these kinds of partnerships.

Other factors included (a) if the provider had recent first aid training; (b) if a center-based provider received employee benefits, particularly health insurance; (c) if the provider worked in an accredited program; and (d) if the provider would do something differently if he/she could. We also asked the question, "If you could do something else, would you?" A response of "no" was highly associated with positive quality.

Higher quality is also associated with having a portion or none of the enrolled children receiving subsidies, as opposed to 50% or more of the children as subsidy-receiving in one particular facility. Other factors include attitudes and views in the workplace and if the provider participates in certain types of training. There were a few types of training that seemed to be notably associated with positive quality such as if the home provider participated in a program known as EduCare that exists in Missouri and Kansas. Basically the program involved a mentor or trainer coming into their home and providing a reward for training. There were some kinds of training that seemed to more highly associated with quality than others, but most types of training accounted for small increments in quality, which make a difference as they accumulate. Another factor is earnings, in which there was a curvilinear relationship. Variables that did not have much effect on quality were age and how long providers had been in the field, except for very new providers.

Klein: The next presenter is Susan Hegland. She is an Associate Professor in the Department of Human Development and Family Studies and serves as the coordinator for the Child Development Laboratory School at Iowa State University. With a particular focus on the impact of adult

behavior on the development of children's academic and motivational skills, Hegland will speak about the director's perspective. She will be reporting on data from a survey of over 400 child-care directors in Iowa who addressed preferred qualifications, salary ranges, benefits, turnover, in-service and staff training needs, and the barriers to accessing that training.

Susan Hegland: This project was funded by the Head Start collaboration grant. In Iowa we are trying to get a professional development system established. The survey I am reporting on was funded in order to get a baseline idea of the needs and the professional qualifications of the people caring for Iowa's children. This study was our first effort; we focused on directors of both part-time and full-time programs. The entire project is on a website for the Community Development Data Information Analysis Laboratory (CD DIAL) at Iowa State University.

We obtained names of centers from various lists, the child-care resource and referral agencies, the Department of Human Services, and so forth. We sent a mail survey to directors of centers, with a 50% return rate. We adapted a survey that had been used nationally, since the original 35-page survey was too long. Our version was cut down to about 20 pages, and it was still too long. The result is that our returns came from higher quality programs. We know this because 21% of our respondents' programs were accredited, and we know the rate in Iowa is closer to 9%.

We analyzed the data in many different ways. We asked programs to self-classify whether they were for profit or non-profit and whether they were child care, preschool, or both. We have an Iowa-funded program like Head Start that we call Shared Visions. Rather than seeing huge differences between profit and non-profit programs and huge differences between preschool or child-care programs, we saw the huge differences between these publicly operated programs and the nonpublicly operated programs. For example, compared with staff in the publicly and nonpublicly operated programs, the staff in the publicly operated and accredited programs earned significantly higher wages, had far more employee benefits, had more formal education in child development and early childhood education, and had significantly lower staff turnover.

Twenty years ago, Head Start salary and benefits looked more like the child-care sector; however, we now see wages and benefits that look more similar to public schools and other publicly operated programs. In Iowa, few formal contractual partnerships exist between publicly operated programs like Head Start and nonpublicly operated programs such as child-care programs, where any public subsidy comes only in the form of buying a slot for a child. If the child leaves, the dollars leave.

We asked a series of public policy questions. What was striking to us as we compared groups, saw differences, and looked for things that were statistically significant was that differences were small—1.65 versus 1.59—but they were all in the same direction. Over 90% of the directors agreed that compensation levels in their program should be tied to levels of knowledge, skills, education, and experience despite the fact that average wages were so low. For example, in my hometown of Ames, workers in the local convenience store start at $8.00 an hour with sick leave, retirement, and other benefits. Our child-care workers are starting below $6.00 an hour. Over 90% of the directors in the field believe that a professional development ladder would make it easier to educate parents and policymakers about the link between quality and training. Many directors believe that compensation levels are inadequate.

Over 75% of the directors agreed that reimbursement rates should be tied to program quality. In Iowa, we do not have a tiered system linking subsidy rates to one's accreditation status or quality standard. Over 75% of the directors agreed that reimbursement rates should be tied to staff training qualifications. The same proportion agreed that it is a public responsibility to pay for some part of training for caregivers, and over 75% agreed that quality is enriched when there is a variety of staff qualification levels. When tied together, individual questions about public responsibility, reimbursement rates, the professional development ladder, and compensation levels suggest that we ask a set of questions about the extent directors favor increasing quality levels through regulation and compensation.

For the study, we asked a set of questions on what type of staff qualifications directors use, and which they think are important in hiring teachers. Over 50% of the directors agreed that it is very important for teachers to have some college credits in child development and/or early childhood education. Over 50% agreed that teachers need on-the-job training and prior work experience at a high-quality early childhood training program under a qualified supervisor.

During data analysis I was astounded by the staff-child ratios in these programs. At the study's outset, I expected the staff-child ratio would be 1 teacher and 1 assistant teacher to 16 preschoolers. Instead, I found the directors were reporting ratios of 1 teacher to 60 children. That is out of line with licensing regulations, and I thought, "What is going on here?!" I realized that the survey defined teacher-director versus teacher. A teacher is the person responsible for the educational program for a group of children. The data analysis reflected that these teachers were responsible for the education of 60 children, and each of those groups of children had two assistant teachers. As we construct and distribute these surveys, it is important to remember that no matter how we define it, we are describing one person with many assistant teachers who earn close to minimum wage and who are actually in the classrooms with the children. That distinction can be made more clear in future surveys.

Not surprisingly, we found that less than 50% of the teachers had any kind of retirement pension plan, and less than 50% had any health insurance. I am not going to report the statistics on staff turnover, because they were very confusing. I was expecting to see a bell-shaped curve in our turnover rates, but instead we had a "W" pattern. The few agencies with no turnover during the past 2 years were mostly publicly operated programs providing health insurance and retirement plans; these showed a bell-shaped curve in the middle. At the other end, some programs reported 100% turnover in the past year to 2 years. During analysis, a "W" pattern remained even when I dropped out the summer programs. If I am going to report a mean and standard deviation, I am assuming a bell-shaped curve; the "W" pattern does not allow me to do that. My suggestion is that I have no reason to believe our turnover rates are different from the rest of the country. I suggest that we need to look closely when we are looking at means, standard deviations, and even medians of turnover rates. We see enormous differences between types of programs and their funding. We distort these differences when we collapse them all into a mean.

There are much greater differences between publicly operated versus nonpublicly operated programs and between accredited and non-accredited programs; there are fewer differences between preschools and child-care centers or between profit and nonprofit programs. This suggests that we need to look at the new types of relationships that are being forged such as the partnerships to which Raikes referred. The three of the four states with those strong partnerships did not include Iowa; those programs may make data patterns like this look different.

Klein: Next, we will hear from Jean Ann Summers, an Associate Research Scientist at the University of Kansas Institute for Lifespan Studies. She is the co-principal investigator for the Kansas Early Head Start project and for the Kansas partnership in the Midwest Child Research Consortium. Summers will speak today about the parent's perspective. She will present preliminary data from a study of over 1,000 families in the four-state consortium. The data will speak directly to their choices for child care, their understanding about quality, and their satisfaction with care.

Jean Ann Summers: Thanks to the Kauffman Foundation, we have data from a pilot study using a series of focus groups with parents and providers to investigate perceptions of quality in child care. We also conducted some qualitative interviews with Kansas Early Head Start parents. The findings I will describe in this session come primarily from families with low incomes, and there might be some differences in responses if we talked about families from middle- or higher-income groups.

As I looked at the qualitative information collected, I could see patterns of the factors parents had described as important in the selection of child care. The responses fell into two large macro groups—practicalities versus intangibles. In terms of practical considerations for families, cost was a very high consideration for some families. Families frequently switch child care when they lose subsidies or start having to pay larger co-pays due to higher costs. Location, convenience, child-care hours are important to the families, particularly for low-income families where members may work late afternoons, evenings, or night shifts. Additionally, safety and cleanliness were important issues cited by parents in our focus groups.

I would like to provide sample quotes offered by parents on some of these issues. Concerning available care and available hours, one mother said she cannot utilize child care because child-care centers tend to demand regular schedules, whereas her job has a rotating shift. She also does not trust the 24-hour centers: "I know my kids; they would be up." For families working the night shift, it is important to think of their preferences about how they would like their child in a more family-like environment at bedtime. Cleanliness is another important issue for parents, and they felt it is important to know that their child is going to stay clean and well-ordered throughout the day.

The families also discussed intangible factors, and trust was strongly emphasized. Whenever one interviews someone who chooses not to use child-care centers, concerns of stranger involvement always comes to the top. This concern feeds off media reports about abuse in child-care centers and issues of that nature. Relationships, continuity, warmth, and caring were important. The people who specifically mentioned continuity were part of an Early Head Start program, and they valued keeping their child with the same person over time. Communication—knowing what is happening during the day while the parent is at work—is also very critical to parents. A final factor cited was whether the caregiver herself or himself is a parent.

Let me offer some excerpts from the interviews. This mother provided a typical sentiment about strangers: "I don't trust nobody but family with my baby. They know her; she knows them. You hear in the news all the time about things going on in them day cares." Here is a quote about warmth that I thought was particularly interesting. I had asked this mother how she came to choose a child-care option when it was time to return to work after her child's birth. She said that she took her child with her on visits to various people she thought would provide child care. Only one person actually asked to hold the infant, and showed interest while the mother was there, so she gave the job to that provider. This quote is from a Missouri Early Head Start parent. She said, "I chose family care because the center wasn't open yet, but now I can't take her out because she's been there, and they know her, and I do not want her to keep changing places." Regarding communication, there are parents who want to get a report every day about their children and want to see more about what is going on specifically: "The only thing I don't like is the comments page. I want it filled out top to bottom."

Participants in the focus group did not trust caregivers who had not had their own experiences as a parent. In the eyes of many parents looking for services, one can have any number of degrees, but if one is not a parent, one is not qualified to provide child care.

Turning to implications, there were some similarities to Raikes' and Hegland's presentations in terms of what providers and researchers think of as quality. The providers' perspective on communication indeed was similar regarding quality. Perspectives about continuity and many of those tangibles—safety, cleanliness, and so forth—are bottom-line, bedrock indicators of quality as far as licensure is concerned.

Differences in relationships were a key factor. The parents want something more in the way of warmth, relationship, and caring. In real estate, the key factors are location, location, location; in child care, the key factors for parents are relationship, relationship, relationship. We need to think about this in terms of what this means for us and for parents. When judging the differences between how providers and parents perceive quality, it seems that we need to train parents on the importance of well-trained and qualified caregivers. If we view parents as the customers

in a child-care setting, and if we were in a private industry with these focus group results, we would conclude that we need to gear our product toward our customers. We need to start thinking about how to provide that warmth, caring, assurance of safety, familiarity, and trust that the parents seem to be wanting in our training, development, and structuring of programs. From the perspective of researchers, that encourages us to figure out good measures of quality and to learn to what degree a child-care provider is warm, caring, and developing good relationships with families.

Klein: Michael Godfrey joined the faculty of Iowa State University in August 2000, after having spent 5 years as an Assistant Professor at South Dakota State University. His research focuses on child perceptions of care including the development of an instrument, the Child Assessment of Childcare. Godfrey will speak about children's perspectives.

Michael Godfrey: I am going to describe five studies where I have joined the data sets together to ascertain what a larger number of children think of child care. This sample has approximately 235 children, all of whom attended one of three forms of child care: (a) large child-care centers including Head Starts generally, (b) some home child care or family child care, and (c) what the state classified as preschools, including university preschools. To measure children's ideas of child care, I developed a game. Instead of playing house, one plays child care. It is not a playhouse; it is a play child-care center. One sets up the child-care center as one would set up a playhouse with tables and chairs. Then the children themselves go around the center and describe what they do during the day.

There are specific questions asked as they are going around the child-care center, such as "What does your face look like when you get to go outside? What does your face look like at snack? Is it a mad face? Neutral face? Smiling face?" These questions make the exercise concrete and actively engaging instead of just an interview. This technique does not work with all children, and sometimes they get too excited. Generally, 4- and 5-year-olds can handle it, 6-year-olds get bored, and 3-year-olds usually cannot do it. The children in the sample answered fixed response questions with yes or no answers, rating scale questions, and some general questions such as "Where do you like to play most?" The last category is generally a lead-in to the other type of questions. The instrument has 59 questions that are divided into four scales. The four scales are (a) suitability to the setting, (b) children's perceptions of how they fit in with the child-care setting, (c) care provider discipline and negative care provider behaviors, and (d) the children's perception of their time spent there.

One of the studies looked at whether there was a difference in the children depending on the form of child care—whether center-based, home-based, or preschool. There are no statistically significant differences regarding the form of child care. What makes the difference in the children's perceptions is the particular site, not the form of child care.

Question: Was the home-based child care licensed or unlicensed?

Godfrey: Most of the child care in this study was licensed, so they were all generally providing higher quality care. We did not do the FDCRS in those home care centers, but they were generally licensed.

I want to go over what children think of child care. Generally, most children are happy to come to child-care centers, whatever the form. They see themselves going to child care like Mom and Dad go to work—that is their work.

The home-care children were slightly different and had a more realistic expectation about going there because their parents were going to work, but they still enjoyed going. About 60-65% would rather come to child care than stay at home all day. Do children like structured activities such as table time or unstructured activities such as free play in the block area or

playing outside? The results are mixed, though there is a slight tendency to prefer the tables. When asked reasons for their preference, children consider themselves like their older brothers and sisters going to school and sitting down in order to learn. Are the care centers usually messy or clean? They are generally messy. Do you like the center messy or clean? They like it messy. The children noticed if the centers were dirty, but they liked the clutter of playing and do not want to have to clean up every time to be presentable. They liked to be able to play and feel at home.

Like adults, the majority of children like to be alone at times. I asked some parents about that and one of them said, "I do not pay good money for my child to go to child care and be alone." However, like adults, sometimes they need time alone. There needs to be a place where they can hang out and not be socially bombarded with other children.

Children generally see providers as happy people, although once in a while, the care providers do get mad. Eighty-two percent of the children reported that the care providers get mad. Seventy-two percent of children reported that the care providers make them feel bad sometimes. When talking to the care providers, they report that they do get mad on occasion and the children probably do feel bad sometimes.

Another reminder from the study findings is that children like to eat, and they like it when providers say it is time to eat. It is a question that I asked the first 100 children; almost everyone said macaroni and cheese is their favorite dish. Another question raised by the panel was children's concern with the lack of privacy in their bathrooms, but overwhelmingly, children do not care; 92% of them did not care, whether they were boys or girls.

How do children feel when they get to play outside? By far most of them chose the happy face, even more than when asked whether they like to come to child care or get to go home. I tried to analyze this question based on the season of the year, since South Dakota can be cold, but children seemingly are unfazed by the weather.

Children do feel bad when another child gets punished, but they feel it is important to have the discipline and to follow through with punishments when necessary. They like it when care providers have time to listen to them. By far most of them agree that the care providers make the rules for the benefit of the children, but they also think they have a hand in making the rules. When asked if the child-care center was a good or bad place to come, 82% of children say their center is a good place to come. The implication for parents would be to ask their children what they think of the child-care setting, and if they do not like it, to find another place that may be better. The children picked up on the importance of having a continuity of care, as long as in their minds it is a quality place where they can be happy. Most of them chose the happy face when it was time to go home. They are happy to come but then are happy to go home.

As the providers were more age-appropriately permissive in their discipline and in the choices they gave the children, with less punishment and less control, the children's perceptions increased on those scales. They had higher scales as the providers were more friendly toward the children. If the providers were more warm and balanced and did not bring a lot of excess baggage to work with them, those children viewed their child-care setting as a much more positive environment. Many of the state licensing regulations look at physical things, but children do not notice those so much. I never had any children talk about the teacher-child ratio. Almost everywhere I went, the ratios were within regulations, so perhaps the children would have remarked on it if the ratios had been bad. They did notice if the care provider was warm and friendly with them, which held great importance to the children. Quality of care, not the form of care, makes the difference, whether parents choose Head Start centers, home child-care centers, or another form of care.

It was also important for the children to have at least one good friend at the setting, somebody that they can look forward to seeing and playing with. We can provide them a quality setting that they perceive as quality and not just the adult-defined quality. We talked about gearing the product to the customer. Even though the parents are paying the bills, the child is the ultimate customer and are the ones who need to perceive this setting as a place that is

worthy of coming to. The sociometric status of the children, whether they are popular among their classmates, is also important to them.

Some additional things to study include family measures that may inform what the children think of child care. Some children were very negative, while others are very positive. These results could be due to individual variation, partially based on what the parents said about the child-care center. All in all, children's perceptions are far more dependent upon their interactions with the child-care provider than the actual setting itself.

Klein: Doris Hallford is the Assistant Deputy Director in Missouri's Division of Family Services. She has been there for 23 years and has been involved with early childhood work for the past 9 years. She will speak from the state administrator perspective.

Doris Hallford: Our primary funding sources for early childhood programs in Missouri are the state Childcare and Development Fund and gaming funding. The entrance fees to riverboat casinos help provide many of the quality pieces. In Missouri, cetain issues currently impact our funding and prioritizing of decisions. We are relatively typical of most states around the country. First, we have a serious budget crunch. Making do with less is the battle cry these days. Agencies and programs compete for the limited amount of general revenue that exists. We also currently have 1,500 families that, in this month alone, will reach their 5-year time limits for Temporary Assistance to Needy Families (TANF). We need to figure out how to best use our resources to support them as they move into the workforce. We also have the ongoing struggle that I hear from state administrators around the country about quantity versus quality. There are people who need child care in order to work, but one also needs to make sure that this child care is of a certain level of quality. Unfortunately, all the money typically comes out of one pot, so we do that balancing act of choosing whether to invest in quality or quantity.

We also have the parental choice issue. As Summers was saying, parents choose child care for a variety of valid reasons. We have to offer parents training on how to choose quality care, as well as offer provider training so that parents have a good selection of providers from which to choose.

National numbers are good, but we know that state numbers are always more powerful when one seeks funding from the legislature. Legislators do not care as much about national numbers, but when they see numbers and data that are pertinent to their area and their constituents, most of them sit up and take notice.

In Missouri, we also have the issue of unprecedented turnover. Term limits are kicking in in our state, and we will lose about three-fourths of our House and about two-thirds of our Senate. This type of research will be increasingly important in Missouri when talking to new legislators, and we have to use our data to tell the story effectively. First, however, we must use the data to figure out what our story is. The data give us a better understanding of what the issues are. For example, what are the issues in the metro area versus nonmetro areas? One of the things that we heard from the state relates to our EduCare program. There are issues in rural areas, and our EduCare program is addressing many of those training issues that we are finding are very lacking around the state. That is one policy implication; we probably need to look at expanding our EduCare program.

The demographics in Missouri are changing. We have a large and growing Latino population. How can we utilize this data to tell us what we need to know about that population? The Department of Social Services has decided to focus on birth to 3 years with our education department focusing more and more on the 3- and 4-year-olds. What are the differences between those two age groups, and how do we need to address them in policy? How do benefits play a part? How should we take those into account as we make policy decisions?

We also need a better understanding of what providers, parents, and children want and need. From our perspective, oftentimes we think we know what they need, and until we talk to them

and learn that our original estimations are not exactly accurate. It is the same way with legislators; sometimes the legislators think they know what is needed. We need the data and numbers to tell the stories of the children and families with whom we work.

In order to target resources, we also need to pinpoint what we can impact and where we can have the most impact with our limited resources. For example, at what point does training impact quality? I have heard that 24 hours of provider training has more impact than 12 hours. Subsidy proportion sounds as if it will play a large part in that. For example, in Missouri we give a disproportionate share incentive to providers that serve more than 50% subsidized children; they get an additional 30% in their subsidy rate. The reason we did that was to help provide a more stable base for providers that serve large numbers of children from families with low incomes. Is that having an unintended consequence of forcing children into subsidized facilities? Are providers intentionally recruiting subsidized children to get the higher rate? How does that impact these children?

As investors, we want to know how to protect investments we make. We are investing huge amounts of money in training, but then we have huge provider turnover as they move into the education system or other places that pay higher wages. How do we stop that turnover from happening? Which incentives work and which do not? As a state administrator, one can implement requirements that people must fulfill, or one can implement incentives to encourage them. If one is trying to influence the legislature, incentives are more attractive than requirements.

We know that state budgets will be tight for the next couple of years. Whether we are successful in our efforts depends on the quality of the available data and our ability to analyze and utilize the data to better target our limited resources. It is imperative that people like those on this panel help us, as state administrators, to interpret those data.

Often we simply look at the numbers, but I am frequently told that I must know the meaning behind those numbers. Without people to help us interpret the findings, we would often take off in the wrong direction. We need to keep in mind that the data collected are not just data for data's sake, but they provide useful information to better serve and provide opportunities for the children and families with whom we work.

Klein: It is clearly important to have state administrators with that kind of passion and commitment to what they do. I will now end this session by offering some brief comments that will mirror some of Halford's because they also represent a funder's perspective. In this case, it is a perspective from a private foundation. We will then have a period of discussion and open sharing.

A foundation is based on the public will and the public trust. We exist to serve the public. At the heart and soul, we have all spent time on visions and missions, some of them more articulated or lofty than others. At the core, foundations exist to serve the public and make the world a better place. The Kauffman Foundation has a history of wanting to do that in the area of young children and families. In fact, our benefactor, Ewing Marion Kauffman, read a lot as a child. Without the benefit of being a researcher, he was a consumer of research. It did not take him long to figure out what Keynote Speaker James Heckman discussed earlier in the Opening Session: if one wants to have the biggest impact, then one needs to start early with the youngest children and families.

As a Foundation associate, one of the things I am responsible for is convincing and influencing our board to make decisions about investing the foundation's money wisely for the public good. As we present possibilities to the board, such as a proposal from the Midwest Research Consortium, it is incumbent upon me to find out as much as I possibly can so that their response on investments is an affirmative vote.

A foundation basically does four things. First, because of special Internal Revenue Service (IRS) status, foundations can embark upon demonstration projects that carry greater risk than others might be able to carry. A demonstration project is one thing that foundations are known

to start up and sometimes support, though we cannot do this for an extended period. Our funding for children and families is miniscule compared to what the federal public budget spends on this group. We have very limited funds. Second, in order to say that this is "the" proposal we should invest in, we study whether this type of investment is worthy in and of itself, and if it can be disseminated and scaled up to a much greater use. Dissemination is something foundations can do; they can invest in things to get the word out. Third, foundations can convene for the purpose of disseminating information. Though we have very limited funds, the funds we do have usually get people's attention, and people will come to the table if we call.

Finally, foundations invest in research and evaluation in order to have something to disseminate, particularly in this day and age of accountability. Much as Hallford spoke about policy makers and the need to provide them with the strongest evidence possible, foundation boards and trustees are by and large made up of people from the public corporate business sector. They need the same type of rigorous evidence, and they are asking for it more and more. Research and evaluation efforts are critical.

Demonstrations are now happening in multiple states, including data camps. I went to a data camp one afternoon and walked away thinking that I had sold this investment because we said we would disseminate—get the word out and have strong, research-based information to share in order to influence policy. Research and evaluation are attractive investments for foundations.

There are challenges. When we think about supporting these efforts, there needs to be a good blend of work to provide short- and long-term results. Foundations will require both. Private investment has a short attention span and requires information quickly. If they do not get it, we lose them. Short-term indicators, proxy indicators, and immediate results are important. At the same time they are going to say, "Well, that is not really what we want to get. Remember we are here to save the world and make the world a better place for young children and families, so we want to know whether they are now productive members of society as a result of this early childhood program." We know that takes years of longitudinal research, but there has to be a careful balance to provide immediate results as well as sketch out the longer-term study. Foundations can provide some ongoing investment, but with the limited funds we have, we probably cannot do what the public can do in terms of multidecade longitudinal projects.

The final challenge I would put to you all from a foundation perspective is that as much as research and evaluation are important, as much as accountability is important for influencing public support and investment in young children and families, there must be careful attention paid to the translation of research into good programming, practice, and policymaking. Crucial decision makers in foundations need to know not only that you have rigorous and reliable information, so that when they quote it, they are perceived as experts, but also that the findings are useful. That is ultimately what they are responsible for, and we will put that challenge back to you.

Carol Mooney: I am from Concord, New Hampshire. Could you elaborate on the criteria for higher reimbursement rates for quality? Exactly what does that mean and how is that done?

Hegland: Our data shows that people stated a preference for higher reimbursement rates related to either the quality of the center or the qualifications of the provider. For example, North Carolina implemented a five-star system. One star is for basic licensing for safety and custodial care. One can move up to five stars based on scores on the ECERS scales. They have trained people through many of the universities in North Carolina, and the University of North Carolina at Greensboro has taken charge of this training, administering the ECERS in their area. They review the agency turnover from year to year as one determinant of the number of stars granted. When we put in a survey question about whether or not reimbursement rates should be tied to quality, people were familiar with the North Carolina model and were using that. I believe that Missouri has higher subsidy rates if one is accredited while meeting three or four other catego-

ries. Several states have had systems whereby the state will pay a higher subsidy rate for enrolled children from families with low incomes, if a program meets certain quality levels.

Raikes: In two of our four states, there is a higher reimbursement rate for subsidy payments for accredited people. This is true for Missouri and Nebraska. An interesting finding in Nebraska is that we found comparable quality in center-based care between subsidy-receiving and nonsubsidy-receiving providers. In family child care, there was a big differential. Our subsidy-receiving providers were providing care that was of much lower quality than were our nonsubsidy-receiving providers.

We had this incentive on the books for them intended as an incentive for quality. For example, if they were accredited, they were assumed to provide care of higher quality and thus get paid more. In fact, what we found was that hardly anybody was cashing in on that because in our particular state, the usage was defined such that subsidy-receiving clients could not be charged more than other clients. Because of the market, they received no bonus, and it did not help as an inducement for quality. We have since corrected that flaw in the system. Missouri just gets a bonus for subsidy that does not necessarily move with the market, so if one gets accredited in the rural areas, one can realize some monetary benefit.

Mooney: In New Hampshire, there is a direct incentive for programs to become accredited. Upon receiving that accreditation from the National Association for the Education of Young Children (NAEYC), they get a $1,500 bonus. Recently, a commission to discuss that issue heard providers raise the question that it seems we are rewarding the people who already had more financial resources with which to provide better programming. This issue has given me a great deal to think about in looking at who is accredited in our state; it is primarily lab schools with the universities and colleges, Head Start programs, the programs associated with Phillips Exeter, and places that have money. It is a dilemma. What do you do about that?

Raikes: In some of the states, there is support given to providers who seek accreditation. Remember that in the Midwest we did find higher quality associated with accredited programs, even though the percentage is less than 5%. We do not know what is causing this effect, but it is a driver of quality.

Barbara Rudlin: I am from Caliber Associates. We talked about the important qualities for parents being warmth, caring, and kindness. Then we talked about research-supported quality indicators such as cleanliness, safety, as well as other things that are not as important to parents. How do we bring this knowledge together in a way that meets the needs of all users in the system?

Summers: First of all, the findings were basically from families with low incomes, so we might have different answers for parents with higher levels of income and education. On the one hand, we need to think about incorporating the wishes of families and children into our training, CDAs, and other kinds of child-care certifications. We also need to turn it around and explain to parents the benefits of well-trained, highly qualified staff. It needs to be a two-way street of communication. It would also be more important to figure out how to measure those things. Another intriguing thought is whether we say that child-care providers must all be parents themselves. Parents seem to be saying this as consumers of child care, so we may need to have a reciprocal discussion about that topic.

Raikes: We are now in the field with a second parent survey to enable a comparison of our observations of quality ratings with parents' perceptions of quality, to see where the discontinuities lay.

Godfrey: The two are coming more closely aligned, especially with the Arnett Caregiver Interaction Scale. The children's own perceptions predict more than the ECERS or the NAEYC standards. Those standards are still important and are getting better with each iteration, but they just need to be broadened.

Carla Patterson: I am from the Queensland University of Technology in Australia. I would like to talk briefly about some early initiatives occurring in Australia in regard to health-promoting early childhood centers, which have experienced some conflict between quality standards and parents' desires. In essence, they have taken on board some of the issues raised by the last speaker regarding children's perceptions, but the rules were made primarily by the teachers.

In the health-promoting setting, the children are permitted to make some of the rules. The parents and staff are integrated into the rule-making process, so one is truly empowering all three components of the center to make decisions about how the center is operating. We currently have many pilot studies in this child-care approach going on in areas with low-income populations.

Summers: I have a thought about the issue of child-care quality and indicators for quality at different times of day, when parents work evenings and night shifts. Perhaps "developmentally appropriate" ought to be applied to diurnally appropriate thinking in terms of what is appropriate for children at a center where they need to be put to bed or where they need to spend time in the evening rather than during the day.

I liked Godfrey's comments on children thinking of themselves as going to work or going to school when they go to the centers. That is appropriate for the time of day if you go to school during the day, but what about evening care? What does that mean in terms of quality? Is there a different definition of quality when one is caring for children during evenings and night shifts?

Klein: Would someone explain data camp?

Raikes: At a data camp, we come together to review our data across our four states and within each of our states, to begin addressing state policy questions. What we are finding across our four states is not the same. In Kansas, everything seems to be about the same, whereas in Nebraska we have providers who are providing low-quality care. In Iowa, perhaps there was lower quality care in infant and family care, but preschool and center-based care was quite high, so there was also variability. At a data camp, we look at these issues, put our heads together, and attempt to provide interpretations of what we see.

Summers: Data camp involved sitting at a table with our state partners and hearing the data. One of us had a laptop with the software package SPSS, so we could work with the data while another of us had a laptop to keep notes. It was intense but resulted in a real partnership with the state representative accessing immediate answers to data questions.

Comment: I got an invitation to data camp. I was expecting to eat S'mores and sing Kum Ba Yah!

Klein: In all seriousness, I asked the panelists to highlight the data camp experience because it is an incredibly valuable component to this consortium. Another big value to investors is concepts of "leveraging" and "partnership." Data camp has been a way for this group to look at analyses, questions, and a wealth of information that otherwise would not have come up had they just been involved with their individual projects. It is leveraging human brain capital as well as potentially leveraging other economic capital and resources. I applaud this group for doing that, it is an interesting, seldom-seen process.

Raikes: I want to make a plug for conducting random selection of child-care providers in your states, if given the opportunity. The power of going to original licensing files, which were monsters to draw from, was still worth it. Think about the categories of providers that can be sampled in your own state and then pull from those randomly.

The story about who those providers were just rolled off those surveys from 2,000 people because we had about 500 in each state. I learned some things that I had never anticipated. Perhaps there may be one unstable sector, but we found strong sectors of stable providers in our states, including people who have been at it for 10 years and believe it is a personal calling. This experience changes the way one thinks about providers, and I think one cannot know that unless one does it randomly.

I did want to mention that more states seem to be getting into this business. I just talked to Mark Greenberg from Pennsylvania. He said that their state is financing a random survey and are actually paying their providers $100 a survey for observations, because they are determined to fill all the cells and may need monetary incentive to get at some of the harder-to-assess questions.

What Choices Are Available to Parents for Child Care and Education Services?

CHAIR: Gerald Sroufe
PRESENTERS: Barbara Bergmann, Janet Hansen, Rachel Schumacher

Gerald Sroufe: I am the Senior Advisor on the Program Committee of the American Educational Research Association. We will begin the conversation with each of the three presenters talking briefly about their perspective on this issue. Then we hope there are questions and observations from all present. Our first presenter is Janet Hansen, who has served as a Senior Program Officer at the National Academy of Sciences, responsible for reports on school finance, international comparative studies in education, and education and training of the workforce. Hansen has also been a Director of Policy Analysis at the College Board and an Academic Administrator at Princeton and Claremont Universities. She is currently Vice President and Director of Education Studies at the Committee for Economic Development, where she oversees early childhood education as well as K-12.

Janet Hansen: I am with the Committee for Economic Development (CED), a nonpartisan, nonprofit, public policy research group. The Committee is composed of 250 trustees, primarily business and academic executives who come together in working groups to consider issues of public policy related to economic development and individual opportunity, globally as well as nationally. They write reports and make policy recommendations, which they then go out and mobilize support for within their constituencies. The CED trustees have had a long-standing interest in issues related to the development and education of young children. In fact, CED was the first business-related group to be interested in this area.

Initial reports going back almost 20 years highlight the importance of the nation developing a strategy that views investments in young children as essential to the country. These reports talk about the importance of having an investment strategy that views child education beginning at birth. The social, physical, and cognitive development of children is important for the long-term health of the nation, as well as to the individual opportunities of the children themselves.

I would like to talk about a new report that was issued last spring by CED, called *Preschool For All: Investing in a Productive and Just Society*. The last report before this one, *Why Child Care Matters*, focused exclusively on a range of issues related to child care. When our trustees decided to take up the issue of young children again about 2 years ago, we looked at what had happened since our last report on this subject and were struck by several things. One is the fact that the majority of 3- and 4-year-old children are now in center-based care for some part of every week. That is obviously related to the fact that the majority of mothers of young children are now in the workforce.

For all of the ideological arguments about whether or not it is a good thing for young children to be taken care of outside the home, the fact of the matter is that almost all children are for some part of the week. Many of the settings in which these children spend time are not particularly of high quality or necessarily the settings where we would want our own children to be.

The second thing that struck us is the fact that increasingly over the last decade, research has shown that children have learning capacities that are not being developed. Children are spending a lot of time in out-of-home settings but are not spending that time in ways that help them develop and enter school on a level playing field. The third thing we saw is that much progress had been made since our earlier reports in terms of programs and opportunities for young children, but that progress is still slow. We were not anywhere as far along as we had hoped to be, and the key reason seemed to be that public investment in young children is still inadequate.

Unlike elementary, secondary, and higher education, in this country we still treat young children as primarily a family responsibility and do not make public investments in young children comparable to investments we make in older children. When one looks at a whole range of issues and concerns related to young children, many of them seemed at some level to stem from the fact that there are not sufficient resources available to remedy identified problems. We decided that in our new report, we wanted to focus particularly on the 3- and 4-year-olds who are already, for the most part, enrolled in center-based care and on the importance of providing access to preschool learning opportunities that prepare all children for school. When I say "preschool learning opportunities," let me be clear that we understand and believe that we are not just talking about cognitive skills. We are talking about a whole range of developmental skills, abilities, and capacities that children need for school readiness.

Since we are a business-related group and one of our comparative advantages is our ability to mobilize business leaders behind public policy issues, we also wanted to focus our attention in this report. There are a tremendous number of issues that we could have addressed, but our ability to mobilize business leaders behind public policy changes is in part tied to having a limited set of objectives to ask people to support. In this report, we recommended that the United States acknowledge society's stake in and responsibility for early education, as it long has for older children, by making publicly-funded prekindergarten offered by a variety of providers; furthermore, it should be available to all children 3 years old and over whose parents want to participate. Everything in this long report is connected to that major recommendation.

We wish to extend that recommendation. We think that universal preschool can be accomplished in the most timely and equitable way through a strong federal-state partnership. Part of the reason we explicitly make this point is that it is not the way we do K-12 education in this country. K-12 education is still primarily a state responsibility; the federal government provides 7% of the money. Part of the result of that state dependence is enormous inequities across the country in the educational opportunities available to children in elementary and secondary education.

In early education and care, we actually start from a different vantage point. The fact that to the extent there are public subsidies, and of course there are extensive subsidies in this area, they are more heavily federal than state. We are not bound by the history and the tradition that has affected K-12 education and kept us from having a national perspective. We were concerned as we looked at how unsystematic early childhood education and care is. There should be a strong role for the states in taking the lead to design preschool systems and having the freedom to choose their own approaches as long as all children have access to preschool education that is consistent with recognized standards and is obtainable from a variety of providers. We thought the federal government's role should be to provide incentives for and assistance to states in constructing high-quality early learning systems.

We debated the issue of what kind of approach states might, or ought to, take. I want to say this explicitly given that the session's focus is about choice. At this point, there is no strong evidence for one particular approach that ought to be taken for early education; there is still much to be learned about how to do early education. The states are already pursuing a variety of different and interesting models. For example, we thought about whether to build on this vision of universal preschool using a Head Start model, which some states are doing, such as Ohio. We decided that was not the recommendation we wanted to make. Instead of just using what we thought was important, the states should have the flexibility to develop a variety of models that we can learn from over time, to see if in fact there are one, two, or three best ways to learn this. Maybe it will always be the case that one can get to one's goals through a variety of means. Since states already have quite different structures in place for early care and education, it seemed sensible to us to build on that diversity and the advantages provided by that diversity.

We thought it was important to stress that parents ought to have the opportunity to choose among a variety of providers. We did not see this as just extending the public school system

downward into early education and having universal preschool administered through the public school systems. It is well known that most of our children are already in some type of center-based care through a variety of providers, only some of which are public schools. For both philosophical and practical reasons, we thought it was important to build on the diversity of providers.

Although our report is primarily talking about preschool, we repeatedly stress the fact that from a family perspective as well as from a philosophical perspective, education and care are inextricably intertwined. This is especially true for working families; they are not going to have options for access to preschool unless those preschool opportunities are connected to child care opportunities that extend through the working day and the working year. That is not the way public schools are structured. It is important that parents have the opportunity to select providers who are willing to participate in state preschool programs but who also provide the broader child care opportunities needed by so many working families.

Let me finish by stressing that we see our report as a call to action more than a detailed blueprint. There is still much to learn as these opportunities are expanded. In conclusion, I would like to emphasize the importance of creating universal preschool programs that take much fuller advantage than do current arrangements of young children's capacity to learn. That approach involves states in building coherent early education systems that are financially supported by both the state and federal governments.

Sroufe: In the Spring 2002 issue of the *American Educational Research Journal*, there was a provocative article on child care from the recent National Institute for Child Health and Human Development (NICHD) study. The authors cite the statistic that in 1999, 81% of children going to kindergarten had already had a preschool experience of some type. Hansen makes a good point that it is almost a universal nonsystem at the moment.

Rachel Schumacher is a Policy Analyst at the Center for Law and Social Policy (CLASP), substituting for Mark Greenberg. She has coauthored a number of works with him, including *Child Care After Leaving Welfare, The Impact of TANF Funding on State Child Care Subsidy Programs, State Initiatives to Promote Early Learning,* and *State Initiatives to Promote Early Learning: Next Steps in Coordinating Subsidized Child Care, Head Start and State Prekindergarten*. These topics are all related to our concerns in this session.

Rachel Schumacher: The Center for Law and Social Policy is a nonprofit advocacy and research organization that has been around for 30 years. It started out in public interest law but is now primarily policy focused. We work on economic security issues for families with low incomes. Our niche is to understand, explain, and translate how federal rules and regulations about funding streams affect what can and cannot be done under state and local initiatives to promote parent choice and other types of activities in early childhood education. My specialties are child care and early education issues.

Our interest in parental choice is fundamental, because parental choice is a key piece of the Child Care and Development Fund (CCDF) law. This law is one of the pieces of federal legislation that we work on. In particular, our work focuses on trying to bring into the discussion of parental choice both the need to think about the impact on child development and the impact on being able to provide real work support for families with low incomes. We try to bring both those tenets into all the work we do, which is often challenging given that the missions of the major federal funding streams for early childhood education can be different, whether one is looking at the rules for Head Start or the rules for the CCDF. These have different missions, with Head Start being child-development focused but not thinking so much about full-day and full-year work schedules; the CCDF is focused on supporting work but does not have in its mission the same focus on child development and comprehensive services as Head Start.

The CCDF law has a parental choice provision that is important for state implementation of

this legislation. The parental choice provisions are supposed to allow all parents who need assistance finding and paying for child care to have a choice of options and to have equal access to child care choices as a family, regardless of economic or financial qualification for that service. That is in the law although what that means is up for debate. How states try to meet these provisions is also up for some debate. I will go into some issues that affect policy areas which states are trying to address and that would also affect parental choice. We have many items on our website that explain the law and these types of provisions if anyone is interested in finding out more about them.

Next, I would like to discuss some key issues to consider when talking about what it means to make parental choice meaningful. First, there has to be a supply of choices available for families. Parents can have abundant resources with which to purchase child care, and there can be a universal prekindergarten program in the state. However, if there is not a supply of options in the community in which the family lives, with provisions to ensure quality care meets the necessary standards and is available during the times parents need it, then parental choice provisions cannot be fully met.

A second aspect of parental choice that is important to keep in mind is consumer education. If parents do not have access to information and assistance in finding options, then it is difficult for them to exercise informed parental choice. What do I mean by that? One of the ways that states try to promote parental choice options is by funding resource and referral networks for parents to visit and get information about the options in their areas, what quality looks like, and what questions they should ask the providers.

Another piece involves ways to understand whether the provider is actually meeting any type of standard. Some people say that it is easier to figure out whether a vacuum cleaner or a hotel meets a certain standard than child care. Some states have tried to address this issue by developing "star systems," which are rating systems built into state licensing programs. When a parent goes into that program, a sign on the door says how many stars the program has out of the total possible. That is one of the ways that I have seen policies try to promote consumer education and informed choice.

One of the more important pieces and one of the toughest nuts to crack is fiscal resources, both for the parents to be able to pay for care if there is a cost associated with it and to make sure that high-quality care is available and accessible. There are resources that can go directly to parents to help pay for care in the form of vouchers or other types of subsidies. Currently, under CCDF, we serve about one in seven of the children who would be federally eligible. The second piece of the problem is that once a parent has funds, that does not necessarily guarantee accessible child care. For example, in the child care system, if one has a child care subsidy and cannot find a provider who will take the subsidy, then one is out of luck. One of the things that determines this is whether a state has a child care subsidy system where they cannot pay an adequate provider rate to encourage high-quality providers to come into the system. Thus even if a parent has a subsidy, he or she cannot always make use of their choice.

Very often, the parental choice argument is made in such a way whereby people think that as long as a parent is offered a voucher, they have parental choice. I would argue that many other features go into parental choice, especially this last one. If one cannot encourage high-quality providers to participate in the system and serve low-income families with subsidies because one is not paying them well enough, then there is not a full parental choice system. It is important to consider the fact that parental choice is not just choice of a voucher but a real informed choice of an array of providers.

I want to talk briefly about Head Start's role in the choice discussion and some ways that federal rules and the way the program is run fits into this whole choice issue. Head Start is an excellent program that offers high-quality services in many low-income communities around the country. There are a couple of ways that parents sometimes find their choices constrained. One way is the income limit on the program; parents who are above 100% of the federal poverty line

might not be able to get into the program. We have seen that in the last few years, especially as many people have entered the workforce, suddenly it is getting hard for many Head Start programs to fill their enrollment. Parents are working and are just over that poverty line.

Another issue is that although many programs want to be full-day and full-year, many are still part-day and part-year. That can constrain the ability of a working family to be able to choose a Head Start program. Many Head Start programs are expanding to full-day, full-year programs or working on collaboration with child care programs to adjust to this need.

Lastly, I want to offer a brief update on the current debate about the Welfare Block Grant, the Temporary Assistance for Needy Families (TANF) Block Grant, and the CCDF block grants. Congress is currently reauthorizing these pieces of legislation, determining how much money should be spent on these programs over the next five years, and whether there should be any major policy changes to those programs during the next 5 years.

One of the things that has happened in the debate since the administration put forward their proposal has been this incredible focus on work and encouraging parents to work longer hours. It is an interesting piece of the discussion that will impact parental choice. It will also have an impact on child care resources for other families. What may or may not happen is a proposal to require families who have low incomes and need cash assistance from the welfare program to work or be involved in work activities at least 40 hours a week. That would include families with children under the age of 6.

One of the things that has happened in the debate that will have ramifications for other programs serving families with low incomes is that very often, these are the same families with whom Head Start programs are working. These families are going to face different constraints in terms of what they need to do to continue being eligible for the program. They are going to have different child care needs, and it may affect their ability to access Head Start because now they will need something full-day, full-year. It could mean that states with limited resources can target their funds only toward those families that are receiving TANF and will no longer be able to serve other working families with low incomes.

If they do make changes to the welfare program and work, will there be adequate funding for the child-care program so that the states will be able to keep up with that need without changing the access to child-care systems for other working families with low incomes? Will there be a loss of focus on the importance of quality, because the child-care program will be so stretched to focus on getting enough time covered and enough child-care assistance that there will not be the time to invest in the quality of the programs? This year, a major part of the discussion has been about improving the quality of the child-care system and helping to make child-care comparable in quality to the Head Start program and other early education programs.

Sroufe: Our final presenter is Barbara Bergmann. She has been President of the Society for the Advancement of Social Economics, the American Association of University Professors, and the International Association of Feminist Economists. She served as a senior staff member of President Kennedy's Council of Economic Advisors, and on the advisory committee to the Congressional Budget Office. She writes on economic and social policy, particularly about welfare, child care, women in the economy, the labor market, problems of women, and African Americans. Her most recent book is *America's Child Care Problem: The Way Out.*

Barbara Bergmann: Here in Washington, DC, especially now, there is great attention to what Congress will do regarding child care. Realistically, one cannot expect Congress to make a great leap in child-care funding or quality regulation. The people who advocate for more government money for child care are concerned about how many millions more we can add on to the current appropriations. When my coauthor Suzanne Helburn and I decided to write this book, we took another tack.

Instead of asking what we need to do this year, or what would be a realistic goal for this year or next, we said, "Let's sit back and try to see what an ideal system would be. How should it be structured? Who should pay for it? That is, what proportion should the government pay, what proportion should the parents pay, and possibly, what proportion should business pay? How much would each piece cost? What can be done about quality?" This cannot be any surprise, but we concluded that huge amounts of money are needed.

We suggest a system where anybody below or at the poverty line would essentially get free, high-quality child care. Parents above the poverty line would pay no more for the care of their children than 20% of their income above the poverty line, which we thought was a reasonable formula. There are many others. Hansen's group is suggesting that for the 3- and 4-year-olds, the parents pay nothing. She kept saying "universal," but she meant "free." We estimated the costs of a free system, but we did want to keep the amount in bounds. The system that we came up with would cost about $50 billion per year. Including Head Start and the state funds that are going to child care, the current system costs about $20 billion per year.

It seems clear that if one gets a system in which parents do not have to break their budget for child care, one can rapidly approach large numbers. We estimated that a totally free system of child care would cost something like $120 billion a year. Both of those numbers are high. However, because what we are in is called a war rather than a police action, the defense budget magically went up $100 billion a year. That would more than pay for an adequate child-care system in this country. The question is not whether the money is there, but whether we spend it in this way. Obviously, there are enough people who want to add $100 billion to the defense budget, but there are not enough people who are energized to add $50 billion to the budget for other crucial needs of this country.

We were delighted to see Hansen's group come in, because they also estimate that much money is needed. That gives some countenance to our estimate. I have to say that when the local so-called feminist groups in Washington hear our estimates of what is needed, they say that we are asking for too much, that they could never back that, and that our numbers are ridiculous. They feel that it is so unrealistic that they would not be able to hold their heads up on Capitol Hill. It is necessary to be honest and to say what the real needs are. We are not going to get there next year or the year after, but unless we advocate for that, it will never happen. I want to remind you all that in the few golden years where we had surpluses as far as the eye could see, nobody in the public or the child-care community, among liberals generally, mentioned child care as something we ought to do. It has not even been on the back burner; it has been nowhere.

Our book is intended to start the dialogue and ask what is needed and where we should be going. We view some of the ideas that the money comes from charity or from business as ridiculous. They do not give very much now; they have all the incentives not to give much more. The conclusion we come to can be characterized as this: the regular child care programs need to become more like Head Start. They need to give more attention to medical problems, psychological problems, involvement of parents, and so forth. Head Start needs to become more like the regular programs in some respects, namely full-day and full-year, but there also needs to be enrollment from a broader part of the community.

The latter part is important. The worst thing we could see is that all the poor children go to Head Start and all the others go to government-subsidized programs. I remember seeing a report put out by the founders of *Child Development* on the Georgia preschools. The person who did the report interviewed the heads of these preschools. They said that they were very careful not to steal clients from Head Start. Georgia has a universal preschool for 4-year-olds. Presumably, there is a Head Start constituency, and there are people of influence who were involved with Head Start who understandably do not want their clients hijacked by the system.

There is a great danger that unless this issue is faced, we are going to get much more race and class segregation than we otherwise would. Head Start people need to look at this issue honestly. They ought to do what we did. They may come to other conclusions as to the way that the system ought to be structured, but they need to look at this issue of segregation.

Sroufe: That is a good start from our panel. We would now like to start a conversation on this topic with the participation of audience members.

Ivelisse Martinez-Beck: I am with the Child Care Bureau. Could you give us a definition of preschool as opposed to early childhood education in general?

Hansen: In our report, we did not try to come up with a single definition of preschool or prekindergarten, because there is not a single definition. At the same time, it is important that the big, new public subsidies that ought to be involved come with some quality standards. We suggested, as Bergmann indicated, that this was going to be expensive. We indicated that it ought to be a federal-state partnership, and funding ought to be about half-federal, half-state. We have a rationale for that, since it would be costly in terms of federal money if our recommendation were actually to happen.

We thought that federal money ought to operate as an incentive to the states in building their systems, to build high-quality preschool or prekindergarten programs. We suggested that the federal money should flow to the states as an effective block grant that the states would apply for and be eligible to receive if they had strategic plans for how they would move toward implementing universal prekindergarten for 3- and 4-year-olds, and if they had developed standards for such programs.

There would be a new federal entity that would not certify a single set of standards, but would look at the state plans and the state quality standards for prekindergarten to determine whether they were acceptable. In effect, we left it to this new body, which we said should be composed of early child care and education experts as well as public policy makers and public citizens. They would look at the state of what we know about early education and develop a set of criteria for accepting or endorsing acceptable standards. Presumably, those would change over time as we learn more about what kinds of teaching credentials are necessary for effectively helping prepare children for school.

For example, many of you are probably aware that the National Research Council issued a report a couple of years ago called *Eager to Learn*. They call for all teachers in preschool programs to have bachelor's degrees. We are far away from that reality now. Frankly, we do not know at this point how essential it is that all teachers in prekindergarten have bachelor's degrees as opposed to other criteria one might set for a prekindergarten program. Maybe it is important that the people who are in charge of developing curricula and programs in preschool centers have bachelor's degrees; maybe it is not so important that all other people in the classrooms have bachelor's degrees.

These are things we can learn about over the years from research, as we implement programs around the country. We see this body that we described not only deciding initially on a set of criteria for acceptable standards but also reviewing those, changing them, and perhaps ratcheting them up over time. This would happen in a practical sense as it becomes more possible to do that. However, it could also happen in an empirical sense as we learn more about which aspects of prekindergarten are the most effective, which types of criteria matter the most in terms of curricular standards, teacher credentials, class size, and all the types of things that one considers when thinking about program standards. We did not think we were in a position to define what those standards ought to be, but there ought to be a body that has such a role.

Quickly, let me say that this is not an out-in-left-field idea. There are many federal programs that have some kind of similar mechanism for setting quality standards. Let me just use one that I happen to know, which is higher education. Much federal money flows to colleges and universities in federal college student-aid programs. That money is tied to colleges and universities meeting some standard that says they are eligible institutions. In higher education, the federal government uses accreditation as its mechanism. There is a federal body that actually accredits the accreditors and determines which accrediting agencies have sufficient standards for program review such that if a college is accredited by that body, they are eligible for federal funds.

We did not want to talk about accreditation alone, because accreditation might be one way that standards are set. It might be that this federal body would say that if a preschool program had National Association for the Education of Young Children (NAEYC) accreditation, they could be eligible for federal funds. We did not think that ought to be the only criteria. For example, look at Georgia's universal pre-K program. The standards that Georgia defines as meaning pre-K might well be ratified by this federal body as making the program eligible, similarly with pre-K programs in other states.

Sroufe: Were you asking more about curricular differences that would be based on different definitions of preschool? For example, is there a difference between 3-year-olds and 4-year-olds or even younger children?

Martinez-Beck: Why are providers able to give different types of care considering market mechanisms?

Bergmann: As an economist, perhaps I have too optimistic a view of what the market can do. The usual assumption by economists is that if the demand is there, the supply will appear. I recently had a little comeuppance on that. I got a call from a reporter from the National Public Radio program *Market Place*. He said that he had a newborn. He lived in Washington, DC and had been calling around to find care for his infant. I suggested that he ask—especially since he is the reporter for *Market Place*—for-profit providers why they are not providing more care for infants and toddlers. This is a subject for serious research. Certainly if we received large appropriations, there would be expansions of supply. My view tends to be that the main shortage is money.

Sroufe: When you say that more research is needed in this area, specifically what aspect are you pointing to that requires research?

Bergmann: We ought to get funding to talk with the executives of these large corporations to find out what is happening. It is nothing we want to theorize about; we want to ask about it and find out their decision making process in terms of opening up centers. Who are the clientele they are opening up for?

Schumacher: Most consumers cannot afford to pay the cost of a high-quality program. There are some incredibly amazing centers in some urban settings where there is demand as well as a concentration of people who can pay. Those are fantastic, but the great majority of consumers cannot afford to pay $12,000-15,000 a year for infant care.

Bergmann: In our book, we give an example of a couple earning $30,000 a year. If the poverty line for them is $17,500, then their disposable income leaves them about $10,000 for child care. That is about what it would cost to get two children into care. What we are saying is that this family, which is in the lower middle class, would have to reduce it's standard of living to the poverty level in order to pay for child care for those children, and they will not do it. That is why there is so much off-the-books care and why, to some degree, parents choose family day care.

Schumacher: I find the power of the universal argument interesting. I was happy to see in the *Preschool For All* report that right now, many of the programs that are aimed at providing early childhood education are focused on the families with the very lowest incomes. Even for poor children and Head Start, CCDF states can go up to 85% of the state median income, but only a few do. They do not have the resources to do it, so most families are just above the poverty level if they are getting any type of child care assistance. We know from research, and instinctively from anyone who is looking for child care right now, that it is difficult to afford.

It is interesting to try to remove the universal argument from the idea of it having to be means-tested, focused, and therefore politically unpopular. We should start thinking about it more as a universal program that is appealing to the average person, and see it as more of a public good in a way that then seems important for government to make gains. That has happened in Georgia. Although it is funded by a state lottery, the Georgia pre-K program for 4-year-olds is fantastically popular. It is free to everyone; it serves about 70% of the 4-year-olds in the state.

Hansen: It is critical to pick up on the fact that it is prekindergarten. It is seen as education. For good or ill, we may not like it, but people are much closer to accepting universal preschool education than they are to universal child-care subsidies. It is where we are politically. I need to be sure that I am clear that our proposal is about part-day and part-year universal pre-kindergarten. If we could get that enacted in this country, the public subsidies that would flow with that would in part start to take care of one big piece of the child-care problem. The money flowing to that could displace public subsidies that are now being spent on those children in child care; that money could flow to other children for other kinds of care. It is not perhaps as we would all wish it. It occurred to me earlier that by emphasizing the early education aspects of this, there is potential to build support that is not worth sneezing at. There are whole new constituencies who are not yet ready to talk about the types of universal child-care subsidies that we envision.

Schumacher: I would agree with that and add one point. One would want to make sure the preschool can be delivered in a variety of settings and that there are ways for them to qualify and get up to speed so that they can provide that service. That is the power to lift all boats—putting money out there that is attached to higher quality standards, but giving the money to actually help programs get there. That is when the system can truly be transformed.

Colleen Gallagher: My concern is about the funding. We would need to ensure that if we set up a universal pre-K program, we are not taking away from programs for children birth to 3 years of age. All of our research shows that birth to 3 is when early education starts and that concerns me greatly. I have seen things shift to take care of one problem and leave the other out in the cold. Regarding parental choice, can state and local groups give parental choice to a particular type of provider? Under current legislation, can states restrict funding to licensed care systems?

Bergmann: Our book suggests that no public money go to unlicensed care, including relatives.

Schumacher: Under the current CCDF law, states may use the money with unlicensed providers. The state has to certify that a health and safety standard system is followed. I have seen states work on moving more of their children from subsidized families with low incomes into higher quality programs. For example, in Oklahoma, where they have a tiered reimbursement star system, they pay more for higher quality care. They are trying to move more of their children into higher quality care. Oklahoma is moving toward saying that the care has to be a certain star level to use the subsidy.

Gallagher: Is that okay?

Schumacher: There are some concerns. Our advice has been to go toward that gradually. There have to be enough providers available to meet needs or the state cannot be served. It must be a gradual process.

Bergmann: Since the term waiting list was broached, that has been an important political weapon. We ought to have systematic information on waiting lists nationwide, and people

should be encouraged to get on the waiting list so that pressure mounts for more money. Advocates have been delinquent in inventing strategies for raising the amount of public money. I would guess that the waiting list publicity could be one of them.

Sroufe: Gallagher had two questions, the second of which we dealt with well. We did not address the first question. If the state mandates a funding level for preschool education, like birth to 5 years of age, that would work against putting resources at the 0 to 3 level and also go against kindergartners who might be older and thus ineligible.

In Florida, almost 44% of our subsidized care is for school-aged children. That is actually where it falls in my area of town as well. It is not that we cannot serve those children—we can. However, if the priority in the law is from birth to 5 years of age, then that is where the funding will go. Once those children are served, attention will go to the others. In some areas, we will never get to the others, because there is not enough money.

Janet Hansen: Unfortunately, there is not an entitlement to child-care services. Many states—at least 17 that we know of—run out of fiscal resources and have to put children on waiting lists. I share those concerns. When we interviewed people in Georgia about how universal pre-K was working and what the implications were, there was a great deal of money going to 4-year-olds. It is a separate funding stream, but people definitely said they were trying to shift some of their resources down to the children aged 0 to 3 years and to the older children, because they know that age group was being left out. This preschool movement focuses many of the resources on a certain age group.

Gallagher: That is my concern—serving families versus serving an age group.

Bergmann: That is part of the problem in giving in to what Hansen has characterized as the political reality. The political reality is that legislators will go for something that is called education but will not go for something that is called child care. One can give in to that or one can say, "That is not right—we need both kinds."

Hansen: That is important. One does not have to give in to it; we need to look at our child-care system and think of it as education and care. I would say that we have not sufficiently thought about the education part of most care provided for 3- and 4-year-olds. We can win more support for those types of things by acknowledging that we are providing higher quality care, which includes more intentional attention to things we are learning about how to educate young children. That is effective politically.

Bergmann: It is a little harder to pretend that the money put into the 0 to 2-year-old programs is educational.

Hansen: I agree.

Bergmann: Yet those children need high-quality, developmental care. When one emphasizes education to the exclusion of everything else, one gets part-day and part-year programs that do not help working parents or their children.

Schumacher: Not only would one want the funds to be delivered in a variety of settings, but also one would want to make it easy to blend so that they can put a full-day, full-year program together. That is the beauty of universal or major early education pre-K initiatives in a variety of settings. The program gets extra resources to boost their quality and meet pre-K standards, but it is in a child-care program that is already operating full-day and full-year. They can put those

funds together with those that they get for child care and do a full-day, full-year program. The problem is where there are barriers and difficulties of learning the multiple funding streams. Programs are doing this. The onus is often on individual programs to figure out all these different rules. There are resources available, but more could be done to increase the flexibility of funds.

Hansen: I agree with everything said. It is also important to remember that most of the public subsidies for child care go to families of children in poverty. This is only part of the group that we are concerned about. I would say that it is when we take this education focus, especially for the older children, that we have a hope of getting broader public subsidies for working families and other families above the poverty line. We are not going to get big public subsidies any time soon for those children for something that is called child care.

Bergmann: Not unless we ask for it. Boeing has 200 lobbyists on Capitol Hill. Maybe the way to start asking for it is to convince Boeing to contribute a share of its lobbyists for this cause.

Marilyn Arons: I am with the Melody Arons Center for Preschool Research and Education. The layer I have not heard addressed is disabled children, particularly those aged 0 to 2 years and their families. In terms of parental choice, for any mentally handicapped infants or toddlers, especially if one is poor or just above the line, there is literally no way to meet those children's needs. Isn't the real issue, the political issue, how to get the energy to leave here, go to Capitol Hill, and turn it into action?

Bergmann: One is not going to get there by asking for $20 million more this year. Obviously, $20 million more is better than not $20 million more, but we must articulate a vision of where we want to go. I have another book comparing France and the United States. The United States government uses about 30% of the Gross Domestic Product (GDP), which is money that passes through the government's pockets through taxes and so forth. In France, that figure is 45%, and in Sweden it is 60%. Neither of those countries has as ridiculously swollen a defense establishment as the United States. We need to start thinking of unmet national needs, including child care, education, and universal health care, and where we want to go with them. Are we willing to pay for it? What kind of taxes would we want to raise? There ought to be a party in this country that wants to spend more and realizes that what we need is expensive.

Arons: It is not just the money. The General Accounting Office (GAO) saw that we had 90 programs across 11 federal agencies, and none of the programs were coordinated. The issue is how to get that money to become more efficient if we cannot get more.

Sroufe: The first question helped out with the fact that we have been ignoring the issue of disabled children in our thinking about parental choice. The second comment was about the fragmentation of federal policies, making it difficult to have an efficient and coherent system, so there are fewer choices than there might be otherwise.

Charles Hare: I am with the Oklahoma Association of Community Action Agencies. I was worried about TANF being reauthorized. There is going to be a real effect on early childhood divisions at the state level. We talk about all the money that we are losing. It impacts the state legislature as well.

Bergmann: States are suffering from lower tax collection and budget deficits. Constitutionally, many of them are not allowed to have budget deficits. Again, we ought to have revenue sharing

from the federal government to the state government. That is particularly important because with all the corporate scandals occurring, the economy may not recover. This economic climate may be around for a while.

Schumacher: A good point has been raised, something we have worried about for a while. The great majority of states have budget deficits right now, along with balanced budget amendments, so they have been in the process of slashing their budgets for the last couple of months. We have been trying to track the changes. For example, many states are considering lowering their eligibility for child care and they have begun to implement waiting lists and not increase provider payment rates. Some states are also scaling back on early childhood initiatives.

Another troubling issue is that in the last few years, caseloads fell by half and states used their free TANF funds—almost $4 billion in 2000—for child-care initiatives. The total budget was about $9 billion. They used that money for child care, after-school initiatives, or early childhood initiatives. That is positive, and we encouraged them to do that. It is important for people to realize, however, that the TANF block grant will probably not be cut but will not be increased either. Due to the factors of inflation alone, it will go down in value by 22% if compared from 1996 to the end of the next 5-year reauthorization. There will definitely be an impact on child care and early education after-school initiatives in states that use those funds.

On the other hand, we are also looking for more funding for the Child Care Block Grant. So far, the House put in $1 billion over 5 years as new mandatory funds. The Senate Finance Committee is meeting today, and my understanding is that they are going to look for about $5.5 billion over the next 5 years. Advocates were asking for $20 billion. Most of those funds had been assumed to require a state match.

My understanding is that the Senate Finance Committee has decided in the first couple of years to put the bulk of the funds in without requiring a state match because of the concern that state budgets may be unable to come up with it. This could be good for states. It could also be bad because as an advocate at the state level, one wants to use that match to encourage the state to keep the money in child care. It will be interesting to see what happens in the end and whether states pull back their investments because of that. It is hard to make decisions right now with such a dire economic backdrop.

Sroufe: Senator Jeffords had a hearing on early childhood education and the needs of the country. Among the featured witnesses was someone talking about the French system mentioned by Bergmann. Senator Jeffords was then the chairman of the committee because it was a Republican-controlled Senate. He had the hearing on early childhood education. The only fellow members of the committee that showed up were Democrats. Literally 2 weeks later, Senator Jeffords had moved to the other side.

Rubina Azhar: I am from South Texas Community College. We always think that these are parents who are going to go to work, but is it possible to have the choice to get aid and stay home, or receive lower pay and stay home for the year? The billions of dollars we spend on providing child care could be used to get the parents to stay home and leave their job. It would lead to a better outcome for the children.

Bergmann: In our book, we come out against that. To show how fanatical we are, we also come out against long, paid parental leaves. The rationale goes something like this: If one is pleased at the advances that women have made in the last 40 years, those advances essentially stem from their being in the labor market even after having children. If we set up a system in this country where essentially a mother is encouraged and subsidized to stay home, we will go right back in terms of women's position in the labor market. Employers will discriminate against women more because they will not view them any longer as permanent employees. If one is concerned

about equality for women, that is not such a good idea. My coauthor tells me that I am the only person in the whole country that thinks that way. I hope that is not the case.

Secondly, if one looks at the needs, the people who stay home are relatively privileged, with a husband or partner who has a decent job. It is a crime to give them money that could go to hard-pressed single mothers. In terms of sending money where it is needed, that is not the way to go either. Minnesota put in a policy of paying mothers to stay home. They do not allow single mothers or people who might be eligible for welfare to take part. Why? Because they do not want to re-establish welfare, and for single mothers, that would be the equivalent of welfare.

The country agreed that single mothers should work, and I do not think that is such a bad idea provided they have good child care and health care. Although Minnesota is telling people to look at this wonderful program, only 23 people are supported by it. Yet Minnesota has a huge waiting list for working parents, poor working parents, or close-to-poor working parents, so it does not make sense to put money into that kind of program.

Nancy Johnson: I used to be the director of the Resource and Referral Network in Minnesota. Politically, the legislature was looking at the flexibility under TANF to allow women who were receiving assistance to be able to stay home with their infants and continue getting assistance up through the infant's first year. The legislature in Minnesota was looking at that and the cost of infant care and realizing that even under Minnesota's generous and fair leave benefits, they were still in many cases spending more for infant care than if they allowed mothers to stay on assistance. The mothers would not be penalized for choosing to work under this program.The legislature was making that decision at the same time they were looking at who also wanted that option and did not want to have to go on welfare to get that kind of option.

The way that this program works is that it allows either parent—the father or the mother—to choose to stay home, but they have to have been in the workplace. That is different than just any kind of means-tested program and particularly different from welfare. The concept is that if one is in the workforce, one has attached oneself to the workforce. Some studies of paid parental leave have found an effective loyalty among parents who are getting paid parental leave. It is a reality that it is mostly people who have upper incomes, but what they find is that it is not at all a disincentive to attach to the workforce. If anything, it is a bigger incentive to stay with that employer if one takes some time off.

The program in Minnesota was fought for by the department, a government agency who was looking at the long waiting list for the child-care program. They did not advertise the rules of the program for the first year. Now that they have been directed to advertise the program, we are beginning to see more families take an interest in the program. It is not just for single families; it is available to all family configurations. It also is not enough to live on, but many families tell us that when they put it together with some alimony or child support, they are able to stay home for another month or two, and they value that.

On the other hand, the way the clause is written right now, the state agencies actually seem to be saving from this program. When the mother or father stays home with the infant, the other children are also at home, so they are not paying for the child care of the 2- to 5-year-olds either. The mother is home with all the children. Another state might choose to design the program differently, making the other children stay in child care and paying those subsidies as well. Characterizing staying at home in opposition to an important goal for women is missing a point here. Many mothers and women that I have talked with believe that they want both options, and they should not be forced to have to make that choice.

Bergmann: From the economic perspective, if the staffing ratio in a good child-care center is 3:1, then if a woman has fewer than three children and is paid minimum wage or more for staying home, it is much more expensive to keep her at home. That is just plain arithmetic. Obviously, if this will be available, people will want it. It will not be available to the typical

single mother who does not have any other money, or if it is made available only to the single mother, it will be a new form of welfare.

In general, rules are going to be established, and Minnesota established such rules as you mentioned that precludes those people. It is single mothers that we have to be most concerned about. They have the hardest situation, make the lowest pay, and have nobody else to contribute to household income and family services. Is it about one third of mothers? This is not a small group. If your point of view is that we have to make sure that single mothers are not left out or are given priority, then this type of a program is not dead.

Schumacher: Whether you like this idea or not, there is some chance that it might become an option for all states to try officially through the re-authorization process, because the Senate is considering legislation to give the states the option of doing an at-home infant care program.

Bergmann: Prompted by Jerry Fallwell's fans?

Schumacher: No, actually not. It gets bipartisan support and the interest of people whom one would not normally think would be interested. The people who are interested in seeing mothers' roles supported are interested in this, and they are interested in aligning with people who would normally be on the left-hand side of the column. I am on the fence about what it is going to mean and how useful it will be for families. We might have more information in 5 years, if states actually get a chance to experiment with it.

Hansen: Just listening to the discussion, I have to say that I have a problem with the arithmetic. On the one hand, I assume we are talking about infants, children under 1 year of age.

Bergmann: Right.

Hansen: Everybody says that infant care is the most expensive care, costing $10,000-15,000 a year. We know that many women in the workforce are not earning $10,000-15,000 a year, so I am not sure that I follow the argument about how the arithmetic does not work. Maybe it does in some way I do not get, but many people—and not just the Jerry Fallwells—hear the arguments about how expensive infant care is and question whether forcing single mothers with low incomes into low-paying jobs is a better use of public funds than enabling them to stay home with infants.

Bergmann: The reality is that welfare allowed them to stay home but allowed them to stay home in utter and complete poverty.

Hansen: That could be indefinitely, not just with infants.

Bergmann: Right. Nevertheless, the stipends were below the poverty level, whereas if mothers work and receive child care from the government, those children will be brought up above the poverty line. For children to have a standard of living above the poverty line, one needs mothers to get jobs.

Hansen: Maybe we are talking about the difference between what exists now and the ideal system we would like to see. I am hearing arguments for a system in which the pieces all work well. I am not an expert on infants, but I have heard that care for infants is the worst and the hardest to find. You are talking about the vision of an ideal system that would work, and maybe that is where the disjuncture enters the conversation.

Barbara Rudin: I am from Caliber Associates and I'm doing work in the early childhood area. One topic that we mentioned in the beginning that we have not talked about at all is the idea of partnerships, particularly in the business environment. I love the idea of the government paying for all of this, but I am not sure that is entirely realistic in our political environment today or at any time. One can exempt businesses from certain expenses by using the government. In Virginia, where I live, businesses can get up to $35,000 right now to institute telework policies, which can be attractive. We work with many private companies who put in child-care programs for their employees; they do it for all sorts of reasons. It could be done at a broader level if the right pieces are in place.

Hansen: I do not want to take exception to that. That is right, although there is a report about to come out of the National Women's Law Center about the use of tax credits to persuade business to provide child care. My understanding is that this will be relatively negative regarding their effectiveness. I do not want to say anything against giving incentives and encouraging businesses to provide these kinds of services directly. However, as a business-led group, when we talked about this, one of our own trustees pointed out that it is largely the biggest businesses that are in a position to do that. Most people are not employed by big businesses in this country. The most effective thing that business could do to increase resources toward this issue is to be willing to pay taxes for public programs. Do not forget that businesses are also taxpayers.

It is great when businesses want to do this themselves, but most of the small- and medium-sized employers, where most people work, are not going to get into the business of providing these services directly, for multiple reasons ranging from economics to legal liability questions to mobile workforces. All business, in our view, ought to be willing to pay taxes to support public programs. That is another important way in which business does in fact support this and ought to support it more.

The Chicago Child-Parent Centers: Prevention and Cost-Effectiveness in Early Adulthood From the Chicago Longitudinal Study

CHAIR: Arthur J. Reynolds
DISCUSSANT: Pamela Stevens
PRESENTERS: Arthur J. Reynolds, Judy A. Temple, Suh-Ruu Ou, Michael D. Niles

Evaluations of early childhood programs have advanced beyond a sole reliance on average program effects to increased attention on the heterogeneity of effects and the mechanisms through which participation leads to long-term benefits. Evidence concerning the key mechanisms of program effectiveness are crucial to program improvement, replication, and expansion to other settings. To enhance the relevance of evaluation findings for policy decisions, benefit-cost analysis (BCA) is also recommended. BCA is increasingly used to help prioritize the use of scarce prevention resources. Unfortunately, prevention and intervention research on established, large-scale programs has rarely provided evidence concerning these emergent issues (Karoly et al., 1998).

In this symposium, we investigate the long-term benefits of participation in the Chicago Child-Parent Center (CPC) Program, the second oldest (after Head Start) federal preschool program in the U.S. Data from the Chicago Longitudinal Study (CLS, 1999), an ongoing investigation of 1,539 low-income children that includes an entire cohort of 989 CPC kindergarten participants in 1985-86 and a matched comparison group of 550 children who participated in an alternative intervention in kindergarten are used. At age 21 (March 2001), the project has determined through surveys and administrative records the educational status of 1,314 youth and the juvenile arrest status of 1,404 youth. Rates of sample recovery exceed 80% for program and comparison groups, and no evidence of selection bias or selective attrition has been found (Reynolds, 2000).

We found that CPC participation beginning in preschool was associated with significantly higher levels of cognitive skills at school entry, higher school achievement through the school-age years, with significantly lower rates of grade retention and special education placement by age 18, and with significantly lower rates of juvenile arrest by age 18 (Reynolds et al., 2001). We also found that participation in extended intervention (4 to 6 years) is associated with higher school achievement and lower rates of grade retention and special education. Two of the most recent findings are that preschool participation is associated with significantly higher rates of high school completion by age 21 (Reynolds et al., 2002) and that preschool participation and extended program participation are associated with significantly lower rates of child maltreatment by age 17 (Reynolds & Robertson, 2003).

In the first presentation following the overview, we investigate the pathways through which the long-term effects of preschool participation on high school completion and juvenile delinquency are achieved. The second presentation addresses the instructional and family-involvement mediators of the early cognitive and scholastic effects of preschool participation. In the final presentation, we describe findings of the first BCA of the CPC program. Overall, our findings strongly support the benefits of program participation in preventing learning and social difficulties and achieving substantial cost-effectiveness.

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■ Pathways of Effects of Early Childhood Intervention on Educational Attainment and Delinquency

Suh-Ruu Ou, Arthur J. Reynolds, James W. Topitiz

Five hypotheses were investigated that link participation in preschool to educational attainment by age 20 and to juvenile arrests by age 18 for children in the Chicago Longitudinal Study (CLS; Reynolds, 2000). These include the cognitive advantage, family support, social adjustment, motivation, and school support hypotheses. Two questions are addressed: (a) Examined together, which hypotheses contribute most to the mediation of the effect of preschool on educational attainment? and (b) Do the hypotheses that explain the mediation of educational attainment best explain the relationship between preschool participation and lower rates of delinquency?

Of the 1,539 original participants, this study was able to document up to 1,404 youth from the CLS Program. Program and comparison groups were well matched at program initiation. Previous research in the study indicated that preschool participation was significantly and independently associated with higher educational attainment and lower rates of juvenile arrest.

The primary measure of educational attainment is high school completion by age 20 (September 2000). Delinquency is measured as the incidence of court reported arrest by age 18. Cognitive advantage was measured by scores in the Iowa Test of Basic Skills (ITBS; Riverside Publishing Company, 1986) word analysis at age 6. Family support was measured by teachers and parents' rating in school participation through age 12. Social adjustment was measured by teacher ratings of classroom adjustment at age 9. Motivation was measured by students' report of whether they expect to go to college at age 10 and 15. School support was measured by attendance in magnet elementary schools and by number of school moves from age 10 to 14.

Latent-variable structural modeling indicated that when the five hypotheses were entered simultaneously, the cognitive advantage, family support, and school support hypotheses significantly mediated the effect of preschool participation on high school completion. Among the three significant mediators, the cognitive advantage mediated the effect indirectly through other factors. School support alone accounted for 31.1% of total indirect effects of preschool participation on high school completion, and family support accounted for 16.8%.

The school support hypothesis (attendance in magnet school) contributed most to the explanation of the link between preschool participation and delinquency reduction (48.1%). The family support hypothesis (parent involvement in school) also contributed to the mediation. The cognitive advantage hypothesis contributed to long-term effects by directly affecting family support and school support behavior as well as motivation (educational expectations).

The model accounted for 67% of the main effect of preschool on high school completion and 73% of the main effect on juvenile arrest.

These results support the cognitive advantage, school support, and family support hypotheses of intervention effects on educational attainment and delinquency. Findings indicated that cognitive advantages in early childhood could launch better motivation, social adjustment, and higher parent involvement, and then have long-term effects on educational attainment and juvenile arrest. This suggests that the cognitive advantage hypothesis does not lead to long-term effects directly; instead its impact was mediated by other intervening factors, such as school support, motivation, and grade retention. These findings direct attention to improved school practices and learning environments in the elementary grades to help promote long-term effects of early childhood intervention.

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■ Origins of the Cognitive and Scholastic Effects of Early Childhood Intervention: Findings From the Chicago Longitudinal Study

Michael D. Niles, Arthur J. Reynolds, Melissa Clements, Dylan L. Robertson

There is a longstanding curriculum debate whether early childhood education should follow the academic model or the child-developmental model. In this study, we investigate the contribution of instructional approach and parental involvement to the initial cognitive advantage and the longer-term effects of participation in the Chicago Child-Parent Center (CPC) preschool program.

Three questions are addressed: (a) Does participation in preschools emphasizing direct instruction in phonics and child-developmental activities impact language and cognitive skills at the beginning and end of kindergarten? (b) Does parental involvement independently contribute to language and cognitive skills? and (c) Do instructional approach and parental involvement contribute to longer-term effects on school remedial services and juvenile arrest by age 18, reading achievement at age 14, and high school completion by age 21?

The study sample included 989 low-income minority children attending the CPCs at ages 3 or 4 in the Chicago Longitudinal Study (CLS, 1999). Instructional approach was assessed by retrospective reports of CPC head teachers and independently verified by school district staff. The phonics-based approach included centers reporting use of direct instruction materials (e.g., Houghton-Mifflin, Open Court, DISTAR). The child-developmental approach was based on extensive participation in field trips, learning centers, and child-initiated activities.

Parental involvement was measured by first-grade teacher ratings of school participation (range from 1 to 5) in which children were assigned the mean for their CPC site. Regression analysis was conducted controlling for gender, risk status, ethnicity, full-day kindergarten, and participation in the CPC school-age program.

We report three sets of major findings. First, children enrolled in centers emphasizing phonics and child-initiated activities (P + C group; $n = 387$) had the highest average scores on the Iowa Test of Basic Skills (ITBS; Riverside Publishing Company, 1986) cognitive composite at kindergarten entry, surpassing the No-P + No-C group ($n = 177$) by .49 *SD*. The No-P + C group ($n = 362$) had the second highest average cognitive scores. In math, the groups emphasizing

only phonics and only child-initiated activities had significantly higher scores than the other two groups.

Second, parental involvement was associated with significantly higher cognitive scores at kindergarten entry and higher word-analysis scores at the end of kindergarten.

Third, children enrolled in centers rated relatively low on phonics and child-initiated activities had the highest rate of grade retention, while the P + No-C group (n = 63) had significantly lower rates of special education. Instructional approach was unassociated with juvenile delinquency and reading achievement in eighth grade. The No-P + C group had the highest rate of high school completion, which was significantly higher than the No-P + No-C group.

Parental involvement in school was associated with higher reading achievement, lower rates of grade retention, and marginally lower rates of delinquency.

Instructional approach and parental involvement significantly contributed to short- and long-term child outcomes. A blended instructional approach that emphasized phonics and child-initiated activities appeared to provide children with the greatest cognitive advantage in preschool. These findings indicate that the use of direct instruction methods should not come at the expense of other enrichment activities. Each instructional approach was associated with long-term benefits either for reducing special education placement or increasing high school completion. Parent involvement contributed significantly to early cognitive and literacy skills as well as long-term school competence. This contribution was above and beyond that of instructional approach and family demographic attributes.

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■ Age 21 Benefit-Cost Analysis of the Chicago Child-Parent Centers

Judy A. Temple, Arthur J. Reynolds, Dylan L. Robertson, Emily A. Mann

In this study, we investigate the long-term cost-effectiveness of participation in the Chicago Child-Parent Center (CPC) Program. Two major questions are addressed: (a) By the end of adolescence, is participation in the CPC program for different lengths of time independently associated with several indicators of child well-being including educational attainment, delinquency, and school remedial services? and (2) Do the estimated program benefits exceed costs?

The main study sample includes 1,286 youth of the original sample of 1,539 in the Chicago Longitudinal Study (CLS, 1999). Data in this prospective study were collected from educational and juvenile court records up to age 21 (September 2000). An alternative-program, quasi-experimental design was used in which the behavioral adjustment of the entire cohort of 989 children in the 20 CPCs in 1985-86 was compared to a random sample of 550 eligible children who participated in another government-funded early intervention. The program provides comprehensive services to children and parents from ages 3 to 9.

We estimated the present value of program benefits and costs in 1998 dollars for five main categories of benefits: (a) reductions in expenditures for the school remedial services of grade retention and special education, (b) reductions in criminal justice system expenditures for both juvenile and adult arrest and treatment, (c) reductions in child welfare system expenditures associated with child abuse and neglect, (d) averted tangible costs to crime victims, and (e) increases in adult earnings and tax revenues projected for increases in educational attainment. We used a 3% annual discount rate evaluated at the beginning of preschool participation. The distribution of benefits was calculated for society at large (participants and the general public).

Relative to the comparison group and controlling for family economic disadvantage, sex and race of child, and program sites, participation in the CPC preschool program was associated with a significantly higher rate of school completion by age 21 and with significantly lower rates of juvenile arrests, special education placement, grade repetition, and lower rates of child abuse and neglect. Participation in the school-age component and in the extended program (preschool + school-age) was associated with lower rates of special education and grade retention by age 18.

The benefit-cost analysis yielded the following results. The preschool program generated a total return to society of $47,759 per participant by age 21. Total benefits to the general public were $25,771 per participant. With an average cost of $6,692 per participant (1.5 years of participation), the ratio of benefits to costs was $7.14 per dollar invested for society at large and $3.85 per dollar invested for the general public (tax payers and crime victims). The main sources of public benefits were increased tax revenues projected over adulthood, reduced expenditures in the criminal justice system due to lower rates of crime, and reduced remedial education expenditures.

The school-age component provided a total return to society of $4,944 per participant and a total benefit to the public of $4,219 per participant. With an average cost of $2,941 per participant (1 to 3 years of participation), the ratio of benefits to costs for society at large was $1.66 per dollar invested, and for the general public it was $1.42 per dollar invested.

Participation in the extended intervention (4 to 6 years of participation) provided an economic return of $24,772 per participant above and beyond that of less extensive intervention (1 to 4 years). Total benefits to the general public were $14,594 per participant. With an average program cost above and beyond less extensive intervention of $4,057, the ratio of benefits to costs was $6.11 per dollar invested for society at large and $3.60 per dollar invested for the general public.

As the first cost-benefit analysis of a federally-financed, early childhood intervention, findings indicate that participation in each component of the program was associated with economic benefits that exceeded costs. This was accomplished by increasing economic well-being and reducing educational and social expenditures for remediation and treatment. The preschool program, the most intensive and comprehensive component, yielded the greatest benefits by age 21. Findings for school-age and extended intervention demonstrate the benefits of reduced class sizes and enriched school environments in the early grades. Contemporary child development programs can provide substantial long-term benefits to society.

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DISCUSSANT: Pamela Stevens

Since its beginning in 1967, the Title I Child-Parent Centers (CPC) have strived to meet the needs of young children by offering a continuum of education and family services from preschool to second or third grade. The CPC program is the country's oldest federally-funded preschool after Head Start. As reported in this symposium, the CPCs have consistently demonstrated their effectiveness in promoting children's school success and long-term well-being. In 1998, it was given exemplary status by the U.S. Department of Education, an honor originally bestowed on the program in 1976. Over the years, more than 100,000 preschool children and families have been served and many more school-age children. Beginning in the fall of 2000, full-day preschool services have been offered in selected sites.

In September 2001, the Child-Parent Center Program and the Chicago Department of Human Services (CDHS) Head Start Program entered into a new collaborative relationship. Through a blending of resources, a new opportunity was created for Chicago's preschool families. Twenty CPC sites already offering a full-day preschool program (9:00 a.m.-2:30 p.m.) are for the first time in the history of the school system providing before- and after-school care. With additional resources from CDHS, each of the specified sites offers care for one class of 20 eligible children from as early as 7:00 a.m. until class time and from dismissal until as late as 6:00 p.m. Through the use of Head Start funds, eligible families are provided this service for 49 weeks. Priority is given to those families who are able to document need.

This new collaboration is meant to stabilize the day for preschool children already at risk due to societal, economic, and environmental factors. In addition to the CPC sites, 10 State Pre-Kindergarten classrooms are also providing this innovative service.

Today, the Chicago schools serve over 59,000 preschool children in 423 sites in 521 schools. In addition to the CPCs, the schools administer the following programs: Head Start, the State Pre-Kindergarten Program, Parents as Teacher First, Even Start Family Literacy, Tuition-Based Preschool, and Extended-Day Kindergarten.

Quality Health Care

Providing High-Quality Health Care for Children: Patient Service and Policy Issues

CHAIR: John Pascoe
DISCUSSANT: Martina Rogan
PRESENTERS: Carole Lannon, Judy Shaw

John Pascoe: My name is Jack Pascoe, and I am a general pediatrician from Dayton, Ohio. I am on the Program Committee, and I will moderate this session, "Providing High-Quality Health Care for Children: Patient Service and Policy Issues."

Carole Lannon will begin our session today. She is Associate Professor of Pediatrics and Internal Medicine at University of North Carolina at Chapel Hill and also the Senior Vice President of the National Initiative for Children's Health Care Quality (NICHQ). She is also Director of the Student Committee on Quality Improvement for the American Academy of Pediatrics. Judy Shaw is at the University of Vermont and directs the Vermont Child Health Improvement Program (VCHIP). I am also pleased to welcome our discussant, Martina Rogan. She is the General Health Manager for the Child Development Council of Franklin County, Ohio.

Carole Lannon: We appreciate the opportunity to be here. One of the things I want to ask before I begin is about who is in the audience today. Pascoe said we might have policy makers, researchers, front-line Head Start managers and staff, so we planned a fairly general talk as well as a generous amount of open time to answer questions. I was asked to focus on patient safety issues because that is one area I work on with the American Academy of Pediatrics. We will provide an overview, and then we will be glad to answer specific questions.

I want to talk about making health care safer for children. Judy Shaw and I both work with the NICHQ, a nonprofit organization that works closely with the American Academy of Pediatrics and the American Academy of Family Physicians to improve health care for children. We work primarily with practitioners, as well as with policy makers in state agencies, the Academy, and the Centers for Disease Control and Prevention (CDC). We work in our respective states on various issues, so we will be glad to go into some of those things in greater depth.

Some of the areas in which we have worked are preventative services, asthma, Attention Deficit Hyperactivity Disorder (ADHD), foster care, and we are beginning some work with the Commonwealth Foundation on developmental services. I am also involved in work with children with special health care needs, including children with fetal alcohol syndrome and associated exposures.

NICHQ is an education and research organization dedicated exclusively to improving the quality of children's health care. We have offices in Boston, Vermont, Washington, and North Carolina. I also work closely with the American Academy of Pediatrics. About half of my time is spent working with them on different educational and policies initiatives. The Academy is a

55,000-member organization dedicated to the health of all children. The missions of NICHQ and the Academy are in significant alignment.

Pascoe asked me to talk about the Institute of Medicine (IOM) report that came out almost 3 years ago, entitled *To Err is Human: Building a Safer Health System*. It received a lot of press in December of 1999, when it said that medical errors are the eighth leading cause of death in the United States. Although the number is disputed, the number of deaths due to medical errors is thought to be somewhere between 44,000 and 98,000 deaths per year. As you can see, that is equal to or greater than the number of deaths per year from breast cancer or motor vehicle accidents in the United States, and it dwarfs the number dying from AIDS.

I saw someone grimace in the back, and that was the national reaction when this book was published. Luckily, there has since been a lot of work on this issue; the Clinton Administration had put together groups to work on it. The Federal Agency for Health Care Research and Quality is making this a major initiative.

All the facts that I showed you dealt with adult injuries, but we do not know much about the risks of errors in children's health care. Two years ago, a study was published showing that serious in-hospital medication errors occurred with pediatric patients three times more frequently than with adults. It was thought that one of the key reasons for this is that multiple calculations are needed when prescribing medications for children. For example, if anyone in the audience came to see me with a strep throat, I would prescribe 500 milligrams of penicillin, even though you all are different sizes, shapes, and weights. For children, particularly for an 8-month-old, a 2-year-old, or a 4-year-old, we are not so broad or generic, and we need to know their weight in order to figure out the proper dose of medicine.

Many over-the-counter medicines have instructions suggesting a certain dose to children 2 to 3 years of age, or another dose to children 4 to 5 years of age. For those of you who work with children, you know that they can vary in weight and size in any age group, particularly the younger the child; therefore, there is variation in dosing. In the literature about drug errors for children, there is something called the Tenfold Error. During my internship, two instances occurred to my colleagues who were calculating milligrams per kilogram. Dividing it three to four doses a day, they mistakenly moved a decimal point, so that an intravenous penicillin dose was given tenfold to a small infant, causing some problems.

This study was from the hospital. We know very little about what happens in the outpatient setting. Part of that, one hopes, is that fewer serious drugs are given in the outpatient setting, particularly very few intravenous drugs. On the other hand, in the outpatient setting, there are fewer restrictions, guidelines, or regulations than in hospitals. Two studies are now looking at pediatric health-care settings. Last month, the Academy sponsored a conference on this topic. One of the concerns that I suspect you can relate to is the connection between what happens in the doctor's office, or in the hospital for children with significant illnesses, and what happens in the day-care setting, school, or family home.

Again, most of the safety evidence we have is based primarily in adult, inpatient, or hospital settings. But, we know that 70% of child health care occurs in ambulatory or outpatient settings, and as I have mentioned, children pose unique safety challenges. Aside from weight-based dosing, there are communication and caretaker issues.

As a pediatrician, I often see a grandmother, other relative, or caretaker bring in a child for an appointment while the parent is working. These individuals sometimes speak a language other than English, so to communicate with them is similar to playing the game "telephone." I may tell one person something, but by the time it gets to the parent, who may then relay it in the Head Start setting, there could be a different discussion going on. One of the concerns is also that children may have less capacity to buffer errors and may be less resilient because they are smaller than adults. Another communication point is that children, particularly younger children, are not able to communicate very well about side effects they may be experiencing, unlike adults who can typically let us know. We may not know about some of the things that occur because they are thought to be part of the illness.

Many wise people in the airline industry and other industrial areas, as well as in medicine, are beginning to think about causes of error. You may remember that the title of the IOM report was *To Err is Human*. The idea they tried to get across is that it is too easy to blame the last person who signed off on a medication or health-care order. There may be a tendency to say, "That person should have known, and if we get rid of that person, we will take care of things." As someone said, "If one got rid of every pileup when an error occurred, we would not often travel by airplane." The airline industry began to think about safety issues over the last 20 to 30 years, and we are learning from them.

One of the challenges in health care is the complexity of what happens. There are multiple steps in medication order and delivery, and statistically, the more steps there are, the more likely it is for an error to occur. Human factors are another issue. The airline industry has mandated limits for how much work pilots and support staff can perform and for what period of time. The medical health-care field is trying to do that as well. In fact, for those of you who work at universities, a new statement has been released stipulating that residents in training must work only 80 hours a week, because the more one is up, the more tired one gets.

One of the main findings from the IOM report was also that the system itself is often designed to produce unsafe results, and we need to think through the process of health care in order to simplify it. There is a lot of work going on about how to do that. I will mention one key point. When I first gave this talk, it was during the Winter Olympics, and I tried to give the sense of handoffs, which increase the potential for error. That is what I meant about complexity in the system design. The more steps in a process, with care transitions from one setting to another, the greater the increase in opportunity for error.

When a child with special health-care needs or a chronic illness such as asthma leaves the hospital, there is a handoff to the primary care physician, sometimes to the parent. The information does not get welled back to the primary care doctor. When the parent takes the child to the Head Start setting, that is another handoff, and if the child with asthma begins to wheeze, do the people in the health-care setting or the Head Start setting know what to do? Every time there is a handoff, the chance of miscommunication or error increases.

For example, there is a sick child who comes in to visit the doctor. The caregiver may not know all of the child's history and may not speak English well, so the doctor may not hear the full picture. The clinic may be busy, and the doctor may suggest giving the child Tylenol for the earache, along with a prescribed antibiotic.

As some of you may or may not know, there is an array of Tylenol products available. There are infant drops. There is a liquid medication that is actually a different concentration and strength than the drops. There are chewable tablets that come in different strengths. Something that would be good for a 3-year-old might be different from what would be appropriate for an older child. There is also a junior size, which my daughters have just graduated to.

With antibiotics, one must calculate the correct dose by the child's weight. Most people in pediatrics do this as a matter of course. Sometimes that can be a little inaccurate, particularly with unusual drugs or drugs that are not commonly used. A caregiver may not be aware of a child's allergy history, and sometimes that is not appropriately communicated to the clinician. Also, the family has received a prescription for antibiotics and been told to take Tylenol. One of the current challenges is the handwriting of physicians. The medication has to be filled, and that assumes that pharmacists can read and correctly interpret the handwriting. The medication then needs to be given to the child.

One question is, does the child take the medicine? Do they take it in the various multiple locations they may be in? If the directions say one teaspoon, three times a day, can one use a teaspoon or a cereal spoon at home? One should actually use a device from the pharmacy that accurately measures a teaspoon. This may be less important for certain medications, but for certain seizure or asthma medications, measurements are particularly important. When the instructions say three times a day, does that mean every 8 hours or does it mean they just need

to get it in at some point, and it could be skipped during the hours that the child might be in day care?

As I have mentioned, the child might be in multiple locations during the day, tended by multiple caregivers at home, day care, or grandma's house. I am trying to give you a common scenario. Handoffs increase the potential for error, especially for children with an unusual disease or for those needing complicated medications.

What can help with handoffs, and how can we make health care safer for children? Using written instructions in the office can be helpful. This is an example of an asthma management plan, and a written note about medications and making sure that the family understands the directions. Because of the law now, pharmacies are giving out some instructions, and often talking with the person picking up the medication to make sure the instructions are clear.

One of the things that has been encouraged lately is an asthma management plan. The Academy is also developing an ADHD management plan in collaboration with NICHQ. These are often made in triplicate, so that one copy can stay in the chart and one can go home with the family. The NICHQ website has an array of tools that can be downloaded.

In the last month, the Academy has also come out with a new online program where tools, including management plans, can be downloaded. For those of you in Head Start settings, it would be helpful to have something like this at the setting. There is also a card that one of the asthma groups has developed. Again, you can link to that from the Academy work. A wise person came up with the idea to provide color, so when this is printed, there are shades of green, yellow, and red. These colors tell the child and the caregiver if the child is doing well. For example, green means to continue with their basic medicines. What is nice is that those continuing medications are written down with instructions. I suggest that people put this on the refrigerator and give a copy to the school.

In the yellow zone, there are some symptoms that the child is experiencing. It is like a yellow warning light or a caution light. It says that when one is at this point, one may want to intervene in order to avoid having to go to the emergency room or get hospitalized. Red should make one worry about the child, check him or her with the physician, and follow a management plan. Often when we give these to practices, they adapt it for their own setting. These are also available in Spanish and other less common languages.

In summarizing this information, I thought of how those of you who work in Head Start settings and interact with families can help children with the health-care system. Discussing this issue in the group can be helpful for children.

What happens when a child visits the doctor? Goes to the hospital? Has an x-ray or blood test? There are many children's books about visiting the doctor or being in the hospital. I think there is an *Arthur* book and one *Curious George*, even though he swings from things in the hospital and ends up much worse than when he started. Then there are some *Sesame Street* books, with Big Bird or Elmo going in. It can also be helpful to talk in the group and suggest that when the child goes to the doctor or the hospital, bring something familiar like a teddy bear or blanket.

The day-care provider often serves as a real ally for parents, and as a source of trusted information. I often encourage parents to write down any questions in order to remember them. If, as a teacher, you have a real concern about a child, share that with the parent and write it down, so that they can share it with a physician. If one is comfortable, offer to have the physician call you. I often call teachers, since they see the child everyday. They often have helpful information, particularly with my ADHD patients. It is also important for teachers and parents to review the child's care plan and to request written instructions.

To summarize, medical errors are unfortunately quite common. We believe that they occur at an equal or greater rate for children than adults. This may be because of weight-based dosing in children. Causes for errors include the complexity of health care, human factors, and even system design. Being an aware consumer can help. The federal agency is developing a handout

suggesting parents know their child's weight, know about allergies, give medications at the right time with the correct dose, ask questions of the caregiver, and request readable written instructions.

The Academy provided me with some handouts for this presentation. I also have some handouts from one of the federal agencies, the Agency for Healthcare Research and Quality (AHRQ). It offers 20 tips to the layperson to prevent medical errors. It is written for adults, and there is one that the Academy is currently reviewing that will focus on parents and children. It should be available within a few months. I would like to turn the podium over to my colleague, Judy Shaw.

Judy Shaw: I will talk about the work that NICHQ has been doing with the primary care providers, and I will begin to explore how primary care providers could be a venue for partnering with the health-care or child-care community. What do we mean by preventive services—making children healthy and innovations to improve child health? What is happening in the country? Lannon talked about focusing on medical errors. Some other groups are looking at improving child's health and at the opportunities between Head Start child-care providers, primary care practices, and communities in general to improve health care for children.

I like to think about the phrase "it takes a village" to frame the context of health. To improve health care for children, every child should have the opportunity to be healthy and to stay healthy. Those of us in the pediatric community, as well as in the child-care setting, tend to agree with that. Every child should have access to quality health care including prevention, dental, medical, mental health, and developmental services. Children should also have access to community supports and services.

What do we mean by all that? I will start by talking about preventive services in primary care. When we talk about prevention, we are talking about intervening in some way, or helping a family and a child to stay healthy, reflecting back on the fact that every child has the right to be healthy and to stay healthy. We want to ensure that they continue throughout their life as healthy as possible. Part of the work we do in the primary care setting, as well as what you do in the Head Start setting, is to try to prevent children from getting ill and to keep children healthy. One of the things that we do is give immunizations. As you are all aware, that is something we administer to the child.

In addition, there is screening, risk assessment, and counseling. Although I worked in the primary care setting for many years, I never thought about the difference between the three and how I might, as a health-care provider or as a child-care provider, think in that context. I can begin to think about the opportunities I might have as an individual or in the context of my environment to intervene and support efforts of making children healthy.

Some of the things that I will describe in more detail include screening for anemia, tuberculosis (TB), lead, smoking, sleep position, blood pressure, vision, and dental problems. Those are some of the areas where we discuss screening, risk assessment, and counseling. There are many more, but I will offer some basics and put that into context of how we all can work together to make children healthy, to prevent illness.

When we talk about screening, we talk about identification of an unrecognized disease or risk factor by a standardized history, physician exam, lab test, or procedure. That is what we do in the primary care setting. It is not intended to be diagnostic; it does not make a diagnosis, but it gives us information about the child. It does not necessarily have to be invasive, like sticking a needle into a child and inflicting pain, or doing something to the child.

One example of screening is vision screening. We are not diagnosing what the problem is, but we are vision screening to note if there is a problem. Think about this in the context of how you work with children and how you might partner with the primary care provider. What if you notice a child is squinting or having trouble seeing at a long distance? Begin to think about some of the things that you do on a day-to-day basis. Blood pressure is another example of

screening. We are not making a diagnosis, but we are looking to measure the child's blood pressure.

We also have developmental screening tools to show us where that child may have problems, not to diagnose. For lead exposure and anemia, getting the lead test and blood test for anemia is actually screening. The second part is risk assessment. We do not always have to screen. Sometimes, we want to do a risk assessment. A risk assessment is any technique used to identify patients at high risk for health problems. We all do that in different ways when we approach a family or a situation. It involves specific questions to determine the patient's risk for certain conditions.

It can be implemented in many ways. In the primary care setting, we sometimes have parents complete structured forms, or sometimes providers complete prompting forms asking those questions. In health care, we gather information to understand as much as we can about the child, the family, and the context of their community, so we can help guide them to have as healthy a life as possible.

TB is an example of risk assessment. Not every child needs to have the test done. In some situations, we do what is called a risk assessment, which involves asking questions. If the child is at risk, then we do the screening. Knowing some of the requirements and what primary care providers do can help one to partner in the risk assessment, in one's own setting. Smoking is another example. We want to do risk assessment for parental smoking or exposure to secondhand smoke in that child's environment. We ask some structured questions about the risk, identify the risk, then think about the intervention to put in place.

We may want to assess a child's risk due to sleep position. We do not just counsel the parents to put a baby on the back and move on. We want to assess the child's risk. Does a grandparent who does not believe in putting the baby on its back to sleep care for the child? With in-depth assessment of the need, one can more appropriately intervene.

The last piece is imparting information or advice regarding behaviors that could reduce the risk of subsequent illness or injury. How does it fit into the framework of screening, risk assessment, and counseling? Some examples of that are injury prevention and counseling parents about how to make their environment and their home safer for the child.

Head Start has done a wonderful job in the child-care community about being aware and partnering with parents to think about how to make their environment safe. When we assess risk, we also counsel and support the parents. For example, if we identify a parent who has a child at risk for smoking, or for being exposed to secondhand smoke, we may want to counsel the parent about how to stop smoking or exposing the child to smoke.

Then there are issues of adaptation. In child development, we all participate in helping parents and children to better develop. Toilet training and discipline are some examples of counseling that we provide. In the pediatric community, we do not do this based only on our best judgment. There are guidelines for how to deliver this care. The American Academy of Pediatrics, the US Preventive Services Task Force, and Bright Futures all have guidelines for when we should do these things, at what stages, and what might happen if we identify a child at risk. However, those guidelines are not always followed.

I have provided data from North Carolina where a number of pediatric practices are represented. The researchers went in and looked at the charts to see how many kids in each practice had an anemia, TB, or lead screening in the chart. The mean is low if all children at 12 months of age should be screened for TB. Ideally, one hopes for 100% compliance. This shows us is that not only is the mean low, but there is tremendous variability. The point is that pediatric providers cannot do this alone. They cannot do this in isolation. There is tremendous variability in how we deliver preventive services and how we impart that information to parents.

For the data from the project that we are working on in Vermont we see the exact same pattern happening. We can improve the quality of preventive services in the primary care setting, but I contend that it is not just up to the primary care provider to work toward making children

healthy. It is the responsibility of all of us in this room. Part of the discussion we want to have this morning is where the opportunities exist for partnering, to help provide good preventive services for children, to reduce errors, and to improve the quality of health care.

Historically, this responsibility has focused on the provider. As Lannon said earlier, if there is a problem, we point at the individual and say the doctor is bad or the practice is bad. We are moving away from that approach now and looking at the system of care and the community level of support. I want to talk about what is happening to improve children's health-care quality. Lannon talked about NICHQ, which really focuses on improving the quality of health care that we deliver to children. Healthy Steps, which I am sure many of you have heard about, is a primary care practice redesign to deliver better child developmental services in the primary care setting.

The other group that some of you may have heard about is Foundation for Accountability. They have this survey called Promoting Healthy Development, the PHD Survey. They are seeking parents' input and are making the consumer accountable for health care. In other words, they conduct a statewide survey that gets parent input into the actions of primary care providers. Did the provider discuss child development with the parent? We are broadening our horizons and looking beyond the providers to get information back from the parents about what we can do better, where the gaps exist, and what they want to hear in the primary care setting.

One area targeted within NICHQ's quality improvement efforts is child development. We are working in collaboration with The Commonwealth Fund in New York. We developed some modules that practices can implement, to think about how they might improve their system to provide better child development information, screening, referral, and partnership with the community. Some of these "change concepts" that practices can put in place do not agree on the guidelines. Believe it or not, in some practices, one doctor does it one way, and one doctor does it another. Some of the things introduced to practices regarding guidelines is meant to encourage agreement on what to do.

Another area we focus on is seeking family and parent input. Some of the most successful practices focused on improvement have parent support groups or parent inputs. For some of the practices in Vermont, quality improvement is comprised of people in the practice as well as parents. I can tell you that parents have the best ideas about how to fix the problems in the practice, and how to fix the system. One of the things NICHQ encourages the practices to do is to engage a parent partner to help solve system problems and improve health care.

We also advocate using structured assessment tools, like a risk assessment check-off list. We no longer expect providers to keep absolutely everything in their heads. We recognize the fact that there is so much information in the medical field these days that it is okay to use a check-off list to remind one of questions to ask. Distributing the work and training the staff are also key components. We also help the practice to think about the provider not having to do everything. There are many people in the practice and in the community who can partner, which is critical.

In one of the practices in Vermont we found that the school does vision screening on all the children. They trained the school to do the vision screening and send the forms back to the practice. The practice knows that the schools have been trained to use the standards that the practice adheres to. We are not trying to add more work to the practice; rather, we are encouraging them to look to the community, to think about partnering together to improve the health of children, to simplify the referral process, and to link with community resources.

We have discussed opportunities to improve the quality of health care for children. We want to deliver the same message from setting to setting. We began working with primary care providers, the pediatricians in Vermont, around improving health care and the delivery of health care. The hospitals came to us and said, "We want to deliver the same message as the pediatricians about baby sleep position, smoking, smoking cessation programs, and so forth. We want to have the same message."

One of the issues is working together so that we are all delivering the same message to parents, forging partnerships with pediatric providers and practices. Again, as we said about screening and risk assessment, how might one identify a child in need of screening or a risk assessment, or help the parent to facilitate the follow-up, if a child has an elevated lead level or is anemic? How might one enable that parent to get into the appropriate services?

In terms of injury prevention and child development, how might one partner to support the parent and to educate the parent about injury prevention? How might one identify quality improvement efforts in the pediatric providers' offices? What are the practices in your particular area currently doing and how might you intercept with them and learn about the gaps in services?

I have done a lot of work in injury prevention. It is not one group's responsibility to educate parents about how to make the environment safer for their children. That is something we all want to do. There is a cartoon that says, "I got sick and tired of putting her in and out of the car seat, so I finally just said the heck with it." This is not our goal, to strap children in car seats and keep them there. We all want to help parents to think about the concept of making the world healthier for their children.

The last piece is child advocacy, parental education programs in the community, and community education programs. March is Poison Prevention Week, so how might Head Start and the child-care community work with the hospital community to provide better education around injury prevention? Another example is May's "Buckle Up, America" week. Then how do we identify community resources?

I have trained physicians, nurses, and many others in health care and have always said that they do not need the answers; knowledge about who to go to for the answer is more important. If a parent comes into one's setting and says, "I have this concern," one may be able to answer his or her question. But more importantly, if one cannot answer that question, who can? The next step is partnering with the community to distribute the information.

With the Web and the wealth of information available for parents, how do we disseminate that information to parents in the best way? In summary, I want to talk about preventive services, screening risk assessment, counseling, and partnering with primary care providers. We talked about innovations to improve children's health, a little bit about NICHQ, and what is going on in the community to do that. There are organizations and groups working on improving children health. How might one partner with those groups? What opportunities exist to improve the quality of child health care? That really involves forging partnerships with health-care providers and community organizations. Thank you.

Pascoe: Any questions or clarifications for Shaw?

Question: On the chart from North Carolina with all the dots, what does the line mean?

Lannon: This was a study by a colleague, which should be published soon. We do not believe it is realistic to set one's goal at 100% because there are reasons why it may not get there; so 90% is the goal we ask all practices to aim for. The goal that many set becomes somewhat the national standard on many issues, so this shows the gap between them.

Rogan: First of all, I wish I could invite you to Columbus, Ohio, to speak with the pediatricians. They need to be innovative and on the same boat. When the nurses come to me, their biggest frustration is their communication with the pediatricians, which is also felt by our Head Start parents. I feel similarly to Lannon and Shaw that parents have to be the primary caregivers for their children. As Head Start professionals, we feel it is our goal to empower the parents to do that. Sometimes it is not an easy task, because the parents whom we serve have difficulty relating to pediatricians.

They feel intimidated when they go to a doctor's office and the doctors tell them things about their child that they do not understand, or in a language that is not understandable to them. We work with parents of many different cultures, and they often have distrust toward doctors, for whatever reasons, including religious and cultural reasons. We still have families who see the medical providers as "the system." This is still happening in the year 2002. These parents do not want to visit the doctor unless their child is sick. They feel like it is part of "the system," which has not always offered them a positive experience.

One of the things that I wanted to do briefly is provide a summary of three things. We talked about medication errors, and in Head Start, the potential for that is great. We have 10 nurses to service our 58 centers. When children need medication in our centers, it gets delegated to the center's staff, which is a teacher, teacher's assistant, or a site manager.

Even though the nurse is responsible for initiating the administration procedure protocol and for the training and instruction, the teacher ultimately gives the medication; thus the potential for error is great. I do not know how to fix that issue in the Head Start structure. Perhaps feedback during the discussion can provide some answers.

We do know three things. First of all, we know that communication among health-care workers, Head Start workers, and family is most important in preventing medical errors. We also know that we, as the health care workers in the Head Start program, play an important role to ensure that parents know the health care system. Finally, we should be advocates for the children as well as the families.

Our health-care system for the Medicaid families in Columbus, Ohio can be complicated, with all this red tape. If they need referrals to specialists, sometimes they have to go through the primary care provider, who does not always understand the need for the referral. We know children with special needs and health concerns in the Head Start program demand our attention. About 40% of our children have asthma problems in a program of about 2,300 children. We have other real concerns for children with life-threatening allergies. For some reason, in the Head Start agenda, education and social service gets a lot of the attention, but we sometimes forget about the importance of health issues.

Lannon: I have an Academy video, entitled *Child Care and Children with Special Health Care Needs,* and a handout on all the different Academy publications. There are several helpful resources for out-of-home caregivers of children. The Academy also puts out resources on asthma, for example, the updated 2002 version called *Caring for Our Children,* which has national health and safety performance standards and guidelines. And as I mentioned, I have brought the list on medical errors put out by the Agency for Healthcare Research and Quality (AHRQ).

The Academy supplied me with brochures for the purpose of this conference, including *Choosing Child Care, What's Best for Your Family.* These may be helpful for parents of younger children who want additional information. There is also something here on child passenger safety, called *Protecting Children in Child Care.* This brochure is about a national conference held by NICHQ in November, on providing care for children with ADHD. One of the Academy guidelines on the diagnosis of children with ADHD is set up for children ages 6 to 12, which I know is older than the children whom you all care for, but it may be of interest to other people that you know.

Comment: Very often, when I have a monthly meeting with parents, they talk about the emotional problems of their children. They do not understand the anger, severe depression, or uncontrollability in their children. It may be that immigrant families do not know exactly how to set boundaries for their children. From what I hear from your presentation, there has to be a wide array of resources in order to educate parents. Many parents also have physical and emotional problems.

Lannon: You are speaking to a universal concern that many of us have noted. NICHQ is actually working on some developmental modules, which are more like anticipatory guidance. Some key pieces are on discipline for families. Some of these are still in their pilot stages. To help bring these issues to the surface, clinicians are using the Parents' Evaluations of Developmental Status (PEDS) questionnaire and the Ages and Stages questionnaire.

I do not want to call them screening tools, but they are ways to help elicit parent concerns when a child may be out of sync with what the parent thinks is appropriate. These are to be used in clinic settings. There is also something called the Achenbach Child Behavior Checklist, used by some clinicians to help focus on the issues. Some of the Academy handouts talk about different issues around discipline. I realize that literacy can be an issue, and it is important to have things that are easy to read. NICHQ is developing simple handouts.

Shaw: When we recognize children have emotional illness, or if parents have many questions, no one group is able to address that. How can we work together to address that issue? One of the grants that we just applied for in Vermont was similar. It tries to bring the pediatric community together with the child-care community to identify those issues and put in place a program for going forward. It seeks partnering in order to identify children that need services early and to provide support for these families, rather than waiting for them to declare themselves later on in life.

We are all talking about how to work together to address these issues. Historically, the primary care provider has used those tools, identified the problem, and referred the child to services in the community. Rogan also described the communication between those who are providing the day-to-day care, the parents, and the primary care setting. How can we build bridges and collectively work together to meet those needs of children in the community?

Pascoe: The question addressed how to help families identify and work with children who have social and emotional problems at home. Barton Schmidt's book, *Your Child's Health*, depending on the reading level of the parent, is one resource.

Question: I worked at a local Head Start program, and I currently work with the region for Training and Technical Services. One of the beneficial things about working with programs in the region is that we have a wonderful resource that helps our advisory committee. It is great, but underutilized. There are many issues with trying to communicate these topics or communicate these issues with parents, and then trying to give the caregivers a broader perspective on issues of early childhood development. It is also important to have people in the early childhood development field understand that an effective health service advisory committee can affect health concerns.

I would like some feedback on that, because I agree with Rogan's comments about some of the challenges. I can definitely identify with that from my experiences. But one of the things that I found in programs that are less frustrated with it, but frustrated nonetheless, is how the health service advisory committee is used. Are the educational efforts just providing, unfortunately, information about the program's operation but not really educating the committee members?

Rogan: Can you define what health advisory committees are? I assume that is a committee specific to Head Start.

Comment: Each Head Start is mandated to have a health advisory board. Until about 2 years ago, our health advisory board was useless, so to speak. We now have an excellent health advisory board, and I have begun to utilize them. We have nurse practitioners, mental health professionals, and disability experts from the community on the board, and they have made my life easier. But there has to be a strong board. The board must have people on it who are

interested in the children and the families served. And, they should have some connection to the health care providers in the community.

Comment: I am a health-care provider. The Bureau has just produced a video on effective use of health services. It is a motivational, inspirational video to use with parents, staff members, and community members. That should come out fairly soon.

Comment: I have had the opportunity to observe 33 years of what we call primary care in an urban setting. We have a two-class system in this nation. The White children go to private doctors, while the Head Start children go to the clinic and sit with their mothers, waiting for hours.

When we talk about one village, there is not one village; there are two villages in most places in the United States. I see the fear in the faces of the patients as mothers carry in their children, fearful that they may lose them, or that their children will not get out of that hospital alive. We are addressing such immense issues that go way beyond the screening issues. We are addressing how to change the whole system.

Lannon: Unfortunately, the parents that we serve go to what is referred to as the high-volume clinical providers. They see children en masse, and the practitioners, pediatricians, and nurses do not have time to sit with the parents and explain what services they are providing. The children are run through the system as though on a conveyor belt. But, the high-volume places will take the Medicaid insurance or whatever type of insurance the family has. The nice practices where the pediatrician has a big plush office and our families can sit down at the desk and learn the procedures and services—most of them have a limit. Or, for whatever reason, especially in the dental world, they just cannot service all of the Medicaid-eligible families.

We would love to improve access and remove two-level systems. The Academy does have many members who are, as you describe them, White and suburban practitioners. On the other hand, the Academy has been one of the strongest advocates for universal access for children. They have worked hard to push the State Children's Health Insurance Program (SCHIP) through. Many of the Academy members work in settings where the majority of children are on Medicaid. In our hospital, we try to be responsive to those needs.

I hesitate to tar the Academy, when it has done so much to advocate for children. Shaw and I are both from states where we have worked closely with the Departments of Medical Assistance. On a positive note, the Health Care Financing Administration (HCFA), which is now the Centers for Medicare and Medicaid Services (CMS), is actually driving quality improvement in this country. The federal and public agencies will drive quality improvement, because many health maintenance organizations (HMOs) and managed care organizations will not pay for it.

There has been progress because of the advocacy of CMS and the CDC. In North Carolina, it has been a model. The majority of clinicians care for both private and Medicaid patients. All this improvement in primary care settings is actually funded by Medicaid. In North Carolina, Medicaid has funded 15 practices in rural areas that all care for children on Medicaid to be part of the ADHD work.

I want to sound hopeful because there are many people working to improve access. NICHQ is also doing a lot with innovative scheduling in something called *Open Access* that one calls up to get in to see the doctor. They were actually doing that in a county in North Carolina that is as large as the state of Rhode Island. We have been doing that for about 6 months, and we have seen that preventive service rates have increased because children can get in when they need to. I want to sound hopeful, and I also want to say that the American Academy of Pediatrics is a wonderful advocate for all children and has a good track record.

Shaw: I could not agree more. I moved to Vermont from Massachusetts, where there definitely was a two-class, two-tiered system. We had the house center, and we had the wonderful private providers. In Vermont, I am proud to say that every provider sees Medicaid patients. I do not see a two-class or two-tiered system. Everybody takes care of everybody, and it is wonderful. Granted, Vermont is small, and I know we are different from everybody else. NICHQ spreads that learning to others and gets other practices and communities to see how supportive and wonderful the system has been. They are all working and bringing parents in to think about how to improve the quality of health care, regardless of how services are paid for.

We need to start small. We need to start developing and spreading those networks. We will not address it from above, I believe it must bubble up from below. We will need federal support, but it will take the groundswell from practices and pediatricians to cut across those boundaries.

Pascoe: I would like to add that 55,000 sounds like a lot of people, but my understanding from the Department of Federal Affairs and from the Academy is that it is a relatively small, national organization. We need to band together with advocacy, collaboration with public health organizations, and any organization with perspectives of child health. Everyone in the room would likely agree that we have a lot of work to do; but we need to be hopeful and keep working together.

Peter Leonard: It seems to me that there are two broad themes that sometimes enter into the conference, and which enter into the relationship between Head Start nationally and professional experts, including both researchers and medical providers. One theme is that for Head Start to be effective in the long run, it is essential that professional specialists demonstrate respect for the parents and families in the way they practice. Secondly, they must take seriously the idea that the parent is inevitably the child's primary teacher and primary health-care provider. For health-care providers to practice in ways that naturally honor those two ideas, they must have a fire in their belly and an inner conviction that each and every parent is also an expert—as much an expert in certain things as the medical provider or the researcher.

For example, the parent may have information, without which, the health-care provider cannot be effective, no matter how much they know. My question is, given the job of pediatricians, how likely is it that they can allocate time to these concerns and do something about them with all the other things they have to do? Secondly, what does the population of pediatricians look like nationally? How likely is it that many of them will actually honor those two principles?

Lannon: My middle name is Pollyanna, so I actually feel hopeful for the work that we do. I am board certified as both an internist and a pediatrician. It is special working with pediatricians because I think they want to do the best job they can. And, on the totem pole of financial reimbursement for physicians, they are on the low realm. I think a lot of the work they do is out of genuine care for children.

There are a few evidence-based tools. Some of the things I suggested before, the PEDS and Ages and Stages questionnaires, can help clinicians to elicit parental concerns without spending much time going through a checklist. It can even be done in the waiting room. The PEDS has been shown to work with many different literacy levels and socioeconomic groups. There are some tools and combinations we can use.

One of the things that we are doing in NICHQ is to say this responsibility should not fall entirely on the clinician. Because they have so many other things to do, how can we spread this out? The practice I spoke of earlier is the only pediatric practice in a place the size of Rhode Island, and 65% of its patients are on Medicaid. They have been able to have the receptionist work with families. In certain cases, people become concerned, "Isn't that patient going to scream at you?" But the practice has worked out their procedures and is actually a star group in sharing how to do this throughout the state.

There are ways to work on it, and NICHQ and the Academy are partnering to spread a lot of this. Shaw talked about the idea of spread, and it takes building awareness and sharing strategies that work to give people hope. There are many ways we are working in the Academy to do that, through continuing education sessions, monthly publications, and by speaking at different sessions and working within each state and region to help build this sense.

Barbara Calabrese: We are working with Head Start in Baltimore on an asthma study. In our asthma program, we have included the training of family service coordinators as the asthma experts in the schools, because there are no school nurses. In some cases, no one on the board has any medical background at all. We are looking at the issue from the bottom up as well as from the wide range. Let's start talking to family service coordinators about how to train parents to look at barriers to asthma management. What are some of those barriers to getting access to the physician, and how can we help them to make this connection with their local physician?

It may help to get the health council into some of the issues in their local area. As a school nurse, I know that some physician offices require that one bring just the child who is being seen. For a family with many children, that is impossible to do. We are helping the family service coordinators identify barriers and different ways of helping parents to address those barriers. We are teaching the parent to be an informed consumer. Asthma is not just a health issue, it involves looking at appearance review issues and other issues in the system. We are trying to work that issue from the bottom up.

Shaw: You are describing a systems approach and the bubbling of ideas from the bottom up. Another good example is when I showed those dot plots for immunization rates, TB, and anemia. NICHQ has brought together different entities, including the practice and supporting community groups, to learn from each other. The example about bringing only one child into the practice is interesting. There is a practice with 100% immunization rates, where not one child is not up-to-date for immunization. Their trick is to immunize every child who walks through the door, including every sibling, neighbor's child, everybody. When that one child comes in for a visit, they check everybody out regardless. When they stood up and talked about this accomplishment in front of 30 other practices in Vermont, it made the practices think differently about immunization.

We did not go into detail today about what NICHQ does, but it brings together different groups to generate ideas and begin learning from each other. It is intended to broaden horizons about how to work together to improve whatever it is that we are trying to improve. We are trying to find models that work while also sharing and learning from each other, instead of in our own little isolated practice, where we deliver care in isolation.

I worked in the primary care setting in Boston for 20 years. I never talked to another practice. I never learned from anybody else; we really were functioning independently. The opportunity to think about and learn from each other, have others generate ideas, and then learn about those ideas is a wonderful opportunity.

Comment: On the asthma issue, if we teach the parents what the National Asthma Education and Prevention Program (NAEPP) guidelines are, they can then go in and prompt the doctor to look at them.

Comment: I want to share with you another approach, because in Australia we have a different health-care system and a different child-care education system. Our approach to prevention has been based in the early child centers or the schools. We have a health-promoting movement that works together with the children, parents, health providers, and other service providers in the community.

It works from a point of strength in acknowledging that, as people have mentioned many times before, the families and the children themselves actually know an awful lot about their

strengths and their situation. Moving forward from that, those people identify the issues that they think prevention should move forward from, and we give those people the skills they need. We talked about empowering those people to actually move forward and take responsibility for their own health issues. Our role as researchers is to document and facilitate that process and to provide evidence for the future that that model works.

Comment: I want to do some advertising for my own program, because we involved Head Start, health coordinators, and possibly members of the health advisory committees. I am the director of the National Training Institute for Child Care Health Consultants, based in North Carolina. We cooperate with the Child Care Bureau and the Healthy Child Care America Campaign at the Academy. We also train state-based trainers for child health consultancy. We have trained people from 47 states in the United States, providing child care health consultation coordination, training, and assistance to child-care centers, but not necessarily to Head Start. We have not figured out how to provide these services to Head Start programs, but we have just invited Dr. George Askew, the new medical director of Head Start and Early Head Start, to be on the advisory board, and he has accepted.

We have had a couple of Head Start trainers, from Denver and Boston. We would like to reach out more to Head Start programs. We offer an intensive face-to-face and online training program. The curriculum is based on *Caring for Our Children*, the book that Lannon showed us. It is coordinated with the National Health and Safety Performance Standards.

Terry Frankovich: Our organization sees education as separate within the health-care systems. For the last 2 years, we have served about 1,200 children. One nurse and I provide the health-care resources. I found that it has been a great experience in terms of opening access to the health-care system. It is hard to change a physician's practice. For nonphysicians to try to change a practice it is impossible. We have been able to make some progress by getting private foundation support. Without this support and innovative approaches, I think it would be difficult to create that interface with the medical establishment as well. These agencies should think about these collaborations.

Comment: One of the reasons that I am here at this conference is to see where oral health fits in to the Head Start agenda. Unfortunately, the neighborhood of Washington Heights, in New York City, is not as wonderful and supportive as Vermont. Part of the reason is because there are no pediatric dentists serving this area. Only about 30% of the dentists in the area accept Medicaid. We have tried to get pediatricians to screen for dental care and to start screening for behaviors that promote dental health. But, there is a separation between mental and dental well-being and general health that permeates our medical community. Given that, how feasible is it for pediatricians and Head Start to allocate time and support for dental care and screening? How feasible would it be to allocate time to incorporate screening and risk assessment for oral health?

Comment: I can speak for our Head Start agency, and I concur with you that oral health is one of the areas that receives the least attention. We have the most difficulty in our area trying to solicit dental screenings for our children, even from dental hygienists. One of the problems is that in Columbus, Ohio, many dentists have received grants to work with Head Start and low-income, eligible families. There are several Head Start programs in our area, and we struggle with particular dentists to provide us with sufficient services. There is not enough of them to go around.

But the feasibility is great. If we had a dentist who was willing to work with the Head Start program in our area, we would probably bend over backwards to do whatever we needed to have that dental service. We would even have him monitor dental students or dental hygienists who could come in and provide at least the initial screenings for our children.

Shaw: In Vermont, all the pediatricians see children on Medicaid, but it is not the same with the dentists. Access to dental care is a problem. Another challenge is that if one asks a pediatrician to screen and identify, there needs to be services for them to refer to. The federal government could help by getting more dentists trained to provide the services and to be available for those children. When we did those chart abstractions and looked at practices, we also gathered dental data. The practices were doing a good job of risk assessing early. Then we also looked at 4-year-old charts. Many of them had verified that a child had seen the dentist, but it still does not get us beyond the access problem of getting those children in need of services to the dentist. We have a strong effort in the state to address dental care, so that may have helped as well.

Lannon: One of the things that happened in North Carolina was a collaboration between the Pediatric Society, the Academy of Family Physicians, and Medicaid. It started with child health-care providers being reimbursed for oral health services including painting on fluoride. The local NICHQ group worked with providers to train people to do follow-ups. We tried to blanket the state in terms of clinicians both being much more aware of oral health issues and in being empowered and enabled to do preventive treatment. This issue is gaining increasing attention, and I know that the Academy has been trying to help elevate this issue.

I will also mention that a friend of mine works with the National Health Law Program, which protects the rights of children, and there are several lawsuits on this subject. One in North Carolina pushes the envelope on Medicaid coverage for children in terms of dental health. There are many barriers to get over before this is accomplished, but people are beginning to work on it. I would be glad to put you in contact with the people in North Carolina because they have done a great statewide effort.

Pascoe: Another possible resource is the Children's Health Alliance of Wisconsin. I used to be a member of this group and oral health was a major initiative underway at the time.

Comment: We started with a Head Start program and a Medicaid program. If one follows the money historically, from the day President Johnson signed Title 19 and Title 18, Medicare and Medicaid, they always underfunded providers. If we had usual and customary fees for the Medicaid child, we would not be having this discussion today. The bottom line is that we need universal health-care programs. We currently spend $180,000 per child in the nursery and then in the Pediatric Intensive Care Unit (PICU). But, we will not pay the doctor who is caring for that child more than $20 per day for the care. There is a rationing system that was done either intentionally or unintentionally. We continue to face this problem. It is 40 years old, yet to be solved, and the debates go on.

Pascoe: We have a call for advocacy on working together for universal access.

Lannon: One of the reasons North Carolina has been able to lead in this area is that the reimbursement rates are equal to private reimbursement rates, in many of the cases. That enables people, and it is why most clinicians in the state care for Medicaid children. I want to point out that the Academy has been behind universal access for children and universal health insurance for many years.

Child Health Advice: Past and Present

CHAIR: John Pascoe
DISCUSSANTS: Howard Markel, Steven Shelov

John Pascoe: I have been dreaming about this session for 4 years now. I thought it would be fun to get Howard Markel and Steven Shelov together to talk about child care, past and present. This is an informal conversation hour, so the ground rules are that both of our speakers will take a few minutes to make some general comments about their particular area of interest and expertise, and then we will open it up to a conversation with the audience.

The first discussant is Dr. Howard Markel. I have a copy of his book, *The H.L. Mencken Baby Book*. He says that his mother bought one too. He is a practicing pediatrician, medical educator, and historian in medicine at the University of Michigan, where he is the director of the Historical Center for the Health Sciences. The second discussant is Dr. Steven Shelov. He is the Chair of the Department of Pediatrics at Maimonides Medical Center and Vice President of the Babies' and Children's Hospital in Brooklyn, New York. Shelov was also the pediatrician on the *Today Show* in the early 1980s.

Howard Markel: It is always a pleasure to come to the Head Start National Research Conference. My charge is to talk about the history of baby-care advice. Doctors have been giving advice since there have been doctors, at least since the time of Hippocrates, and probably before that. We know that since the Middle Ages, there have been specific books for general consumption. Most of these books use different concepts of medicine and disease than those we would understand today. In fact, in America, there was a popular book by a physician named William Buchan called *Domestic Medicine* that went through 12 editions in the 1800s, and the book did not separate children from adults. I bring that up because baby and child care advice books are actually part of a bigger phenomenon. That bigger phenomenon is pediatrics, children's health as a specialty, which is a late 19th and early 20th century phenomenon.

Before that point in time, most doctors on this side of the Atlantic Ocean, or elsewhere, would simply think that the problems of children were just smaller problems. They did not separate issues of physiology or pathology, which reminds me of a joke. Once, when I was a resident, the transplant surgeons came in to do a transplant. These doctors could put a heart into somebody but could not start an IV line on a 3-year-old. I was requested to do that. The transplant surgeon asked me how I could take care of such teeny-tiny patients. I said that it was easy, and that I pretend that I am a teeny-tiny doctor. This notion that children are different psychologically, developmentally, and physically, and the diseases they get are different, has not gone away completely. It is a 19th and 20th century phenomenon, as is the public health movement that we benefit from today. Those are two joined enterprises.

This is not surprising, when one thinks about it. In the late 1800s, in this country alone, one out of every five infants died before their first birthday. Another one out of five would die before their fifth birthday. Death was a common visitor to the homes of most Americans. As a means of prevention or decreasing infant and child mortality, doctors, public health workers, and social workers instituted a concept called "scientific motherhood." This is an early 20th century term; now we would probably call it "scientific parenthood." Let us recall that the lion's share of parenting at that time rested on mothers. It was important not only for Americans but also for immigrants. From 1880-1925, 25 million immigrants came to the United States, during an era when the Immigration Restriction Act was enacted. This Act was one way of inculcating hygiene and issues of better living, and is the time when these child books came about.

Dr. Luther Emmett Holt, who in many ways was the father of all the baby-care books, wrote *The Care and Feeding of Children*, first published in the 1890s, and it was actually written as a catechism. It included about 90 questions that he wrote first as a manual for nurses. It then

became so popular that he had it published, and it went through edition after edition. In 1946, it was the most widely selling baby-care book in the world.

At that time, one could find baby-care advice in magazines such as *The Delineator*, a women's magazine. It is published by the Butterick Company, which also sold dress patterns. The editor at this time was a man named Theodore Dreiser, the famous novelist. He was in between gigs as a novelist and was editing a women's magazine. Baby care was the most popular topic requested by readers of magazines like *The Delineator*, *Ladies' Home Journal*, and *Good Housekeeping*. Parenthetically, he hired some people to write baby-care articles including Leonard K. Hirshberg, a physician that graduated from Johns Hopkins in 1904, and a man named H. L. Mencken. You may recall him now as a famed Baltimore journalist; he was 27 years old at the time. Mencken ghostwrote all the baby-care articles under Hirshberg's byline. That link is also how Mencken and Theodore Dreiser met, and they developed an important relationship in American literature.

Mencken was a bachelor until he was 50 years old, and he never had children. In fact, the only real experience he had to write a baby-care book was that he was once a child himself. He used many of the leading textbooks of the day, including Luther Emmett Holt's *Care and Feeding of Children*. Holt also wrote the standard textbook of pediatrics at that time. The book was then sold by Butterick. It appeared in 15 different issues of *The Delineator* but was then sold for a quarter as *A Textbook for Mothers on the Care and Feeding of Babies with Questions and Answers Especially Prepared by the Editor*. An original copy of this book is worth about $25,000, which would have made it quite a good investment.

Well-baby contests were held throughout the progressive era. These were ways of getting mothers to learn how to feed their children, how to recognize symptoms, and so forth. One particular contest was directed at immigrants from Chinatown in San Francisco. There were wonderful cross-cultural attempts at this time of people going into immigrant neighborhoods or neighborhoods of different socioeconomic classes, and doing the best they could. They did not always do a perfect job. They brought their own cultural biases to the scene, but they were dedicated people who tried to benefit children's health in America. This goes to the other point I raised about the partnership of public health and pediatrics.

Then came Dr. Spock in 1946, when his book was published. Spock's book sold more than 40 million copies, which is more than any other book with the exception of the Bible.

Question: Do you know how many editions there have been?

Markel: The book is now in its 10th edition. Spock was a fascinating man, because he represents, more than any other American pediatrician, this nexus of public health, doctoring, public education, and "the doctor as teacher" concept by dispensing reasonable and sound advice. Remember that the first sentence in Spock's book is "You know more than you think."

Spock also became quite an activist. He was opposed to the Vietnam War and to the proliferation of nuclear warheads. He explained late in his life why he got involved in protesting the Vietnam War. He said, "These are my patients who are going. To me, that is a real issue that I need to be involved in as a doctor." It seemed outlandish at the time, and some people in the medical profession thought that was not the proper role of a doctor. Still, *JAMA* put handguns as the main public health issue in their journal 1 or 2 years ago. It is interesting to see the change over time in that we see a broader role for all of us who care for children in the realm of what we need to think about and do in order to protect their health. I will leave my comments for later, because I know Shelov is probably going to proceed from Spock, and then we can all interact.

Steven Shelov: Spock and I were friends, and I once spent a wonderful weekend with him and his wife, Mary, at their home in Camden, Maine. He was quite old at that time, and somewhat enfeebled physically, but not mentally. He was considering having me take on the editing of, or

the next step of, an edition of his book. He and the late Michael Rothenberg made a decision to part ways, and he was not sure what the next step would be. We spoke at length since we had many political similarities and commitments to the health and welfare of children in the broadest context. He was a visionary person, even at 89 years of age, and one who could see what the needs of parents were in 1946 and throughout the multiple editions of his book. He was incredibly energized at that age despite his worry and had in his heart the direction of where parents and children needed to go.

Despite that conversation with Spock, the publisher decided that I had a conflict of interest at that point, because we had moved through the first edition of the Academy's child-care book for parents and had already achieved a level of identity. The publisher thought it would look strange, and perhaps be a breach of competitive need, for me to take over the Spock book. Spock was the only play in town for dozens of years, and it was an incredible testimony to him and his vision that parents looked to his advice in such a meaningful way. I certainly remember doing that with my first child. He gave a sense of reassurance, knowledge, and comfort at times when you needed it. He could speak through his book, with so much experience that one could get a sense of direction in the midst of a 2:00 a.m. crying jag from a 7-month-old infant.

During the 1970s and 1980s, the whole field of parent education exploded, and publishers tried to build on the incredible thirst for knowledge and degree of subspecialty movement sought by parents in a more sophisticated world. What were parents looking for that partly spawned this incredible burst of targeted information? The first thing they were looking for was expertise, not just opinion. The beauty of Spock, and to some degree his shortcoming, is that while he was an experienced, talented, New York-based pediatrician of many dimensions, he offered only himself, as smart as he was. Parents began to say that they did not want only one person's opinions, and they asked if there were other ways to gather enough opinions so that they could make some of their own decisions. I took into my heart Spock's basic theme that parents know more than they think about their children. This theme is important when deciding what should be the best of parent educational materials.

The second thing parents wanted was good, "cutting-edge" information. They wanted to hear predictions of where things were about to go, so books began to move in that direction. They did not want things out of date. There was often a 10-year hiatus between Dr. Spock's editions. Many things happen now, and there is a telescoping of new information. It is not all necessarily good, and it has to be sifted and cared for. When one analyzes the advice given now, much of it is the same as what was offered back then, only it is more complicated because the world is more complicated.

The other thing to note is that Spock was a general pediatrician. He attended medical school at Yale University. During his residency program, he actually did a little bit of child psychiatry, like T. Berry Brazelton. Brazelton is the other major individual with an area of specific expertise, but he translated much of his child development expertise to the lay public in his books, mainly focusing on infants, infants and mothers, and temperament. He translated temperament for parents in such a way that people could identify with the very active infant, the not-so-active infant, or the quiet infant. Brazelton took the baton from Spock and made "cutting-edge" developmental science available to parents.

However, they were basically still generalists, and there was a move toward the subspecialty desires. One of the things that has happened in child health is that our children are physically healthier than they were at the turn of the century or pre-World War II. Much of that has to do with public health dimensions, immunizations, and other preventive dimensions, so that in 1968, when Bob Haggerty coined the term "the new morbidity," much of the physical stuff was either different or had come under control. There was a movement toward a greater understanding of behavior, as it was related to child development and growth. What could experts say that we could then translate into parents' understanding? That is where the evolution came to the current flurry of what you see now in bookstores.

The purpose of the books was to impart seven principles. The first principle is obviously to educate. They were meant to enable parents, and enabling is what Spock did the best. They were to empower the parents, to give them a sense that they could take some control and, through understanding, more effectively manage a situation with a child. The books were meant to encourage and support. Encouragement was a critical part for parents undergoing difficult times. It is hard work to be a parent every minute of the day, though it is certainly rewarding most of the time. I remember when I was a 1st year resident at Montefiore Medical Center in New York. I had literally been there for 3 weeks when our son Joshua was born. I remember going to the nursery, seeing him, and being excited, and then looking around for someone to sign him out to. That is a medical term—when you change shifts, you sign out and then go on to the next thing, and somebody else takes over. There was no one to sign out to. I looked around, and I was the sign-out person, and this was our child for every minute to follow. Encouragement through those times was an essential part of what those books provided.

The books provided expertise. The parent is, in fact, the given expert in terms of knowing an infant best. However, one can also benefit from learning things that other people have to offer, which is an important part of these kinds of books. The books offered empathy for the situations confronted by parents. More important than anything else, they embraced the parent as the most important partner in the care of children. The books at that time covered a variety of topics, and one began to see many new books on the 2-year-old who is whining or who is shy. This is all important and has added to the domain of the books. It is an accomplishment for an organization to bring expertise and specialty in "cutting-edge" and updated information, focusing on developmental stages. Developmental stages and behavior are the cornerstones of a quality book that parents are looking for. Prevention of illness, either prevention of physical illness or "anticipatory guidance" as it is called in child-care settings is critically important and should be addressed in a book like this. Information for parents on nutrition, behavior, and expectations should also be rolled up and gained from that book.

These books have evolved to offer techniques for bathing an infant, putting an infant in a blanket properly, carrying a child in a car seat, feeding an infant at different times of their lives, making formula from scratch, putting an infant to sleep, or handling a fever. The book should offer suggestions for how to handle situations and how to recognize illnesses that are apparent yet confusing. A quality book should also assist parents to use the resources available to them and how to recognize their child's own uniqueness and sameness at the same time. There is a sense of pride in believing one's child is unique, but there is also a sense of comfort to know that others have also experienced some of the things one is going through. This can help a parent adapt to their own experience.

The tone approach is critically important in making a book feel good to read or to see. That is clearly expanded now, in a generation that has some worry about parenting advice. The magazines, as one could see in that magazine from 1910, show some things that never change; they just become portrayed by glossy, color pictures.

We have some tremendous challenges as parents, pediatricians, and care providers for children. One of those challenges is the abundance of information that is of questionable value. This information is available through Internet connections and other ways that can be frightening because they are unsifted, unfiltered, and unvalued in terms of what is truly a good piece of advice and what is not. They often come not with literal censorship but with a sense of fear.

For instance, I now have a grandchild. That boy whom I did not sign out continues to not be signed out, and he is 31 years old now. He has a wonderful wife and a 5-month-old child. We were recently talking on the phone about the infant having a fever. We talked about what to look for and examine, and they found some suboccipital nodes. I said that the child probably had roseola. My daughter-in-law looked up roseola on the Internet, and learned that it is caused by the Herpes virus type six. She entered a panic mode over what that now means for the child; including sexually transmitted diseases, syphilis, you name it. How terrible! Fortunately, I was

at the other end of the phone and could calm her down, but that does not always happen. That is an example of how information from certain venues, accessed in certain ways, does not help families. Instead, the information made her afraid that the infant had some terrible, fatal disease.

We are at an interesting threshold. Over the past several years, I have been pleased and proud to carry part of the mantle of educating parents. The book originally came out in 1989, so we are actually almost 13 years into it; and it will be revised this summer. Yet at the same time, we are cautious about having so much information out there for parents, child-care providers, and others. We need to be more vigilant about what we recognize as quality. We should allow access to people such as Markel, myself, or others to develop methodologies in which the best information is provided to families and child-care providers in ways that are both good to educate, good to update, and safe. A fearsome situation should not be created such that parents will feel afraid of the wonderful opportunity to care for their child.

Pascoe: I would like to ask Shelov to elaborate on how this book was put together. From the comments of Shelov and Markel, it sounds like in the late 19th century and the first half of the 20th century advice books were primarily a one-person show or written by a small group. Could you say a few words about how this book was put together?

Shelov: By the way, I get no interest out of this book, so do not worry, this is not self-promotion and is not helping my child go to college. I brought this proposal to Bob Haggerty, who was the president of the Academy, in 1985 or 1986, responding to what we felt were the needs of families, the need for expertise and updates, and providing more than one person's opinions. We felt that it was important to tap into the expertise of some of the smartest people in child care all around the United States. Many of them are on committees or are representatives of the Academy. We used them as the centerpieces for the knowledge, and someone wrote up the information and translated it appropriately from "medicalese" to language more appropriate for the lay audience.

We assembled about 75 pediatricians, experts in their area, and allowed them to develop materials that were appropriate to what needed to be known at different ages about different subjects. We then wove it together, first in a "medicalese" fabric, and then in one voice that would be understandable and appealing to mothers and fathers—many fathers have read this as well—while incorporating the proper information. That process took about 4 years. My basement was literally covered with various versions and revisions. That was the origin and the mechanism by which this book was done, and it has continued in that way. Now I have an editorial board with a new, young set of people who are experts in the field, and we are going to reassemble some new information.

The other thing we have done is to update the information every time it is printed, such as including new immunization schedules. If one bought a book today, it would have the right immunization schedule. That is something that publishing and printing allows one to do when the book goes back to press. Fortunately, this book has had such a frequent print run because many pediatricians have embraced it.

The book is also online now through the Academy, so if one wants to download a page or two for something, it can be done. That is the way in which we have blended availability to parents, expertise that one need not question because the authors are highly established in their field, and information is presented in a format that is easy to understand. We have received criticism that reading levels may still be too high in this book, and one must look at who comprises the audience. Some books are sophisticated and may be okay for some readers, while other readers may have more difficulty. One adapts their own view of what is valuable, based to some degree on how comfortable it is in terms of one's reading level. At this point, authors with credible backgrounds should write materials for parents. However, anyone can get on the Internet and call himself or herself an expert. The Academy of Child Psychiatry provides infor-

mation about who the experts are. Those people are recognized and highly regarded. That is the same principle to which we should adhere.

Pascoe: I have one question for Markel, then we will open up to the audience. Were there any recommendations from the late 19th century or early 20th century that most of us would find anywhere from quaint to outright dangerous, based on the information that we have now?

Markel: One thing that is interesting is how much has stayed the same. That is also true of textbooks. Frank Oski used to say that we could study any edition of Nelson's Textbook of Pediatrics from the past 40 or 50 years in preparation for the American Board of Pediatrics exam and probably do fairly well. There are many things one would recognize and many things that one would not enjoy or not recommend to a patient.

For example, pediatricians in the early 20th century had a fetish about when to toilet-train. Holt said to begin children as early as 3 to 6 months of age. That is quite remarkable. The feeding schedule was also quite a fetish in that it was like a train schedule at Grand Central Station rather than based on when the infant wanted to eat. There were also different points of view. When Mencken was writing his baby book for Hirshberg, he wrote boldly that any woman who does not breastfeed is not worthy of the name "woman." That is not something we would ever say. In my generation of pediatricians we recommend breast-feeding, but we do not make mothers feel guilty about bottle-feeding, or at least we try not to. Thankfully, we live in an era where bottle-feeding is quite safe.

Formula use is also a 20th century phenomenon that is a remarkable advance in baby care. The "cutting-edge" pediatricians of 1900 were all developing artificial formulas. It is called formula because it contained milk and a certain amount of added carbohydrates, fats, and protein. Each infant would have his or her own formula. There were actually no collaborators, like the Walker Gordon Laboratory in Boston, owned in part by T. Morgan Roach, the famous Harvard professor of pediatrics. There was technology transfer even at that time. They would make these formulas for wealthy parents, by the way, not for poor people. Everyone had a method—Holt used the percentage method and David Murray Cowie at the University of Michigan had his own method. Formula was the human genome of the day for pediatricians, and it helped build many careers. By 1920 or 1925, it was shown that one size fit most, but not all. We know today that certain infants need a soy-based formula or children with particular nutritional deficits or problems need a specific formula. For the most part, the differences between Similac and Enfamil are like those between Coca-Cola and Pepsi. Those are issues that have changed quite a bit.

Another thing that has changed quite a bit is the use of sterilization. We live in a disposable age right now. One can now buy formula in a can, already premixed in powder form. Many people now have dishwashers, and do not sterilize in the old-fashioned sterilizer. In fact, the microwave is a new tool for sterilization. We warn people not to microwave the formula for their infants because it heats unevenly and the child can burn his or her mouth or lips.

Obviously, things have changed. Another thing that has changed quite a bit involves infectious disease. Contagious disease was the other "cutting-edge" issue of pediatrics. I do not think I emphasized the power of immunizations in terms of bettering children's health. One out of five children died of diphtheria, measles, and polio, which was not as big a killer as the others. The diphtheria vaccine was developed in 1936. Diphtheria antitoxin existed in 1895 as a treatment, not a preventive. Until the 1930s, we did not have many vaccines; they started coming in the following decades. From the late 1930s to the 1970s, most of the vaccines we give today were already in use. What you give and when you give it changes, but the menu is relatively similar.

Issues of hand washing were huge, as were warnings to not kiss infants, due to tuberculosis. Until 1960, people thought the disease was primarily transmitted by spitting rather than

coughing, even though it was known that tuberculosis was in the sputum in the lungs. People in the late 19th century were not terribly shy about spitting or where they spat. Some subway stations in New York City still have signs that say, "No spitting by order of the Board of Health." It was not an aesthetic sensibility, although that is a good enough reason, but it was believed that if one had tuberculosis, the sputum would dry, mingle with the dust, and then the tubercle bacilli would float around. Therefore, spitting and kissing were two main issues in the early baby-care books.

As Shelov was talking about his son, I was thinking about my daughter, who just turned 2 years old last week. I have written a baby-care book, a baby textbook, a pediatric textbook, and others, but I did not know what I was doing during her first few weeks of life. I wrote about it in the *New York Times*, saying, "What the hell was I thinking when I wrote this stuff?" I bring that point up because nobody truly knows how to parent until one does it. One learns on the job, so I think that all of us can act as coaches for parents, since parenting is not instinctual. I did not know how to burp my child; now I do, but I did not then.

Pascoe: Did the hordes of infants that were dying in the ghettos of diarrheal disease at the turn of the 20th century, primarily in the summer, contribute to the focus on nutrition?

Markel: Absolutely. We do not know exactly what the cholera infantum, or summer diarrhea, was. It is not likely to be rotavirus, because that tends to occur in the winter, but it could have been from tainted milk. There were not refrigerators back then; milk came from the milkman and was put on a cake of ice. Particularly before the 1920s, milk was dispensed in a giant milk pail. Farmers would bring milk from the farms to the city, and customers would fill a smaller metal milk jug. If one lived in a tenement apartment building in New York City or Philadelphia, one might just put it out on the stoop or on the fire escape, because that was the coolest spot in the house. There was no refrigeration, let alone air conditioning, in these houses. I do not know what caused these waves of summer diarrhea. I wish I did, but I do not have any data. It had to be caused by a microbial agent. The presumed culprit is tainted milk.

Clean milk supplies at the milk depots were a wonderful thing for the poor children of America. Henry Koplik of Koplik Spots is the one who actually invented it, but he does not get the credit for it. There was a man named Nathan Strauss, who was from the distinguished Macy's department store family. Oscar Strauss was the U.S. Secretary of Commerce and Labor at the time when they were joined as one department. Nathan Strauss ran Macy's, and his brother and business partner, Isidor Strauss, died when the Titanic sank in 1912. They gave out free milk to poor children, and they linked that with a pediatrician conducting a well-baby exam. The well-baby conference that we do today, on various schedules, emerged out of that. It was a preventive strike then for children at high risk to be checked out, but it has now become mainstream for our standard of care for children.

Pascoe: Let us open up to the audience now for questions.

Casey Emmer: Despite the plethora of child advice, or maybe because of it, parents still have misconceptions. I am curious what you think some misconceptions are, now in 2002, in terms of behaviors that are still happening. What is the role of pediatricians, the public health sector, and even books, in counteracting those misconceptions and poor health behaviors?

Shelov: That is an easy answer—do we have another hour and a half? The first comment is that there are often no answers. There are often ideas while a behavior is occurring as to what it might mean or a menu of approaches or advice for something; but there is not a perfect answer for most things. This reality still makes parents uncomfortable, since they would prefer to have a magic bullet. Many questions asked by parents involve behavioral situations, such as tantrums,

sleeping issues, behavior with siblings, behavior in school or preschool, biting episodes, and bedwetting. Any magazine survey listing parent concerns would have these items.

Obesity is starting to come onto the scene; it should have a long time ago. There are no perfect answers for those things. They need to be done in conjunction with what is happening within the family, and each situation is different. In my mind, that is the role of the pediatrician or allied health professional in the pediatrician's office. Sometimes, pediatricians are too busy to deal effectively with these issues as much as they should. The one-on-one stuff is important for developing individual family strategies for dealing with a host of these things. It may take some attempts at different things to reach where one wants to go, knowing that there is no one perfect answer.

Magazines and articles tend to make things fit onto one page, with six bullet points, which is somewhat unhelpful. The oversimplification of some of these issues is also problematic. This is why, when I did the Today Show, I had to be careful about not doing too much in a 4½-minute segment. If Willard went too long or if the prompter blew up, I only had 3½ minutes. The danger of any of those presentations is that they tend to be simplistic in their advice. The sound bite mentality exists, and oversimplifying child health advice is a trap. People need to be careful about falling into that, by either expecting it or relying on it too much.

The issue of public health and pediatrician involvement is linked. We are probably one of the most public-health-oriented professions because we think preventatively. We think on a cross-population basis and not just about the individual. We think long-term rather than just immediate. We think of other entities besides the physical, including mental and public-oriented stuff, when it comes to herd immunity and immunizations. We think of long-term diabetes prevention by offering nutrition counseling. Without the pediatrician thinking in those terms—environmental, safety, exposures—we are missing the boat. Most of us have been trained in that approach in medical school or other training programs. Many of us have gotten into public health advocacy issues because it is a natural role for us to be in. Different pediatricians do it at different levels; it depends on their own orientation. In their hearts, people in these professions embrace public health efforts.

Markel: Your question and your answer are reflective of American society and medicine over the last 50 or 60 years. I always ask my students when they think a visit to the doctor would actually result in improving one's health, offering a bonafide cure for something. People say, "Well, he was not Theodoric of York or any of these bloodletters," or things like that from the 1900s or 1920s. Penicillin was widely available around 1946, after World War II. One might be able to shrink it back a little to 1922 with insulin, but that is a smaller segment of the population. It was a mid-20th century phenomenon for people to expect answers and cures for what ailed them. We loved it as doctors, because it increased our prestige, our revenue, the complexes we work in, the research we do, and so on. Hopefully we are coming up with the goods, and the health of Americans and people around the world, particularly in developed countries, is better than it was 100 years ago.

However, with that progress comes a double-edged sword whereby people expect quick pat answers to some questions under the rubric that lack quick pat solutions. Behavior is a perfect example of one of these issues. If a child has a strep throat, the culture is positive and one knows what antibiotic to prescribe. It is a binary situation with a yes or no answer. However, with a child having a tantrum, it is hit or miss, and parents are uncomfortable with that. I know my residents are annoyed when I say, "On the one hand . . . , but on the other hand . . ." They roll their eyes and just walk away. However, most of medicine, particularly most of pediatrics, is a muddy gray space, as are these low-morbidity diseases that we address. In a way, we are victims of our own success. We are not dealing with the yes or no questions any more, but with complicated questions. Parents are uncomfortable with these complicated issues, and so are pediatricians, because we would much rather say to "Do x, y, and z and come back in a week." It is reflective of the time in which we live.

Barbara Calabrese: As a nurse who has worked in public health, I think we have taken out the personal interaction by relying more and more on printed material. We have taken out the opportunities for dialogue between parents and professionals. We have lost the well-baby clinics that we used to have. Many HMOs decide the amount of time that one is allowed to have during a visit with a physician. Parents do not have the personal resources; even extended families are disappearing in many cases. How can we retrieve that personal touch in educating parents? Books are wonderful, but if a parent cannot read, understand, or have access to the book, it does not help.

Shelov: You are absolutely right. Books were never meant to replace personal contact, but were meant to allow for an expansion of knowledge at the convenience of the parent. I do not think that books should replace personal contact. This is a serious problem having to do with the pressure of what it is like to be in a practice that has turned into a volume-dictated source of fiscal sustenance, combined with a host of other restrictions on practice requiring more paper, more documentation. Some of these requirements are good, but some of them are redundant.

All physicians are affected by a difficult series of converging forces, with adults coming with six or seven problems as they get older, not just one or two. That is an even greater issue, because they do not have any additional time, and we now have four times the number of things to discuss. I do not know the answer to this problem; one possibility is to use other personnel—colleagues, nurses, nurse practitioners—in creative ways, to allow better communication from a variety of different vantage points.

Doing some things as groups may be an interesting approach, even though they take more time from the professional. From an educational standpoint, that can actually serve as support for families, but not in terms of one-to-one visits. Pediatricians and other physicians will find themselves tapping a number of those different venues to have interaction, communication, and dialogue with their parents and patients.

One hears from the people in the practice how Saturday office hours have become an absolute requirement. They are practicing 6 days a week on a regular basis, taking time from their own personal lives. This creates a sense of drain on their part and a sense of not having the time to recharge their own batteries. The professional nurse and doctor are not in an easy position, whether as a floor nurse, a Pediatric or Neonatal Intensive Care Unit nurse, or in a primary care setting; they are under great pressure from a variety of different vantagepoints. The way around that is to increase numbers of professional personnel, including both physicians and nurses. People may not realize that the last medical school built was in 1981. We are not turning out any more doctors than we did 20 years ago. Every year, we graduate about 16,000 new doctors, entering every different career. On the other hand, the general population has increased and is getting older. Nursing schools are closing. Therefore, our problems are more significant.

Children are experiencing a variety of different exposures. One of the talks I give is about counseling children and families after September 11th. I gave a talk last week in Florida; it was packed, and nobody said a word for an hour. Then people got up and talked about what the children in their practice were like 9 months after the event. Those are complex issues that require a lot of time from the provider. We need to train a significantly larger number of health-care personnel, including nurses, allied professionals, and physicians, to meet volume needs and health care-related needs. Will that be more expensive? Yes, it will. Will that allow more time to be taken between a provider and a patient? I believe so. That is probably the only answer, and we must figure out how to do that.

Markel: I agree. The average doctor, at my age of 42 years old, has had four to five jobs since finishing residency and/or fellowship. They work at HMOs and bounce around from job to job because they are unhappy with the setup or the care or the time allotment or what have you.

This action causes an incredible financial drain, because it costs about a quarter of a million dollars to recruit, train, hire, and move a primary care physician. One would think the HMO companies and insurance companies would want to retain as many doctors as they could, purely from a business point of view.

The point you raise is something that deeply worries me. Whether one is a nurse, nurse practitioner, or physician—the title is less important than what one actually does—one needs to talk to and be with the patients. Anyone in this room knows that pediatrics mostly involves talking. I am not a psychiatrist, but often I play one in my clinic. I see teenagers mostly, and these visits involve a lot of talking. I talk about drug abuse or depression issues, and I need to spend time explaining things to my patients. I do not like when the bean counter has a stopwatch.

Everyone here is deeply concerned about children, and we are all purchasers. I will bet that everyone here has a health plan, or I hope everyone here has a health plan. One is a purchaser, or a consumer of, a health plan. One thing that businesses listen to most of the time is their consumers. It is not just doctors and nurses who need to complain about this, but patients also need to complain that they are not getting the time they need.

There is a real value to that in the pediatric line. Whenever one sees an ad for an HMO, it is always of a young child hugging the doctor or holding balloons, and everything is nice and hunky-dory. There are reasons for that: (a) one wants young families in a managed care or insurance program because they tend to get sick less often than older people, and (b) it is great for public relations.

As a pediatrician, I am deeply offended at how children are exploited for products. Now we are doing it; the enemy is us because corporate medicine is doing it. It is always children, and we need to complain and take a page out of Dr. Spock. What is particularly not right is that I do not know many patients who feel great about seeing their doctors all the time. They like their doctors, but do not always feel that they get the time. I do not know many doctors who feel good about that either. I do not mean to demonize HMOs, but we have a real need here, and it will inevitably cost more. So what? We are the richest country—well, until yesterday with the WorldCom situation—but we are still a wealthy country. I suggest that in this conversation we need to revolt a little bit.

Question: I am a nurse with the Head Start program in Morris County in northern New Jersey. In my "other life," as I call it, my husband and I own an antiques shop, where we have books. About 2 years ago, I came across a domestic science book that had a chapter on child care and illnesses. It came right after the chapter on how to kill a chicken. This is just a humorous anecdote to share on the priorities in life at that time.

The second thing that came to mind in the discussion today, and a concern that we have in working with our parents who have great access to the Internet, is that they believe everything that is there. The community is out there with a narrow aspect of what they are talking about, and they do not always see the broader picture. They also have web sites that are linked to products and services that are even scarier. Quite often, information is written in a language they can understand. They become concerned, wrongly sometimes, and buy into things they need not buy into. Do you see this as a concern, and will there be any public education from pediatricians about this new phenomenon?

Shelov: We have seen it before, but it has gotten bigger. We have been dealing with it for a long time; however, they are much better at it and are taking advantage of forums and opportunities that did not exist before, some of which have been of their own making, for the sole purpose of promoting something. That is an insidious, ever-present situation.

The problem is that physicians are all over the map on this issue. Some physicians feel morally, consciously, and ethically that there is no way they will take anything from any phar-

maceutical company, which is another way of doing it. Others feel that they can separate practice from that aspect, and others do not care or look forward to a free dinner on the backs of the pharmaceutical company representatives. In this forum, we are not going to be able to depend on individual behavior to dictate an outcome. As much as I hate to say this, there needs to be more control over it.

Finally, they are waking up to what pharmaceutical companies are doing with respect to physicians. I have been watching it escalate. In practice it is outrageous, and it is incredible what is being spent. In fact, there may be some regulation or means of controlling it so it is not permitted. That all adds to the expense of what ultimately becomes the product cost to all of us. Anybody who does not understand that does not understand Health Economics 101. I cannot say that the sensitivity of physicians uniformly takes umbrage at that. How is that for a politically correct answer? It will have to come from a higher authority, which I am not sure is there right now either.

Markel: The Internet is the world's greatest library, but it has been indexed by Beavis and Butthead. One must be careful. One thing our clinic does is to create a list of recommended web sites, like the American Academy of Pediatrics or the Centers for Disease Control and Prevention (CDC) sites. There is also KidsHealth by the NeMours Foundation. There are many good web sites, and it is incumbent on the pediatrician to take a look and offer recommendations to his or her patients.

The other issue that was brought up is the nexus of products, free donuts, or whatever. At Johns Hopkins, we used to get a crab feast on June 30th of every year, hosted by Ross Labs. They always got us crabs, but I rarely prescribe Similac. The issue of free dinners needs to be changed, but it is chump change compared to a much bigger issue. If one looks at the *New York Times* or any major newspaper today, one sees full-page advertisements, or television commercials, for Prilosec or Zyrtec or whatever, guaranteed to make life better. Jerry Seinfeld has a whole routine about that. The character in the ad is always some guy on a bike, and the weather is nice. Who are these people? That is even scarier. I do not mean to sound paternalistic, but when products are advertised directly to the doctors, there is at least an editor or a filter.

I bring this up because the Internet does not always have an editor. There is a good reason why newspapers, magazines, and books have editors to act as a gatekeeper. A good editor is a smart person who reads a lot and knows which information is nonsense or useful. It has been said that what separates man from the animals is the desire to take medicine. Madison Avenue, for lack of a better term, markets things, and they are much better at user-friendly explanations than we will ever be.

Pamela Raya-Carlton: One interest of mine involves working with adolescent parents, both historically and currently, and with the frequent challenges of convincing them to see a doctor about their new infant. I am talking about 13- and 14-year-old mothers. First of all, I was curious if adolescent parents were, historically, a whole lot easier to work with than other parents. I do not know if they were ever easy as parents, or easier to care for their children's health, and to take care of them in a mature way.

Markel: It was much easier historically, because there were orphanages. That has died out, thankfully, but until World War II or shortly after, unwed teenage mothers would give their children up for adoption. There were 19th century sensibilities to institutionalize, separate, and quarantine others, whether they had a contagious disease or were socially not acceptable. Socially undesirable was the term they used in the late 1800s. They were easier in that way because it was a means of control. There is a wonderful book called *Search for Order* by Robert Wiebe about the history of America between 1877 and 1920. It describes various institutions of control—insane asylums, penitentiaries, orphanages, and wayward women's homes—all that stuff that has fallen by the wayside.

In terms of the history of adolescent medicine, a wonderful book came out a couple of years ago by a colleague named Heather Munro Prescott called *A Doctor of Their Own*. It provides a history of adolescent medicine as a subspecialty, which is a new phenomenon. It goes along with this low-morbidity issue from about 1960. It was going on in the 1940s with college clinics, but the idea of adolescent medicine and teen pregnancy as a medical entity came about in the last 40 years. That might give you some insights.

My clinic serves many teen mothers, and I used to have more of them in Baltimore. I have learned that one cannot make assumptions about someone's ability to parent based only on their age. Some of the best and some of the worst mothers and fathers I have seen have been teenagers. It is an individual situation. It is amazing how there are high profile issues in American health, like cloning, which is a dot on the wall compared to teen pregnancy, sexually transmitted diseases, or tuberculosis, but those are not sexy topics.

The acute sudden scary thing or the science fiction that always gets our attention fascinates me. This is way out of proportion to the chronic killers or the chronic health problems that go on all the time. That dichotomy is very troubling and probably an element of human nature. Something that comes suddenly and kills a few people in a spectacular fashion will grasp our attention out of proportion to the teen pregnancy issue.

Shelov: The other piece that has changed, in addition to the change in orphanages, is the breakup of the extended family. What may have helped a young girl decide not to have a child was that her mother was there for her in some way, shape, or form. Where that has been broken or severed, a greater negative potential is added for what may happen to a young teenage mother.

Data show that school attendance and school graduation by teenage mothers probably has the greatest likelihood of resulting in a better outcome for the mother-child dyad, and ultimately for the young teenage mother—more than almost any other intervention. Any opportunity to foster and nurture that is important. There is a program at a high school in Bronx, New York, that specializes in having teenage mothers and their infants come to school together. The school provides child care for the infants so the young mothers can attend school. It is not an easy place, but there are better outcomes. Those are the kinds of things one has to throw at the 600,000 teenage pregnancies per year. The number has decreased from a peak of 1 million in the 1980s, but it still remains a huge issue.

Markel: I can make a specific comment about that issue. We conducted a prospective study in Milwaukee in the early 1990s. We followed mothers from when they were pregnant in the second or third trimester until a little beyond birth. We asked about binge drinking and looked at how the infants did. Some of the first-time teenage mothers had relatively good infant birth weights and also had higher scores on social support; the idea is that they were still with their families. The mothers who had difficulties, who were binge drinking and delivering small infants that ended up in the Special Care Nursery, were women in their middle 20s. This was typically their third child, and they were no longer in a nuclear family; instead they were depressed and socially isolated. Ten percent of them were binge drinking on a regular basis while they were pregnant.

Diane Langkamp: I am from Children's Hospital Medical Center of Akron. I have two questions about the role of child-care advice from specialists. First, it was mentioned that people want the bullet, the magic moment, or the quick answer. What is the role of child-care advice in addressing more complex problems? You alluded to the problem of obesity, which certainly is exploding in epidemic proportions in this country. Parents want quick solutions to their problems.

The other question is the role of child-care advice in things that might be unpopular. For example, one of the things that comes to mind are cold and cough medicines, and their use for

young infants. There are millions, if not billions, of dollars made in that industry, and yet they probably do more harm than good.

Shelov: For issues with such long lead times, like obesity prevention and the poor ability to recognize a definitive outcome, one knows if a child is overweight by school age. What does that mean, and how is that measured? We must continue to ram home the messages about the consequences of poor health, from the standpoint of weight control or obesity, and encourage the lay press to continue covering these topics. The lay press is an influential arm of public health education, and the message must be loud and consistent. It is almost too late for a host of children of this generation. Type II diabetes for our community in Brooklyn is astounding. They are seeing the same thing in Dallas. It is an American phenomenon, although it is also surfacing in Europe and China. Continuing to be consistent about the message, using every vehicle we can to converge on the same message, and repeating that message in a variety of venues is the way to impact these issues and produce outcomes.

Interestingly, television health education has now been pushed to the cable networks, for the most part. However, viewing per minute on the network stations is much higher than on the cable networks. The regular networks may carry one-time messages, but there is little continuity around health education. A hot issue may make a splash, but it is usually not accompanied by a "sexy" or entertaining message. There needs to be some convincing about those vehicles of communication for health education messages because people watch a lot of television. These messages must be backed more on the screen. There were more messages during the 1970s and 1980s, but they have slipped away, thinking that cable would pick up there. Cable will not pick up the load; they just do not get the popular viewing that they need. That is not satisfying to the families because they want a quick fix. The same need for immediate solutions affect antibiotic and cough medicine use in the office; people want something immediately.

Taking the high road on that is challenging in practice. Many books are clear about the lack of efficacy of those things, and they do not promote them. A constant message has to be repeated, time after time. Parents see the old cause-and-effect pattern whereby the child takes the medicine and feels better. Most of us know that medicine often has nothing to do with getting better; fortunately, the course of most illnesses is self-limited. But the parent looks at the situation as a cause and effect, so we must somehow convince people. One has to use every venue possible while keeping the message consistent. The bugger in this whole thing is the profit people want to extract from the products that they make. With that continuing to be a major force, there is no easy way.

Markel: I once wrote that the only people who benefit from the sales of over-the-counter cough medicines are the people who make them, or their children, who go to better schools. That is an easier high road to take. By the way, baby-care books in the early 20th century warned against soothing syrups and the like. The syrups often contained morphine, opiates, or heavy-duty ingredients like paregoric for colic, well into the 1950s and 1960s. This is not a new problem. It has become a billion-dollar industry. The antibiotic thing is a little different.

It is easy for me to take the high road because I work at a university and am not there in practice. When I was moonlighting in a practice years ago, it was a hard thing to do. There is a huge cost because antibiotics are societal drugs; if one develops resistance, it will also harm others. That is something we need to pay closer attention to.

There is a great book called *The Spirit Catches and You Fall Down* by Anne Fadiman. The one thing the Hmong would actually relate to in Western medicine was antibiotics. They would take antibiotics; they felt that that actually was the one thing Western medicine had to offer that was any good.

Shelov: It is a miraculous entity. Stuart B. Levy has written a book called *The Antibiotic Paradox.* The subtitle is something about how the miracle is being destroyed. I am paraphrasing it, but the idea is that we are developing resistant strains, and most of them are caused by overprescription of issues. I just filed a story on immigrants buying antibiotics over the counter at bodegas throughout New York City. I write for the *Science Times* and *New York Times*. My editor called and suggested that I go to the neighborhood of Washington Heights and try to buy some ampicillin. I bought 30 capsules without even walking that far. This contributes to a small percentage of the phenomenon; however, the major contributor is that middle-class people demand antibiotics from their doctors.

I want to discuss obesity, though, because it is a tough issue. Other than smoking, it is the second greatest public health threat that we face. We know that children who are obese tend to remain that way, and we also know that people's eating habits are laid down early in life. It is a complicated issue. People are inundated by Big Macs and Burger Kings and super size meals. It is not just a regular Coke; one has to get a super size Coke. I do not mean to point only to the fast food industry, because they provide a product that people like. It tastes good if you like that, and it is also fast. For a working family, it is hard to cook at the end of the day. There are reasons for all of that.

I had a call the other day about an obese child. One out of 10 children in the country is overweight, and 1 out of 10 children is clinically obese. Therefore, 20% of the children in America are overweight or worse. The children eat french fries, candy, and soda. It is tough to change these eating patterns, and one has to start early on to establish good eating patterns. One by one, it is incumbent upon pediatricians and any children's health care professional to not ask if a child is eating well, getting his vegetables, and all that stuff, by rote. I have done it, but I do not do that anymore because we are seeing so many heavy people.

The *New England Journal of Medicine* published a great study a few months ago on the rise of Type II diabetes among younger people. The abstract reported in the American College of Cardiology meeting showed that young, clinically obese women in their late teens and early 20s had signs of risk factors for heart disease, like cardiomegaly. On one level, by not doing anything, we are reassuring that we will have business in the years to come; I do not think that is an acceptable approach. We need to work hard on this, whether by books, Internet, doctor, or patient sit-downs. I do not think we are doing enough on that issue.

Question: I want to bring the conversation around to child care if possible, which is the umbrella under which we are gathered. We have heard about the need for increasing numbers of health professionals and the need for looking for as many venues as possible to get health messages to people. I wonder if the panelists or audience might reflect on their experiences or their expectations for engaging the out-of-home child caregivers, teachers, and providers who take care of 60% of the preschool-age children in the United States in the delivery of helpful and accurate health information to parents.

Comment: We are currently doing an asthma study with Baltimore City Head Start. We are going in and providing education on asthma management to family service coordinators, with the caveat that we would like them to report the same information to not only the Head Start staff, but to the parents in group sessions and at teachable moments. We have not finished the study, so we do not have any data on it, but some of the family service coordinators are very engaged and others are not. We do not know quite what the difference is or why we can so thoroughly engage some people but not others. We do know that the ones who are engaged are actually out there teaching and have felt that it has made a difference. We do not have all the data yet.

Bob Bradley: That is an important point because the literature out there sadly suggests that, on average, there is not much communication between child-care providers and parents. It is an actuarial thing. One of the general challenges is to figure out ways to get more communication back and forth. I am involved with a group in Atlanta called the Center for Child Well-Being. We have a parenting network, and we are trying to figure out ways to coordinate with Head Start, to try and get more exchange, and to find out how we can best help that group work with parents toward those kinds of objectives.

Jane Goldman: There is a project going on in Connecticut. I am not directly involved in it, but Angela Crowley, a pediatric nurse practitioner at Yale University, is coordinating a whole program of coordinating the health-care consultants. Each day-care center must have a health-care consultant, and there are attempts to get him or her much more involved as part of the staff, above and beyond administering tuberculosis tests. Together, they are working with the families and with the medical practitioners in the New Haven community. Hopefully, people will learn more about this model.

Patricia Horne McGee: I am from Ann Arbor, Michigan. One of the requirements of the *Head Start Performance Standards* is that there be a health service advisory committee that includes professionals, pediatricians, nurses, and so forth. Part of their involvement is not only in terms of advice for the Head Start program, but also in terms of parenting education, parent involvement, and disseminating correct information about health needs in that specific community.

In our area, we are seeing a resurgence of tuberculosis, mainly because of our new immigrant population. We also have a high incidence of asthma, so a great deal of what the pediatricians and nursing community and health community brings to Head Start families is correct information about those areas, because there is a resistance of parents to want their children to have the tuberculosis skin test. Why and how that can be helpful, especially in this time, is essential information. As you all are going into the profession in your various cities, that may be a way of being involved with the child-care communities. *Head Start Performance Standards* clearly speak to all that need to be involved and the use of the community professionals in sharing information.

Shelov: The beauty and importance of the venue of child-care centers or out-of-home child care programs is that the age of the children is perfect for having an incredible impact on lifestyle behaviors and nutrition. These actions can set the template for the rest of their growing years and for later on in life. It could and should be a major point of intervention and a point of addressing these issues, including the parents but not necessarily relying on them. The parents need resources to use, which can come through the child-care center.

The child care chapter in this book was done with Susan Aronson and a host of other people. She is a guru in the field, and she is wonderful. She is not the easiest person to work with because she is insistent that the quality of the information is perfect. More power to her. I got a lot of heat making sure that things she said were in the chapter. I said, "Who else would you listen to in terms of that kind of information?" A reader can cut them, pull them out, use them, and then give them to families. The more projects that we can focus on that age in those centers, the more likely we are to see some change.

Comment: I would like to make one other comment about Head Start staff and their asthma knowledge. Interestingly enough, even though most of them do claim that they themselves or someone in their family has asthma, they are not comfortable with asthma management themselves. If we can teach the Head Start staff about asthma management, we are then not only helping the children, but also helping in community education and making an impact on the entire community.

Emmer: I am from Columbia Dental School. I have limited knowledge about standard Head Start curricula and to what extent health behavior promotion is included and standardized. Does that exist at all?

Comment: That is the keystone of it. That is an important part of Head Start.

Emmer: I have been charged to come here and see where dental health behaviors are on the map in Head Start. In terms of activities, maybe we could chat afterward.

Markel: By the way, another place to make a difference beyond Head Start is as a consultant to a day care center on medical issues. One of my residents had this idea several years ago when his children were in day care. Now we require that all of our residents, and I do it for my child's day care center. It is a kind of a volunteerism, a grassroots, pro bono kind of thing that we ought to do when sending a child to school. When I started my medical career, I wanted to change the world. I am not that much older, but I believe in incremental differences more than I ever did before. Anyone here that has been with Head Start all these years knows that these incremental differences make enormous difference. This is just one other thing we can all do.

Pascoe: This has been a wonderful session. I am sure you have all noticed that when professionals who care about children and families get together, invariably themes of communication, collaboration, and advocacy arise.

Providing Quality Health Care for Indigent Children: A Comparison of the U.K. and U.S.

CHAIR: John Pascoe
PRESENTERS: David Hall, Thomas Tonniges, Leslie L. Davidson

Jack Pascoe: I am a general pediatrician from Dayton, Ohio. I thought it would be wonderful to talk together about the similarities for child health care in the U.K. and U.S.

David Hall is a Professor of Community Pediatrics at the University of Sheffield and the President of the Royal College of Paediatrics and Child Health. He is also editor of an important book in the U.K. called *Health for All Children*, in its fourth edition. Tom Tonniges has been Director of Community Pediatrics at the American Academy of Pediatrics for the past 7 years. For 18 years, he was in private practice in Hastings, Nebraska.

Leslie Davidson, also a pediatrician, has been Director of the National Perinatal Epidemiology Unit in the U.K. for 5 years. She was also a Reader in Public Health and Notice, in Oxford, England. She is returning to the United States in September 2002 to become Chair of the Department of Population and Family Health at the Mailman School of Public Health at Columbia University in New York.

David Hall: I am originally a general pediatrician, a jack-of-all-trades, and master of nothing. I spent several years working in southern Africa and became interested in a whole range of public health issues. I also worked for a time with neurodisability issues and neurology, and became increasingly interested in prevention, early detection, and health promotion. I have gone the full circle from being a front line, general pediatrician to a public health-oriented person. Now I am involved with policy and training issues, which is one of the roles of the Medical Rural Colleges in the U.K., similar to the American Academy.

I am going to provide a flavor of the interesting and hot topics of the moment in the U.K. We have a wonderful National Health Service, which was set up after World War II, to offer free health care for everybody through taxation. People were supposed to get free medicines, teeth, spectacles, everything. We now have some problems with the system, not fundamentally due to a wrong model of care, but because of serious underinvestments over the last 25 years. That is why we are all struggling at the moment.

What does every child get from the National Health Service? They get free access to health care at every level, from preventive health care to gene therapy and organ transplants, all free at the point of use for everybody within the U.K. In theory, they get access to a health visitor for the first 5 years of life. A health visitor is a trained nurse specializing in that particular branch of practice. On average, she will have a caseload of 320 children under 5 years of age, although it does vary enormously. There is a serious shortage of health visitors in some parts of the country.

We also have a school nursing service, and one school nurse covers quite a number of children at school. Again, there are serious shortages of staff. Although this is the plan on paper, it does not actually work out in practice in every case. Every child will be on the list of a General Practitioner (GP) or family practitioner. A GP in England has a list size ranging from 1,400 people to 3,500 people, but is on average just over 2,000. One fourth or one fifth of the population is children, so the average GP looks after somewhere between 300 and 600 children.

With that wonderful health service, with everyone receiving equal access to free health care, we should not have any health inequalities. Unfortunately, that also is not quite the case. We have data from my own city of Sheffield. For each home visitor caseload, we have calculated their poverty or deprivation score using city council data. Then we have taken the birth weights of the babies born in each of those caseloads over the years.

In many parts of the U.K., there is about a 200mg birth weight difference between the best off and the least well off parts of Sheffield. Then we have a number of examples of the inequalities in health. The gradient across social class, in many respects, is getting worse over time. The social class gradient from dying in a house fire is 15 times higher in the poorest than the wealthiest families. The gradient for the number of days missed of school across the social classes is also steep, ranging from about 2 days to about 7 or 8 days. If one compares the qualifications of children leaving school and divides them into those who get free school meals, which is a convenient poverty index in the U.K., and those who do not get free school meals; there are enormous differences in the gradient of the qualifications the school leavers receive.

In regard to dental data from the city of Sheffield, the decayed, missing, and filled teeth (DMFT) index shows the differences across the city. In the more prosperous parts of the city, it is between half and 1 DMF. In the worst parts of the city, it is somewhere around 4. There is a general recognition that poverty is bad for health, as *The Guardian* stated the other day. An estimated one sixth of our children live below the poverty line. The statistics are fairly scary. Picking one at random, 8 million people do not have a refrigerator. Two million children lack two or more basic essentials. Poverty is still a big issue in the U.K. Our Prime Minister said he would rid the country of poverty by 2019. Two of those years have gone and so far, we do not see much change in the gap.

Social inclusion is high on the government agenda at the present time. In some parts of the country, one could buy a whole street for the price of a car. Housing is virtually abandoned. There is much emphasis on bottom up approaches in the government initiatives to tackle these problems.

Sure Start is one of our flagship programs. It is a cross government program. Seven different ministers are part of the management team at the government level, so we have representation from Health, Education, Youth Offending, Home Office, and the Treasury. The aim of the program is to "ensure that a child is ready to benefit from education when he starts school."

Many of these families cannot afford a car and have long distances to go for school; it is a scattered population. In some respects, these people are actually more deprived, and have worse poverty than the people in the cities, even if their actual income is not necessarily low.

Rural Sure Start is now getting underway. Interestingly, Sure Start builds on the American Head Start research about early intervention. However, it has another dimension that is rather different from the U.S., and that is emphasis on bottom up approaches, community development, and local ownership. As a result, there is huge variability in what actually goes into these Sure Start programs. The typical Sure Start project will serve 400-800 children, probably reaching a population of up to 20,000.

For a local community, the original concept was what they called pram-pushing distance, except nobody has prams anymore; but that was the term they used to capture the idea that this should encompass a walkable neighborhood. That is largely the way it was developed. The importance of bottom up approaches emerges when one looks at some of the imaginative local projects.

One thing that I feel strongly about, and clearly the ministers do as well, is the notion that one can make a big investment in the early years. But, if one does not capitalize on it once the children are in school, much of that investment can be lost, notwithstanding all the research pointing to the sleeper effects. Any of us who have had children of our own know that a parent's job is not done when the children go to school. In fact, the amount of support one puts in as they go through school probably grows rather than diminishes.

On Track is a second program driven by the Department of Education in the Home Office as part of crime prevention. It focuses on the 4- to 12-year-old age group. It tries to stop these children from getting into trouble, because one can identify early on the children who are heading for trouble in school. There are a number of components. This program is at an earlier stage than Sure Start, and its full impact is not yet clear.

Another program is called Connexions, which is about providing a personal mentor for the 13- to 19-year-old age group, with a particular focus on the at-risk youngsters, who are the inner-city children from extremely deprived or disturbed backgrounds. This program is getting underway, and it looks interesting; but again, it is probably too early to make any real evaluation.

Excellence in Cities is about raising the standards of inner-city schools. When I reviewed the collection of government initiatives since 1996, I counted 67. I probably missed a few. The people who have to bid for this money are complaining that they cannot keep up with all these new initiatives. It is virtually one initiative per week, and it is certainly difficult to keep track of them.

The government is now looking at various ways of forming partnerships for children leaving public care, in a program called Quality Protects. We have 53,000 children in public care at any particular point in time, and a survey of these youngsters showed the appalling outcomes when they grow up and leave school. A small snapshot survey of 48 random children leaving care showed that one third were using drugs, one third committed self-harm at least once, nearly two thirds have thought seriously about suicide, and 40% have actually tried to kill themselves at least once.

The General Certificate of Secondary Education (GCSE) is our school-leaving certificate for 16-year-olds. Based on data from 5 years ago, 70% have no qualification at all when they leave school. These children have the most awful outcomes. Quality Protects is a huge investment, and it puts enormous pressure on local social services to do something about these children and to improve their outcomes. Another area that has become clear are Domestic Violence Refuges, or shelters. At any one time, 34,000 children in England and Wales live in these refuges. Two thirds of them have no background health data chart at all; two thirds of them have no access to incoming mail. Then we complain when they do not keep hospital appointments. Furthermore, 20% have developmental problems, and 50% have behavioral problems. Accurate immunization rates are difficult to get, but they are certainly low. This is another group of children who are just outside the system and not captured by any of the routine services.

As the *Evening Standard* newspaper said the other day, it pays to have rich parents. That is still the case, even with universal access to a free health care system. In a meeting a couple of years ago between the U.K. and the American Academy, there was great interest in the fact that we have achieved free universal access to health care, which I know many of you in the U.S. would like to achieve. The fact is, we still have big health inequality gradients. It is fairly obvious to all of us that this is about the poverty gradient, the poverty gap, and the extent of inequalities.

The questions that seemed worthy of discussion for this group are: How much does health care in general, and pediatrics in particular, have to contribute to this whole picture? I ask myself that question in more depressed moments. What type of social engineering works best? Does it have to do with income? Does it relate to benefits? Is the answer a curriculum-oriented program working with parents, similar to Head Start? Is it the more community-driven, bottom up approach that we have in Sure Start, which is less specific on the inputs than Head Start? What about the importance of maintaining investment in school-aged children? I do not know what other programs are running here that are comparable to our On Track and Connexions. The lesson seems clear that notwithstanding all the early optimism about Head Start, it is important to maintain the investment in children going through school. It is no good investing all the eggs into one basket in the preschool years.

We have a huge evaluation of Sure Start underway. The total budget in Sure Start is in excess of a billion pounds, like one and a half billion dollars, which in U.K. economics and population is roughly one quarter of the U.S. It is a lot of money. There are about 20 to 24 million dollars invested in a long-term evaluation program. It is the biggest grant ever won by a university, and it is not mine, I am jolly glad to say, because it is the most nightmarish evaluation project imaginable. Edward Melhuish and Jay Belsky at Birkbeck College, University of London, are coordinating it. There is also a consortium. I am on the steering group with a number of other

people. It is fascinating to see how it is being developed. In terms of the data set, it makes NASA look like a laptop.

Question: It was mentioned that children have access to transplant funds from the Bureau. Does that include bone marrow?

Hall: Absolutely everything. In general, we have a good record where children's oncology is concerned. We compare fairly well with the rest of mainland Europe, except that the uncommon childhood solid tumors tend to get referred a bit later, which we suspect may be due to primary care and training issues. But in other respects, the care of children with cancer in the U.K. is good. We can hold our heads up on that. In fact, the more complicated the problem, the better we do. It is the front door kind of thing that we are not as good with, like child psychiatry, where waits of 18 months are not uncommon. The waiting time is not bad for children, but it is appalling for adults.

Tom Tonniges: I am a general pediatrician. I have practiced in rural Nebraska for 18 years and have been at the American Academy of Pediatrics for the last 7 years. At the Academy, I have an opportunity to work with pediatricians around Head Start and child-care issues. We actually administer the Healthy Child Care America Campaign, with which many Head Start people are familiar. We recently got a Bright Futures Implementation Grant as well as an Oral Health and Mental Health Initiatives.

I would like to give a sketch of the U.S. health-care system. I want to talk about its strengths and weaknesses, the social determinants, and follow up on some of the things that Hall mentioned. Then I will describe some of the things we are doing at the Academy that I think are useful. I will conclude with some comments about the Healthy People 2010 Initiative, which is important to the health-care system for children in this country. As one looks at the U.S. health-care system, it is no secret that health care is considered an entitlement rather than a right. And yet, even though we have a right to pay taxes, and we have a right to the education system, for some reason we still have not been able to identify that health care is a right for our citizens.

There are literally hundreds to thousands of payment plans, including indemnity insurance, fee for service, HMOs, PPOs, and managed care organizations. Many people are trying to identify what services are appropriate in our health-care system. As an example, our government has Bright Futures guidelines, but Medicaid does not pay for the program's implementation. Frequently, the services in our health care system are determined by the employer. If one talks to the employer, which we frequently do in pediatrics to improve payment for services, they will say that they pay for what their employees want.

We frequently get caught in a "catch-22," because families do not know what they need until they need it, and then it is too late. Rarely do individuals pay for their own health insurance. As an example, in my practice, it was not infrequent that farmers with seasonal or variable income would frequently choose not to have health insurance or get extremely high deductible insurance that would throw their family into economic distress if a catastrophic health problem occurred. Drugs, procedures, and hospitals drive our health-care system. Most of the health-care dollars go to those three areas of our system.

We have minimal but increasing support for primary care. In terms of preventive health-care services, only 1 to 2% of our health-care expenditures actually go to preventive health-care services, even though people would all agree that preventive health care is a good use of health-care dollars.

Our public health system is variable. I was practicing in a state with essentially no public health-care system; yet in other states and communities, it is well-established. September 11th and the anthrax issue in this country highlighted how varied our health-care system is, and how we have difficulty responding to national and local emergencies. Our health-care system is

basically still a cottage industry. From a physician perspective, it is mainly made up of solo and small group practices. Over 50% of physicians function in a practice of four people or less. Yet, if one looks at child health, it really is a low cost, low tech health-care system with a small percentage of patients who are high utilizers, or at high cost. Still, we have not figured out how to ensure health access for all children.

Our health-care system in the past has been based on anecdotal experience. We have not invested the dollars in health-care services research to show that what we do makes a difference, which is more interesting as we move forward over the next decade. Certainly, our strength as a health-care system is the research base. The National Institutes of Health (NIH) budget is $25 billion, yet our service side of it, our Maternal and Child Health Bureau budget, is less than $800 million.

The challenge for all of us from the clinical and practice sides is to make sure that research is clinically relevant. Our diversity is a strength as well as a problem. For example, through our newborn screening system, some states actually test for up to 25 newborn metabolic diseases at birth. Meanwhile, other states only test for two or three diseases. Consequently, there are 50 different newborn screening programs.

Another strength is that, in general, people and children in America are cared for. We have occasional experiences similar to the U.K. of people not having access. People do get health care, and most people would agree that we are probably the most technologically advanced health-care system in the world. The abilities and resources in our health-care system, and the way it is set up, drive technology research and new drug development. It provides an opportunity for creativity, particularly in the areas of access to care, health-care delivery, and treatments.

Currently in America, 11 million children are without health insurance, and over 5 to 6 million of those children are either Medicaid- or State Child Health Insurance Program (S-CHIP)-eligible. Yet we have difficulty getting those children into regular, ongoing system of care. Each day, over 1,400 children are born without insurance. Over the late 1980s and 1990s, we saw an increase in the number of children without insurance. More children are growing up in poverty, and there is an increase in the number of families who lack prenatal care.

From the standpoint of disparities, looking at the relationship between household income and health, as income increases, health improves. Perhaps one of the issues for discussion centers on education and income. As a person's education level goes up, their income goes up. The ability to have a higher income later in life is one of the ways we can get out of this issue of poverty for many of our families. Certainly, the American family has changed. It is like the family in the U.K., in that families were extended families in the 1950s. Malnutrition was not uncommon. A trip to Grandma's house was a big deal. Three vaccines were all one could expect. Certainly, for the child of the 2000s, these things are not new.

Certainly, obesity is a major problem. In my community in the Chicago area, it is not uncommon for children to go to Europe alone, but they do not go into Chicago and see some of the situations where families have to raise their children today. One of the significant diseases of the 21st century is Type II Diabetes. An article was published in *JAMA* last week about the significant complications that young adults were having, including strokes and heart attacks. People in their 20s and early 30s have developed Type II Diabetes. It is an epidemic among the Native American population and is significantly increasing among our ethnic minorities.

Certainly, there are changes in our health-care delivery system. We are going on at this point and will be accelerating over the next 10 years, changing to an interdisciplinary, multidisciplinary team approach. Research will show that prevention works and that we need to focus more resources in that area. We will also continue to see changes in health-care financing. Many people say that if you have seen one managed care plan, you have seen one. The only consistent thing about managed care plans is that they should be called shifting managed care, because they continually change. We will also see an extended role for the nonphysician among our child health-care providers in the future.

We developed a definition of community pediatrics at the Academy. It applies to social service, social welfare, education, health, or any profession. We have defined community pediatrics as a perspective that enlarges the pediatrician's focus from one child to all children in the community. That is something each of our professions can do. We work with individual children, but we have a responsibility to think about all the children in our community. We are hopefully moving pediatricians to think in terms of a strength-based model rather than a deficient model of care.

Communities are places of strength where child health can actually be improved. The community pediatrics perspective recognizes that family, educational, social, cultural, spiritual, economic, environmental, and political forces act significantly upon child health, favorably or unfavorably. It is a synthesis of clinical practice and public health principles directed to providing health care to a given child and promoting children within their community. Pediatricians of the next decade will have much more public health experience as they go out into communities, due to different things happening in postgraduate education and residency training. Community pediatrics involves a commitment to use community resources and to collaborate with other professionals, agencies, and the parents, to advocate for and achieve access and quality of services for all children.

The operative word here is collaboration with the parent. As we move into the next decade, hopefully pediatricians will be better trained to listen to the needs and concerns of families. It is integral to the role of all health professionals, social service workers, and educators who care for children. How can this definition be helpful to all of us, no matter what our profession? It can help us as practitioners in our specialty. It can help us advocate for community services. It can help us develop tools for educational and community-level activities. It can help us provide questions to be researched and can provide a framework for advancing each of our careers. We are doing this at the Academy through the medical home concept and comprehensive primary care.

We define this as accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally competent. Many activities are going on at a local, state, and national level. A great amount of information about local programs is available at www.medicalhomeinfo.org, where one can click on any state or community and find out about what is going on in that area.

I want to close by talking about Healthy People 2010, which is a comprehensive, nationwide health promotion, and disease prevention agenda. It is grounded in science, public consensus, and is designed to measure progress. It follows up on our Healthy People 2000 activities. The two main goals are to increase quality and years of healthy life and to eliminate health disparities. It offers active, practical steps to put into practice services for families at the community level. It is framed in a 100% access, 0% disparity program.

Those of us working on these initiatives feel that they are truly achievable over the next 10 years. There are 470 areas in child health that are part of the Healthy People 2010 Initiative, including 100% access, disparities, immunizations, breastfeeding, oral health, vision and hearing screening, and children with special health care needs. In regard to children with special health care needs, it will hopefully help us move to full implementation of a system of care for these children, will measure the success, and will build on years of partnership while also engaging new partners.

It has 10 outcomes, including access to a medical home, adequate insurance or coverage, early screening and identification, a family-friendly service system, and family partnerships and satisfaction. Another outcome, where pediatrics has woefully failed as a profession, is in working with our adult colleagues around appropriate transition into adult life.

What can one do? As anyone dealing with children within the community, use community data. Become involved in the community. Work with public entities. Use local resources to solve local problems. One of the things we are trying to do is break this down into chunks that individual pediatricians can handle. If every pediatrician in America figured out how to improve

access to care for 200 children, which I think is totally doable and manageable, 100% of children in America would have access to care. The process would also foster leadership.

Very quickly, there are nine characteristics of big thinkers. One of the challenges here around health issues for children is to get on fire and never lose imagination. You bet the farm. You marinate in thought. You think better together. You do not take no for an answer. You turn reality into fantasy. You live your lives with a purpose, and you think with your hearts.

It is important for all of us to start small. The message is that access to care for children in America is really one child at a time. A huge federal program will not suddenly solve this problem. We know that that it is not the answer from the U.K. experience, where Hall just said that they have 100% financial access but huge disparities. We know from our own experience in that we have 5 million children who are eligible for S-CHIP and Medicaid but who still do not have access to care. We will never get there unless we think big and think that we can solve the problem.

Margaret Mead said that the solution of adult problems tomorrow depends in large measure upon the way our children grow up today. There is no greater insight into the future than recognizing that when we save our children, we save ourselves. I like this ancient quote: "Inferior doctors treat the patient's disease. Mediocre doctors treat the patient as a person. Superior doctors treat the community as a whole."

Comment: Tonniges talked about the crowd of 1950. I was 9 years old at the time, and the doctor in my poor neighborhood in Washington Heights, New York, charged $2.00 for a home visit. He gave us as much as he could give us technologically. We had a major medical center 3 miles away that had a big sign out in front saying that it would provide health care to all, regardless of race, color, or creed. The 1950s were not so bad in some areas in terms of altruism and caring.

Tonniges: I would not disagree with that at all. The flip side of it is that 18 years ago in practice, I saw children die or have significant morbidity from totally preventable diseases and conditions, and that has dramatically improved. We now have the highest immunization rate of all time here in America. I would agree with you around the altruism, and in my job at the Academy, I try to get pediatricians out of their offices, out of the exam room, and into communities to solve some of these bigger issues.

Leslie Davidson: I work in England now. I was trained as a pediatrician in the U.S., and I did my epidemiology training in England. I have had babies and young children in both countries, so I have maternal experience in both, and experience working both in the inner-city of London and the inner-city of New York. My direct comparative experiences somewhat fuel the way I feel about these issues. I want to think about the two systems as a starting place for the conversation that we can have afterwards.

Hall had said that mortality in children is actually lower in the U.K. than in the U.S., but it is high for Western Europe. England is always lagging behind the rest of Western Europe, with the worst figures. It is a huge embarrassment to the U.K. government and population. Increasing numbers live in poverty. The government has committed itself to eliminating poverty for children in the next 18 years, which is a hugely powerful promise, and they are doing some things to address it. Whether or not they can get there in 18 years is a debatable issue. Whether or not their approach will get us there is another interesting issue.

Over the last decades, there have also been massive changes in family structure, in the percentage of children born outside of marriage, and the number of lone mothers bringing up children. These are huge changes that affect child welfare and child life. Again, as has already been demonstrated at this conference, increasing understanding at the government and professional level on the impact of early experiences on children has led to the Sure Start program,

which Hall mentioned. They are receiving over a billion dollars from the government to affect change and community development for children. That program actually came up as a result of a spending review at the Treasury Department. The Treasury Department reviewed all of their spending on children and on later childhood, and concluded that they had to do something significant, because the spending was enormous, disparate, and uncoordinated; thus they developed the idea of Sure Start. Sure Start actually came from the Treasury, not from the professionals. That was fascinating because it actually committed the government behind the scenes to the program, which had its good and bad sides.

The other thing that is important about the U.K. compared to the U.S. is the Children Act. The legal framework around child well-being is stronger in the U.K. than it is in the U.S. Even though the U.S. has a Bill of Rights, a Constitution, and a stronger legal framework in some ways than the U.K. for children, the U.S. still has not signed the United Nations (UN) Convention on the Rights of the Child. The UN Convention on the Rights of the Child led to the Children Act in 1989, and that act puts in place the legal framework upon which education, social services, and health is based. Section 17, in particular, is about children in need. It basically says that no child should be unable to achieve or maintain a reasonable standard of health, and that the government has a responsibility to put in place services for any child where their health or development is likely to be significantly impaired or further impaired without the provision of services. That is powerful and underpins much of what goes on in the U.K.

Going back to what Hall said, what does exist, in spite of our inequalities and outcomes, is a universal patchwork of services that is geographically based. We have shortages of pediatricians and health visitors. But, there is a community pediatrician in every district, responsible for areas of child health including child disability, child protection issues, and public health interests of children.

There is also a Consultant in Communicable Disease Control (CCDC) in every district with responsibility for infectious disease control. In every local authority, an environmental health officer has the responsibility for dealing with the outside health aspects and preventive health aspects. Every district also has an immunization coordinator, who might be a pediatrician, microbiologist, or public health doctor. They are responsible for planning and implementing the immunization programs. There are people with responsibilities for adoption and fostering. There is a designated doctor for child protection. Every hospital or community grouping has a designated nurse. Every institution has a named doctor and a named nurse who theoretically have overall responsibility in that hospital or community grouping for child protection advice and support. There is a child protection committee in every area. Every school has a school health service. So, there is a rich fabric of care in place across the country with no holes. That is a tremendous strength.

Hall also mentioned that every child from 0 to 5 years of age has a named health visitor. At 5 years of age, it is transitioned to a named school nurse. At the same time, every child is enrolled in a general practice. Children have a person-to-person relationship, and districts have a set of accountable responsibilities.

The child and family are embedded in this whole circle of care and services. Some areas, like mental health, fall down. In my old district, one could wait an entire year for a psychological consultation and assessment for a child with a disability. It was pitiful and inappropriate. However, New York City is worse, especially for a child with complex needs or disabilities. What does exist is the potential for this fabric to actually work in a coordinated way to serve the needs of the child. The question marks exist because it does not always work that way. The interface between different sectors and different services is where it often falls down, between the school and the community pediatrician, between the mental health services and the primary care team, between the social services and the school. That provides a snapshot of the structure and the pattern of health services.

Now for a different look at the poverty issues. Ninety percent of married families earn over

£300 a week. The figures for those who are cohabitating with a partner are not much worse. Forty percent of lone fathers make over £300 a week; however, a tiny proportion of lone mothers make over £300 a week. In fact, most of them make very little money. Therefore, the changing health status in terms of the increasing proportion of children living with lone parents, and a decreasing proportion living with married parents, has a huge implications for the economic status of the children.

One of the lovely things about working in England is that national statistics are wonderful. The U.K. has linked birth and death certificates showing the social class gradient for mortality for the first and the second year of life. The gradient is sharpest at the end of skilled and unskilled labor. Birth weight, has the same gradient. Dental decay also correlates to social class. Decay is increasingly high, affecting up to 70% of the population in the fourth and fifth lowest social classes.

Breastfeeding is the central goal of the National Health Service (NHS), and it has recently become a central goal of the government. The initiation of breastfeeding, and then breastfeeding after 6 weeks, also demonstrates a social class gradient. England had been unable to shift this for decades. In 2000, a bit of encouraging news showed that the gap is narrowing slightly between social classes in terms of the initiating of breastfeeding. Every 5 years they do a feeding survey, which now shows that the gap is narrowing, from 65% to 50%.

Smoking during pregnancy is also an issue we have tracked. In the entire U.K., about 22% of women smoke during pregnancy, even though effective programs exist to knock that down at least 10%. We have increasing levels of smoking among younger age groups, among girls in particular. The "never smoked" in 1998 among school children declined and the increase of "regular" smokers rose to about 18% at 15 years of age in England. The number of teenage pregnancies are the highest in Europe and is a major government priority; however, it is much lower than here in the U.S.

In terms of mental disorders, a national survey showed these were primarily behavioral disorders of children, conduct disorder, anxiety, and depression. The survey again showed huge social cross-gradient. Many of these are linked to early intervention. Evidence shows that some mental disorders can be prevented if marital disharmony and things like that are addressed, yet we have not been able to do it.

What kinds of things get in our way, given the wonderful fabric of care in place? Children do not have to wait for acute care, older people often wait a long time to get their hip replaced or the cataract done, but children do not wait. Where do we lose? Where do we fall down? Part of it is explained in that they require people to change, and that requires health education and effective intervention. It is about adequate housing. It is about health interventions that are outside of health, addressing risks to health.

Injury rates are one example where a 1996 study showed that the overall mortality from injury for children has declined massively in the last 15 years. Actually, the decline was seen all in the upper social classes, while the gap between the poorer children and the upper-class children was widening. We need health services to be better funded, but we also need to understand better and implement the preventive approaches that are outside of routine health care. That is a huge challenge for both countries. We also need to better coordinate our work.

What are the similarities between countries? Both countries have inequalities in income, health behaviors, breastfeeding, smoking, health outcomes in mortality, low birth weight, dental health, injury rates, and disability rates. It is probably true that the levels are different and are generally higher in the U.S. than in the U.K., but the barriers are probably similar. The U.S. does not have universal health care for children free at the point of access, and it needs it. The U.K. has it and thankfully has not lost it yet. However, the similarities struck me the most in working between the two systems both as a mother and as a pediatrician. When I moved to Brixton from Harlem, 3 per 100 babies were born HIV-positive in Harlem at that point during the early 1980s. In Brixton, it was per 1,000. The difference was ten-fold, but it was the same problem.

Pascoe: What is the rate of low birth weight in England?

Davidson: Seven percent low birth weight, about 1.5% very low birth weight. We are at the lowest rate we have seen in the U.K.

Pascoe: Is the difference among racial groups in the U.K. like the U.S.?

Davidson: I am sure it is, but the U.K. does not collect that data by race. One could say there is three times the risk of low birth weight in the U.S. African American population compared to Whites. The U.K. cannot do that, since they do not collect that type of information on the birth certificates, and the birth certificates are determined by national law. In regard to the differences, the U.K. has universal health care while the U.S. has variable Medicaid provisions and other ways of doing it. In the U.K., every woman has a named midwife when she has a baby. The woman herself has a health professional assigned to her, whether or not she has an obstetrician.

In terms of universal health visiting, the U.S. has various home visiting programs in certain funded demonstration projects or with special funding. Universal school nursing varies. In some ways, the U.S. has an interesting model, because the U.K. does not have the reproductive secondary school model that the U.S. has. Every child in the U.K. has the right to be examined, evaluated, and screened by a GP. Additionally, about 60% of children have a pediatrician.

Both countries actually have the use of emergency facilities for care instead of their named doctor. The U.K. has Sure Start, but they do not have anything like Head Start. The U.K. government came to the U.S. to learn about Head Start, but it decided not to incorporate it and instead chose Sure Start. On the other hand, it does have the stated goal to reach universal access to preschool, for 4-year-olds and then 3-year-olds. In the U.S. there is a similar goal, but no real mechanism yet.

What works and what does not work? One of the great advantages of England is that the country has 50 million people, and the government sets priorities and tells people what is important. There is a close tie between government and the health service, with the ability to implement what has been decided. That is sometimes good and often not so good. If children drop off the agenda for a few years, the people who run the health service provision drop the children off the agenda. Right now, children are way up on the agenda. But for much of this decade, children were off the agenda.

Only in the last few years have children moved up into the top 14 priorities for the government. Because it is so closely knit, the government priorities determine the spending down the line. They often do not listen to the professionals or the parent groups. The U.S. is a federation, with different funding streams, so one can sometimes weather government changes more easily than in the U.K. When I went to the U.K., I thought it would be fabulous to have a national health service. However, working and commissioning health care for children and for mothers was challenging, because they were not on the agenda. It required total persuasion to get a little bit of money for this or that. Because of the differences and the similarities, there is a huge scope for collaboration in problem solving and in sharing what we know and what we do not know. That is one reason why this dialogue is important.

Pascoe: Is there any parallel to the White House conferences on children, early childhood, or mental health? Does the Prime Minister, or some credible body closely related to the government, bring together experts at certain intervals to talk about issues that are critical to children?

Hall: Within Parliament, there are many cross-party committees and commissions that will hear evidence. They are more influential than most people realize outside politics. Obviously, there are professional conferences, and some of the professional bodies are skilled at getting into the media. The British Medical Association is by far the most expert at getting issues into the media.

I suspect it is not as high profile as the U.S. equivalent, and we certainly are not as effective at catching public attention. The media will run the stories they think are interesting, but they usually have little relevance to what is really important. I do not know whether it is different in the U.S.

Question: Dental care is a problem in the U.S. because insurance companies are supposed to cover it, but dentists often do not take the insurance as their total reimbursement.

Hall: From our perspective, the most important thing related to dental health is prevention. The physician network is heavily involved in providing dental advice. Data shows that only about 20% of children actually get registered with a dentist within the first 2 years of life, which is one of the targets we were aiming at. Most of those are middle-class children, even though dental care is available for children free of charge. In theory, even sophisticated treatments like orthodontics are available. In reality, however, finding enough people to provide these things is difficult; but it is not a huge problem in terms of access. It is much more of a problem in terms of using what is available. That is the biggest issue for us.

Davidson: The issue of fluoridation is a nonhealth intervention that affects health. London does not fluoridate its water supply. It has been a battle for years. Similarly, for orthodontic treatment, one has to wait 2 or 3 years, at which time the child is already too old.

Hall: Teeth are falling out by then.

Davidson: However, there are criteria around orthodontics, which are fair enough, looking at potential damage to the tooth as opposed to cosmetic.

Tonniges: There is no question that oral and dental health is the biggest health problem of children today. Early in my time at the Academy, it did not seem to be a problem in my practice; but when I started to go on site visits across the country, everywhere I went, people said they could get health care. They could get shots for children or physician appointments; but they could not get a dentist to see them. That flies in the face of the fact that in the last 6 years, two dental schools in Chicago have closed. The number of people coming into the system is going down. One of the programs that we have around oral health is to educate pediatricians on oral health issues and train them on how to do fluoride varnishes and washes and how to provide primary preventive dental services in their medical home. We will get a real uptake of that concept among people who work in community health centers and areas where many poor children live because they will recognize the need for it. It will be interesting to see if people in our suburban practices, and more middle-class and upper-middle-class practices, embrace that. Currently, less than half of children in American have a dentist and or even see a dentist before they start school. It is a major problem.

Davidson: The other issue is diet, which is a problem in both countries. Fizzy drinks and sugary stuff contribute to a huge problem around rising obesity in England, and will certainly have a social class distribution. It is not yet at the level in England that it is here in the U.S., but it following along. My anecdotal experience is that about 10 years after the problem is big in the U.S., it becomes big in England.

Pascoe: Right. I have an example that may be part of the future, especially if the American Dental Association or dental organizations cannot take care of this community problem. A pediatrician outside Dayton, Ohio runs a clinic for all children, indigent or not, with a sliding scale for children without insurance. He has recently been funded by Ohio's Health Department to begin fluoride washes and sealants in children. Of course, there is an evaluation component.

We will see what happens, but I wonder if this is going to be the future, with a one-stop shop for preventive oral health as well as preventive physical health.

Tonniges: We are now developing an oral health initiative. We just got funded about 4 months ago and are hiring staff. One of the problems is that pediatric dentists are encouraging earlier and earlier exams for children, when there also is less and less access. A policy statement will come out of the Academy in regard to this issue. Pediatricians, and most of us in health care, will be surprised by the direct relation of the oral health of the mother and the health of the child, and the colonization of the mother's mouth and oral cavity with bacteria, compared to her infant. It will be interesting to get pediatricians to open mothers' mouths, see how many cavities they have, define them as high risk, and make sure their children get appropriate oral health care.

Mike Silverstein: The dental equivalent of NIH just funded pediatricians at the University of Washington to conduct a fairly large oral health study among communities in Alaska, where dental health is a big issue.

Pascoe: While the pediatrician is looking in the mother's mouth, I also hope he or she is asking about depressive symptoms, which are epidemic in this country.

Beverly Morgan-Sandoff: I am from the Los Angeles County Office of Education. We are requiring our Early Head Start and Head Start programs to make sure that their children have access to a full range of health services, including dental. They are coming back to us saying that they cannot find any dentists to care for their children. There is nothing that we can do about it. Is there any kind of collaboration being developed with the Head Start bill and The American Dental Association or American Medical Association.

Casey Emmer: Many of you touched on the issues that my division at Columbia University is working on. The Medicaid reimbursement rates are so low, so dentists do not want to see children after the age of 3 years. There are no pediatric dentists in Washington Heights, New York. It is a horror. There are only 3,000 pediatric dentists in the country. So much can be done in terms of preventative care. It puts the burden of responsibility on the pediatricians to talk to the mother and to also screen the children. Head Start has so many opportunities to promote good oral health behavior, even drinking the fluoridated tap water as opposed to bottled water. They can promote toothbrushing and watch out for how long these children use baby bottles. There are many opportunities for intervention. It just requires an iterative process between Head Start, day care centers, pediatricians, and dental professionals.

Morgan-Sandoff: We are doing an intervention in Los Angeles with low-income women serving as trainers to low-income families, in the area of health. We could really do something in terms of dental care.

Emmer: There are effective ways in a community to educate people, but we also know that education does not always change behavior.

Raymond Arons: I want to address mental health issues. As a result of my 31 years at a medical facility, I receive many calls about finding a bed, particularly for children. For example, autistic twins who are 9 years of age, who are in crisis and are looking for a bed, are actually a danger to themselves and then a danger to their family. In New York City, surrounded by 15 million people, we have about 20 psychiatric, pediatric, in-patient beds available at best, and they are full. There is no place for these children to go. If there are 50 million people in the U.K., how many beds are available for pediatric psychiatric patients?

Hall: I cannot offer an exact figure. I can certainly tell you that it is a long-running problem. We are somewhat better off than the figure quoted for New York, but there is chronic pressure for beds. The examples given would certainly not figure on our particular list of priorities, because those sorts of situations would largely be avoided through fairly good respite care service in most places. It is unusual for families to reach such a point of catastrophic crisis for something like autism. We do have some specialist residential schools. When the educational, medical, psychiatric, and social problems all converge on one family, we sometimes manage to get a tripartite-funded placement in one of those schools.

Where I used to work in South London, we had an enlightened administration, and we had several such cases. It can be done. We have a much bigger problem with what we call the psychosocial crisis—the youngster who is increasingly out of control, with several suicide attempts, sexually abused, getting into prostitution and drugs. They come into the hospital on Saturday night and turn the ward upside down. The pediatricians say it is not their problem, send them to the psychiatrists. The psychiatrists say they will not come into the hospital on a weekend. We phone the Director of Social Services, who says to wait until Monday. The whole thing is a nightmare. At the moment, this is one of the top issues on our agenda that we are trying to tackle more effectively.

Davidson: I came from a less enlightened part of London than Hall. But, Southeast Thames, when I was a pediatric epidemiologist there, did not have beds for adolescent psychotic children. We had to buy them from the private sector. We had to go down to Kent. We did not have any provisions for those children, and it was appalling. We also do not have enough child psychiatrists. For the children that Hall was talking about, who have moderate to severe disabilities, behavioral disorders, epilepsy, etc., a residential school would be better for them. But often, in my district, there was wrangling and disagreement about who had what share of the bill between education, social services, and health. The rules said that one could not budget share. They are changing that, and it is a great advance that the three sectors can now share budgets to provide for these children, to prevent such wrangles.

Arons: Back in the 1950s, we had 100 beds for pediatric cases. As a result of the institutionalization in New York State, we had 100 beds for children in the Bronx or Manhattan who needed care. They are not there anymore.

Davidson: Both countries also have a role to take on regarding incarcerated youth. They are not humanely or appropriately provided for in either country, and it is a massive problem that we have discussed marginally, but never have done much about.

Question: One of our major program goals is to facilitate service access, particularly among our immigrant population. We notice particular barriers to accessing services for the immigrant community. What type of barriers exist in the U.K.?

Hall: First of all, there are different disease patterns, but I think U.K. and U.S. pediatricians are well tuned to those. Language, of course, is another barrier. In one little corner of London, they speak at least 27 different languages. It is a challenge to set up interpreters and written material for 27 different language groups. However, the cultural barriers are probably more difficult, and there are many difficulties in how people perceive health care. Even something as simple as an appointment system can be a barrier. One of the goals of the National Health Service is to maintain a proper, reliable appointment system so people know when they will be seen. Some immigrant communities are not used to operating under an appointment system. They expect the clinic to be open at all hours. A friend of mine who practices in India runs his office exactly

like that. It is open until the last patient leaves. A patient gets seen that day even if there is a long line. People think it will be the same in the U.K.

Other barriers include understanding things like long-term medication, the idea of not taking it for months to get better, but for years. All of those issues create enormous gaps to cross in order to ameliorate the difficulties. On the other hand, there are also great strengths. Many immigrants show incredible commitment to their children and determination to do what is best for them. The family structure is also much stronger. I do not have any data on this topic, but I am sure that the number of severe conduct disorders among our Asian community children, for instance, is much lower.

Tonniges: This issue is really interesting, where public policy that was developed with the intention of improving access to care has probably actually made it more difficult. Translation services are an example. Federal law requires that translation be provided. How in the world could somebody in private practice in America provide translation in 27 different languages and then not get paid for it? That is a real barrier. It is easier for practitioners to say that they do not accept Medicaid patients or low-income patients. Another example is the whole issue of presumptive eligibility, which we do not allow. If one sees a patient who does not have access to care, there should be some way for the care provider to get paid while the patient's eligibility for public programs is determined. Fortunately, in obstetrics, that is not a problem; but for undocumented U.S. immigrants, it is variable, so public policies were written to improve access and improve care, while it may actually be a detriment. That is why we need to keep having these discussions.

Davidson: A universal health care system in the U.K. makes people assume that it is accessible to everybody. Very little of the research looks at the division between offer and uptake for antenatal or postnatal screenings, for example. We know little about whether the barrier is the level of care offered, the language, or the level of choosing to take it up. In not understanding that issue, we cannot do much about it. It is a big challenge for us to begin looking into those topics as research questions and also potentially as audit questions for evaluating one's own performance and work.

Hall: Another angle is screening for postnatal depression, which is highly topical. It turns out that the standard screening instruments used for depression work poorly within many Asian communities, where depression tends to be presented in terms of physical symptoms. That is one of the difficulties people are struggling with at the moment, trying to understand what depression actually means in those communities. Even translating the word depression can be problematic. The mental health area is quite difficult, particularly regarding the diagnosis of psychosis and psychotic illness. There is a whole range of challenging, but interesting, cultural issues.

Pascoe: What is the NHS policy on patients who are not U.K. citizens?

Hall: Being a citizen is one thing, but the real question is whether one is in the country legally. Depending on which country one comes from and whether one is a European Union citizen, distinctions are made between emergency and elective care. There is not a quick, simple answer. Certainly, when the hospital admissions officer is checking people's details, they look to see if they are eligible for NHS treatment. It is rare to have any problem over that in pediatrics, but in adult practice it might happen more often. I have never had to turn a child away from treatment.

Davidson: Certainly there is an obligation for GPs and hospitals to treat anybody for emergency care.

Pascoe: Treat them and charge them for the service?

Davidson: Yes, but they do not ever do it. It is much more complicated to get the charges. There are no bills. The paperwork is killing. In England, there is no paperwork, one just goes, so it is easy for people who are not eligible to slip through the net. It is rare for routine services for anybody to check at the child level. In London, and where I work, with a huge number of immigrants, there was an explicit policy that we would not turn away anybody. Everybody, every child, whether or not they were legal, would receive care.

In the U.K., data shows that failure to provide health care leads to worse outcomes. There certainly is data for dental. There is public health data in England for dental about the provision of care and increasing dental health, which has been increasingly good over the last decades.

For elderly people, it is much more direct, so there are data on failure to repair hips with increasing disability, cataract failure, failure to screen for retinal disease from diabetes, failure to treat blood pressure and renal failure. There are much better long-term data, mostly morbidity rather than mortality, linked to failure to either provide or take up, because for blood pressure, often it is the failure to take up. Many people dislike taking their blood pressure medication, for a variety of reasons. Some studies are looking into why or how, and there are ethnic differences.

Pascoe: Two years ago, we held a meeting in Newcastle, with 25 pediatricians from the U.S. and 25 from the U.K. This fall, there should be a supplement in *Pediatrics* about the conference proceedings. Even though we shared a common language, one of the most marked differences was an extreme passion by U.K. pediatricians about the UN convention, compared to a neutral or negative response from U.S. pediatricians. It boiled down to the U.K. system honoring the rights of the child, and the U.S. health care system honoring the rights of families and parents. I am interested in comments on that assumption, because we never had a vigorous discussion to resolve the issue. It was a fundamental difference.

Davidson: I was passionate on the rights of the child. The U.S. pediatricians were seeing it as a diminution of the rights of the parents. It is true that in the U.K. law embodying it, rights were somewhat shifted around. Parental rights were parental responsibilities. Overall, the U.S. is derided around the world for being the only country to not sign the convention. That does not mean that one cannot look at the subtle issues. It is fascinating to go to a UNICEF conference and hear people speaking of the U.S. with contempt because of that treaty issue. What is wrong with empowering children's rights? It does not diminish the family because actually it puts the child in the context of the family.

Pascoe: We have not discussed the basic difference in the provision of primary care, which is that pediatricians provide a great deal of primary care in this country. They do not in the U.K. Does that contribute to the difference in opinion?

Hall: It is a fascinating topic, because it is not compulsory for our general practitioners to have training in pediatrics. It is possible to become a GP without having completed a pediatric post in a hospital. The argument would be to learn pediatrics on the job while doing general practice work. We are not impressed with that argument and with the changes in the way the health service is structured and the current unpopularity of family practice, the whole thing up for review. When we have discussions with our colleagues in mainland Europe, where many countries have primary care pediatricians, they always ask how on earth we can provide a decent service.

GPs are not trained in pediatrics. The fact is that it would be difficult to show that it made a big difference, because the GPs overuse the specialist pediatricians. I suspect that for health promotion, child mental health, and dental health promotion, we would probably find that care is not as good. However, I am not aware of any data that actually shows that.

Davidson: What goes on the birth certificate is decided by law, so to change one's birthday, one must go to Parliament. It is difficult to change. Gestation is not on the birth certificate. It has been under review as part of a civil registration review, but all the national statistics come from the birth certificates. The midwife delivers the baby and writes a notification. The notification goes to the community health services. It goes to the registrar locally. The parents are required to go to the registrar and register the birth within 2 weeks. The two are put together and sent to the Office for National Statistics. It is not illegal to ask about race, but that information is not put on a birth certificate. It does not get into the national statistics.

Hall: However, there is local data. Quite a few places would be able to tell about someone at the local level. Because everyone does it differently, and it is not specified nationally, there is no nationally aggregated data. That is the problem. We have also seen about 25 different ways of cataloguing race.

Davidson: The politics of the NHS was that for 20 years, under the Conservative government, they took out 3% out a year. They took out money. They did not just level-fund; they starved it. The Labor government has not begun to put money in. It is still way below the proportion of gross national product of any western European country. And, it is only targeted to come up close to some of the lower mean over the next few years, for training, infrastructure, buildings, everything. It is trying to rebuild itself. It is not level funding; it is actually sharply increasing funding. Hall might want to speak about the national service framework for children. Would that help make children a priority?

Hall: There are several different kinds of prioritization. The biggest one for us at the moment is simply what slice of the cake goes to children, so that is prioritization against heart disease, cancer treatment, mental health, the elderly, and so forth. We are running a number of campaigns and lobbying efforts to raise the proportion of money allocated to children. But on the whole, the distribution of money is from the government to health districts. It does not usually come labeled specifically for children or cancer. It is decided in detail at a local level.

Once the government offsets certain spending priorities, the local health authorities or the local trusts are obliged to take those priorities into account. There is a complicated political process of deciding the order of the priorities, whether it is the elderly, children, or whomever. Within children's spending, there is another round of politics. What tended to happen in the past was that whomever shouted loudest got the most.

The big, powerful academic units with high-tech research will get vastly more than child mental health, for instance, but that is shifting gradually. We now have what is called a National Service Framework, which is trying to more effectively define priorities and service levels. I will say in 2 years time whether that has made a difference, but it is an interesting process. However, the most important thing is probably parent power, which is sometimes effective for getting important things onto the agenda. And sometimes, it gets rather unimportant things onto the agenda and gives them more priority than they deserve. At the moment, the autistic pressure group is highly effective, as is the chronic fatigue syndrome group. So, a disproportionate amount of energy goes into those conditions. For instance, children's traumatic head injury does not have an effective pressure group and thus little money goes into that; but that can change overnight if a politician's son gets hit by a car. There can be illogical distortions.

Student Programming

Challenges and Commitments: The Role of the Mentoring Relationship in Developing Junior Scholars

COCHAIRS: Rebecca Bulotsky, Eileen Rodriguez
PRESENTERS: Christine McWayne/John W. Fantuzzo, Tonia Natalie Cristofaro/Catherine S. Tamis-LeMonda, Abbie Raikes/Ross Thompson, Jason Downer/Julia Mendez

Rebecca Bulotsky: We would like this roundtable to be an interactive discussion. Our panel of student–mentor dyads will talk about challenges related to mentoring. Then we are going to poll the audience to get your ideas about which challenges you would like the panelists to speak to and address problem solving strategies to meet these challenges. Since there are many students in the audience, there is a great deal of wisdom. You are all experts on this experience. We would like you to share that wisdom with us as part of a larger group discussion.

The topic of mentoring has been receiving a good amount of press over the past couple of years especially with the Head Start Scholars Grants. We want to especially thank Michael Lopez, Catherine Tamis-LeMonda, John Fantuzzo, and Faith Lamb-Parker for valuing mentoring and encouraging us to do this roundtable. We would also like to say a special thank you to our mentors who told us "just to go do it."

Each of the dyads will give a presentation on one specific challenge that they have encountered in the mentoring relationship. Students will present 5 minutes on their perspective and then the faculty mentor will present 5 minutes on their perspective. After this we are going to poll the audience and choose one or two of the challenges to discuss among the panel members who will discuss strategies they have used to meet these challenges. Then we will turn it over to our special guest, Anthony Salandy, who will facilitate the larger group discussion with students in the audience. We encourage you to share your perspectives on any strategies that you have used and share your wisdom with all of us so we can all talk about these issues.

Eileen Rodriguez: I will briefly introduce each of the four dyads to give you a flavor of the variety of people we have on the panel. Each dyad will offer a unique perspective on what they perceive as challenging within the context of the mentor–mentee relationship. The first presentation will be by Jason Downer and Julia Mendez from the University of South Carolina (USC). Downer is in his 6th year, heading towards his clinical internship. He has been working with Mendez for the past 2 years. They will speak to the issue of how students develop their autonomy within the context of the mentor–mentee relationship.

The second presenters will be Tonia Cristofaro and Catherine Tamis-LeMonda from New York University (NYU). Cristofaro is a doctoral candidate in the psychology development and she has just completed her 3rd year in the program. She has been working with Tamis-LeMonda for the past 3 years. They will address the challenge of balance and fostering a healthy relationship.

Following their brief presentation we have Abbie Raikes and Ross Thompson from the University of Nebraska at Lincoln. Raikes will start her 3rd year this fall and has been working with Thompson for the past 2 years. They will discuss the role of mentoring in effectively bridging basic and applied research.

The fourth dyad is Christine McWayne and John Fantuzzo from the University of Pennsylvania. McWayne will be going into her 5th year as a doctoral student in the School, Community, Clinical, and Child Psychology Program, and has been working with Fantuzzo for the past 5 years. They will give a brief discussion on perspective taking.

Jason Downer: Julia Mendez and I have talked about different types of challenges we have had over the years. Being in my 6th year, I have had quite a few. It was difficult to choose just one but we decided to talk briefly about how a young scholar can develop his or her own independence, own thoughts, and own autonomy within larger projects that his or her mentor has and throughout the time in graduate school and beyond. There are three questions to think about before we open up the floor. Think about how mentors can promote autonomy in young scholars and what the students can do to facilitate this process for themselves as well as for the mentor. Specifically, we will talk in terms of how to do this in the context of participating in community/university partnerships—how one does it out there in the community and not just in a department of psychology or sociology.

When I think about autonomy, I think about it as a process. I know that as a young graduate student, one comes in, has big ideas, and is confident. It is a difficult process to get into graduate school and so one is looking already to individuate and get one's ideas out there. However, one quickly learns that autonomy is a process in which one is going to be in the entire time in graduate school and that it does not happen over night. One needs to be patient and work towards it in a number of different ways with one's mentor.

There are several steps to head towards being more independent as a young scholar. The first thing that I learned with Julia was that one must develop a knowledge base particularly in doing partnerships with the community before one can become independent and do things by oneself because one needs to know the community. One needs to shadow his or her mentor, listen/observe all the skills of a psychologist that we can learn, and ask questions. One must be able to do that in order to be autonomous.

One must also be a competent autonomous scholar. That is something one can do throughout one's time as a student in working towards being more autonomous. That then provides a good base towards taking on more responsibilities in the research program in which one is working. Julia has done a terrific job of gradually giving more and more responsibilities. One has to learn that process and then do it on one's own. Then one can add more in the community by talking to community leaders and Head Start directors and teachers. That role can slowly be handed over to the student so he or she is doing it on his or her own and not just watching and observing the mentor.

As a student, one gets more responsibilities. It is the student's responsibility to start taking more risks in that supportive mentor–mentee relationship. For me personally, that involved staying at USC for another year and applying for the Head Start Scholar Grant and giving it a shot, which is something I never would have done on my own. Julia was supportive, but I also had to take the personal risk to do that. It is a two-way street; she had to trust me to go ahead and do it, and I had to take the risk. That is one way to develop one's autonomy: to use a mentor as a stepping board and a support to take risks and develop who one is going to be as a young scholar and in the years to come. Gradually, I have felt more comfortable expressing my opinions about my project as well as the greater projects on our team. I feel more confident that my contributions need to be heard and am slowly able to talk more about that in the team meetings and other forums.

Julia Mendez: It is a treat for me to be here today. Jason Downer and I have had a great time reflecting on how we have gotten to this point. I might need a mentor self-help group after the session because he is leaving us to go to Philadelphia. He has been a valuable student and I am going to miss his contributions at South Carolina. It is also a privilege because my own mentor, John Fantuzzo, is sitting at the end of the table.

I graduated from the University of Pennsylvania's program in 1999. I was a Head Start Scholar in 1997. I was proud that Jason took the risk to attempt to become a scholar because it was such an influential experience in my own growth. When he talked about taking risks it is true that mentors can create opportunities but ultimately it is up to the student to choose which opportunities will help them to find themselves and at what time. The choice that this individual made to join the Head Start community and make father involvement research a part of his identity meant delaying another important milestone in his own trajectory, which was leaving for an internship.

In any decision that mentors and mentees make together there are tradeoffs, and one must figure out how to work to develop one's own sense of identity and autonomy. We do not use autonomy to mean independent. One of the things that you will hear as the theme today is that mentors and mentees stay connected and also help autonomous, young scholars, of which I include myself in that category, make new connections. What one winds up doing is adding to one's reservoir of mentors in one's professional life while also maintaining the original mentors that taught us that together we are more than we are as individuals.

Let me give you five things to think about that emerge in the context of a diverse training experience that involves working in Head Start communities, not only with faculty mentors but also with practitioners and Head Start teachers. Head Start parents have been very influential in my own training and now also in Jason's training as he is listening to the thoughts of the fathers with whom we work.

First, Jason characterized a knowledge base, which I refer to as relevant research skills. It is one thing to understand statistics, data analysis, and research design. However, one also has to understand how to explain that to someone who has not had that training. One's ability to translate research into useful information that will benefit Head Start is one aspect of allowing one to be autonomous in one's work in the community.

The second aspect of autonomy that we talk about is interpersonal competence, which is not easy to define. One of the difficult things that students face is developing one's own interpersonal competence and not just mimicking the style of one's mentor. One's mentor will have a style that works in connecting with the community, but not everybody can carry that off. John Fantuzzo is one of the best people to make up titles of things. He is always naming things. I am horrible at titles and still, to this day, pick the title last. I took that influence and tried to come up with a title called *The Companion Curriculum* for my own project. It may or may not work but I had to find my own style in terms of how I wanted to be connecting with the community, whether it is through humor or whether it is through respect. We have someone on our team who is consistently described as a lady and that is her special connection with the community. So one has to find one's own way of relating.

Other aspects are planning and decision making, where the best mentors allow mentees to see individuals thinking, reasoning, and planning, not just making decisions. One needs to be focused on the process of getting to the outcome, not just on what the outcome is. That is actually more important than just knowing what data we are collecting or whether we are going to that center next year. As a student, that is hard because one wants to know the answer. One wants to know what is going to happen. One wants that comfort, and it is just not always going to be there in the context of community-based research.

One's confidence will grow as one's experiences diversify so, therefore, the corollary is to have different experiences. The last thing I would like to mention is a piece of advice that I received from Esther Kresh in 1997. She made it very clear that mentees have to be willing to learn not

only from success, but also from failure. Remembering that our lessons from failure are often more important than our successes will be helpful because when one is learning, one fails often and that can be a good thing.

Tonia Cristofaro: Thank you for your interest in this very important topic of the mentor–mentee relationship. If we reflect on Ainsworth's definition of a secure attachment between a mother and her young child, we will most likely consider the qualities of autonomy, independence, freedom to explore, availability, accessibility, and consistency. Ainsworth describes the secure bond as a safe base from which to explore. In my opinion, these features of a secure relationship are also characteristic of a strong, healthy, and nurturing relationship between a mentor and a mentee.

The mentoring relationship is a vital foundation for students' future partnerships with research families, community agencies, other universities, future mentees, and so forth. This partnership that we experience becomes one important model for how we extend this one fundamental relationship to other relationships. In this regard, we may also refer to Bowlby's notion of an internal working model. The specific challenge is maintaining balance in managing the multitude of tasks and responsibilities as a graduate student. We may define balance in a two-tiered fashion.

First is the interplay between student autonomy and dependence on the mentor. Second is having well-rounded graduate training. To successfully juggle many tasks is an expected challenge in graduate school and definitely an important experience. That teaches me about my own strengths, weaknesses, and how I contemplate various issues. Cathie Tamis-LeMonda systematically and constantly encourages her mentees to maximize opportunities to enrich their academic, scholarly, and professional development. For example, academic development involves course work while scholarly development includes engagement in the many aspects of research, such as the coding of data. Professional growth consists of attending such conferences as these and the dissemination of findings. Cathie's ability to engage in multitasking and to succeed is wonderful motivation for me. Participation in various activities clearly requires dedication, devotion, and carefulness. As a graduate student, I embrace all these opportunities and I learn from them and try to succeed although I am realizing the very real constraints of time.

Linking to the notion of good mentoring, Cathie is my coach, my support system, and my guide who motivates and inspires me, and who is actively helping me to develop my own unique style. Her values are rigorous, dignified research and her strong personal and career goals are my models. I deeply appreciate her care for her students' growth as developmental researchers with integrity. There is a challenge in prioritizing responsibilities and duties because, for me, all dimensions of graduate school contribute toward development in different and beneficial ways.

I welcome opportunities to actively engage in research, to pursue various projects, and to embark on new ventures to challenge myself. For instance, she asks students to reflect on serious issues in children's development and asks thoughtful questions about them. She asked me to present her with a research topic of interest to me and to work with closely with her in an interactive manner to pursue the study. She and I have been working closely together on parent/child language.

I firmly believe that I have Cathie's consistent guidance. Her faith in her students' abilities is very much appreciated and this faith becomes a spark for me that creates the desire and will to assume further responsibilities. The challenge unfolds with meeting all the demands of research and professional activities in combination with course work responsibilities at this point in our lives. The mentor–mentee relationship serves as a building block and stepping stone from which Cathie and I join efforts to meet this particular challenge of balance.

Catherine Tamis-LeMonda: That was so beautiful. I am absolutely thrilled to be here. Eileen Rodriguez and Tonia Cristofaro are my students, but I have also come to know many students in other universities, including John Fantuzzo's students at the University of Pennsylvania. I feel as though they are my mentees as well.

When we were told we had to come up a theme, Tonia came to me with the idea of balance. Balance captures actually everything everyone has spoken about today. I am going to talk about balance in two ways. One is the balance within the university or department setting a student is in. The balancing of the research that goes on in one's lab with one's mentor concerns the opportunities afforded by course work and other faculty. I have a true story about a student of mine from several years ago who has now graduated and has a fabulous career. She was phenomenal. When we were doing visits, coding, and everything else that goes on in research, she was getting more visits done than anyone else. She was coding more than anyone else. She was thinking about every last conference presentation that one could ever have thought about—she was my star.

She was my star until one of my faculty colleagues came up to me and said, "Allison (I am using a pseudonym here) is failing my course in emotional development." I said, "How could she be failing your course?" She said, "She comes in late every single class. In fact, she missed the last two classes and felt it was okay to miss them because she had home visits for you." I was suddenly struck with the realization that I had said to make sure visits are the priority. In our lab that is our motto: Visits are the priority. If a family is going to see us, we go on that visit. If it is a father who is going to see us, we do not sleep at night—one does anything to see a father.

I suddenly realized that I was failing in a sense as a mentor. I had not instilled in my student the idea that there is a balance between the research in which one engages and the learning that happens within the lab and in the larger environment of the university. We need to keep that in mind because I constantly expect my students to do everything under the sun within the lab. I realize that they also have to do well in other aspects of the university life. They have exams to pass as well as classes and seminars to attend. It is easy for me to get them wrapped up in the research and forget.

Additionally, I gave a talk earlier this week on multidisciplinary collaboration and the importance of learning from other fields. Without balance, if I am the only mentor, if I am the only teacher, then I failed because the balance is that one learns from everyone. One learns from the qualitative researcher who knows so much more about ethnographic methods than I can ever teach my students. That balance is so important.

The second aspect of balance is the within university/outside the university balance. In the protective environs of my lab, students learn research and make mistakes. Research is a process—we change coding because that variable does not work, and so forth. I want to nurture that. I want this process to be a beautiful unfolding of an experience. On the other hand, I sit on faculty searches at NYU. I make sure I am on every faculty search, because I want to make sure I know whom we hire. I see the CVs coming by my desk from recent graduates who have 10 publications. I could never get a position in my university today because we are raising the bar for faculty positions and professionals. I get the sense that as I want to nurture a gradual unfolding there is a tension out there, there is balancing. The reality is that we need to present at conferences. We need to publish. My students need to have end products. So while we want the end product ideally to take years as one thinks about it and ruminates and reflects, one has to turn some of those out quickly.

We need to make sure we get our pieces written, which means I line edit and make students do 10 drafts of a piece so that it is meticulous and can be published. My students know that I keep saying publish, publish, publish. I sound like a broken record. Although I believe our sole goal is not publishing, there is a reality out there that we do need to produce. There is that outside world that will not know how wonderful people like Tonia and Eileen are, but will only know their names as printed at the top of a journal article. We need to balance this self-development and growth with the reality of objective demands in our field, which are rather steep.

Abbie Raikes: Ross Thompson and I chose the tension between applied and basic research as our topic, which draws upon many of the elements we have discussed up until now and also raises a few new elements. I would like to start by saying that I came to the University of Nebraska from a public policy and public health background and had worked on Capitol Hill. I have a master's degree in public health and have done some research in Central America. I came with a relatively well formulated, I thought, idea of what I was interested in studying. One of the greatest pleasures for me in graduate school has been to explore new aspects of developmental psychology that I was previously not aware of. That has occurred primarily through my mentoring relationship with Ross, and I am grateful for the opportunity to do that. In the process of doing that, although I am still interested in some of the applied questions, there have been times when I have been impressed by research and the questions that basic research can answer that are harder to do from an applied research perspective.

Over time, I have become more interested in integrating the two approaches and attempting to find common ground between applied and basic research. In light of the Head Start conference, I have noticed that there are many people who seem to be juggling that tension in attempting to come up with ways of designing studies that can contribute both to applied and basic research. Ross and I have spent time discussing that and struggling to define the ideal for my development as a graduate student in light of my appreciation of both basic and applied research questions.

In terms of my own research, I feel strongly that I conduct research that leads to an increased understanding of how to help the most at-risk populations. That stems from my public health and public policy background. That is a core in myself that I like to remain true to as I do my research. I am presently conducting a study on attachment and risk in Early Head Start. For those of you who do not know Ross's work, he is an attachment expert. In the process of doing this study, I have been impressed by the careful research that he has done in the past.

I highly recommend that if given an opportunity, talk with Ross at length about early relationships and attachment relationships, because his approaches to these issues are inspiring. They have influenced the way I approach my own attachment research and have also made me much more aware of the limitations that I encounter in dealing with an Early Head Start population.

Some of the things that I will address specifically are the manifestations of this tension. In terms of what happens to me as a graduate student and in terms of our mentoring relationship, I feel as though I spent a lot of time figuring out how to recruit my sample because I picked a difficult and diverse population to study. I definitely abide by the earlier statement about never missing home visits. Everything is scheduled around home visits. That is definitely my life these days, as well as addressing issues that arise from working with the Early Head Start program. As a result, I feel as though I spend less time writing up results and preparing articles for publications than I would like. However, since it is the population that I am interested in, it is time that is well invested, and I feel as though I am making good choices. On the other hand, sometimes I am very admiring, perhaps a little jealous, of the clean and well-defined populations and the nicely designed studies that I have seen come out of my university. That is one way that the tension manifests itself.

Additionally, I feel a responsibility to design studies that benefit the Early Head Start program that I am working with, because they have provided me access to their population. I feel as though my research questions need to be designed to give them information that they would not have had otherwise. Then, as a result, sometimes the focus of my studies takes more of an applied angle. I spend time trying to figure out how I can answer basic research questions while still providing them with this information and helping them integrate and understand what I am telling them. That is probably something that is not so true of basic researchers.

As I prepared my comments today, I realized how mentors have such a large influence on the type of research questions that students ask, how we envision making a contribution to the

field, what we define as success in the field, how important it is to feel as though we are living up to the expectations of our mentors, and the desire to draw upon and utilize the expertise of our mentors and to use that expertise as a catalyst for our own development. It is a great inspiration, but it also can create challenges as one realizes how one is both similar to and different from one's mentor. I had no idea when I started graduate school how influential this mentoring relationship would be.

Ross Thompson: Something like this ought to happen all the time because it is amazing what one learns from other people on a panel and from one's own student by listening to their comments. I am reminded of a conversation I had with another of my students about a year and a half ago when she just finished her orals. We were ruminating about our time together and I found myself asking her a question that I thought about a lot, which many of us in the field ask ourselves. I said that sometimes I wonder if whatever legacy I happen to leave for my career is going to matter more in terms of the research I contribute or the students whom I have mentored. Quick as a shot she said, "It is your students." She responded so fast that I immediately said, "What is wrong with my research?" However, when I had a chance to reflect more on her comment, I took it as high praise, as she was obviously reflecting her experience. The legacy we leave, and certainly comments about the softball team-sized mentoring relationships left by John Fantuzzo and by Cathie Tamis-LeMonda, reflect the fact that we do leave an important legacy in human capital.

I wanted to put some of Abbie's comments in context, because the program in which she and I both work is fairly unconventional. It is a program in developmental science and developmental psychology. It is oriented toward training basic scientists with a concern about development and context. As a consequence, whatever orientation students come to the program with, they will be well trained in the basic science of developmental psychology, but always with an awareness toward its applications, the role of culture, and the influence of social policy as it relates to the applications of our research. Part of this comes from the fact that our department also has a strong law psychology program. Many of Abbie's colleagues in graduate school are getting their law degrees along with a Ph.D. in psychology. There is also a Center on Children, Families, and the Law that works hard toward applying the insights of developmental science to train child protection case workers in the State of Nebraska, doing mission-driven applied research related to children and families, and doing contract-driven research as it relates to the needs of children and families throughout the country.

This provides a unique context for both opportunities and challenges of graduate study. Many of them focused on the issues that Abbie raised concerning how one puts together an identity as a basic scientist with the driven needs that cause many of us to do applied research. We have had four students come out of the program just this year. Where they have gone is not unusual for us. Two are becoming assistant professors as development psychologists in departments of psychology. One is taking up a position at the Centers for Disease Control and Prevention in Atlanta, and another is a post-doctorate with Cathy Spatts, on child abuse. That reflects the breadth of interest many of these students have, and they were not expecting they would go in that direction when they started the program. How do we work with these kinds of challenges? How do we think about forming bridges between basic science and its important applications that have caused many of us to come into this field? How do we think of that in the context of the mentoring relationship? As a bottom line, the best that we do as mentors is to provide a wealth of opportunities for our students, knowing that the period of graduate study is a period of unique development.

Therefore, oftentimes, the best that one can offer the students under one's guidance is as many opportunities to discover for themselves what types of professional roles and opportunities they want to take advantage of. Abbie's involvement, for example, in some of her research arises from the fact that she has been involved in the Early Head Start Evaluation Project

through internships at our Center for Children, Families, and the Law. In many respects, those have provided provocative opportunities for the development of her thinking as a researcher. Her involvement in the Early Head Start program has also enabled her to enlist some of the personnel there as advisors in the development of her own research opportunities.

In addition, she and I coauthored a number of writing projects. One is a chapter on the impact of welfare reform on children. It is a new topic for both of us, and in working together, we both discovered things that we had not known about the interaction of basic research and applied challenges. Another is a chapter in a book that we just wrapped up, on the development of psychopathology and the challenges to attachment theory and research.

The other broad thing I have learned about mentoring in this context is the importance of recognizing that as a mentor, one is going to learn from the opportunities that students take advantage of. I have experienced a wealth of growth in the context of working with Abbie, little of which she is aware, that comes from my discoveries of having to respond to her work. As a result, when we meet together, my head always hurts because I have to think very hard about the questions she is asking and the integration she is making. I cannot always answer the questions she poses, so we have to work together to figure out the answers. As a result, I am also growing, and that is the best thing about being a mentor.

Christine McWayne: I am going to play off that last image. When I leave meetings with John Fantuzzo, I am sure his head also hurts, but I think it is for different reasons. John and I have a wonderful relationship. Every person on this panel is an exemplary mentor or mentee. However, frankly, there are probably some students out there that would agree that the mentor–mentee relationship can be relatively difficult sometimes. John and I will talk more about the conflicts and tensions that exist in the mentor–mentee relationship and the importance of perspective taking.

We were thinking about the mentor–mentee relationship in relation to a theory outside of psychology—to Einstein's theory of relativity. There are three basic elements: space, time, and motion. We were reflecting on these three elements, because we think they are important issues for both mentors and mentees to consider. We tend to have different perspectives on time, space, and motion. I will talk about my student's perspective.

In terms of time, I know, as a student just starting out, that I felt overwhelmed with how many things I had to get done. I had a whole laundry list of what I had to accomplish; finish all my course work, complete a master's thesis, pass my preliminary exams, and (oh yeah) that dissertation, and internships, writing independently, and everything else. For students, it is easy to see all of these tasks in a linear fashion. For example, I am going to do one thing and, then, I am going to the next thing—not experiencing them as part of a whole process of learning and growing. One reason may be that much of the time tasks are competitive. Tasks are often not related, or they do not seem to be related at the time, so as a student, one feels disjointed and compartmentalized about the work one is doing and how it relates to the big picture and to the future. That is the issue of time.

The issue of space is interrelated. As students get through all these checklists of things that we have to get done, oftentimes we do not have the space, particularly the psychological space, to reflect upon our process and what we are doing. We may feel dissonance between what our mentors value and are accomplishing, and what we value and want to accomplish. Having time to step back and think about owning our own values and forming our own questions about the field, and about ourselves as professionals, is critical to becoming a scholar. "Space" is often limited for students because of the limited amount of time we think we have. We might place stock in how long it takes us to do things. We set up arbitrary deadlines for ourselves, comparing ourselves to our colleagues, and think, "Given how long it takes me to do things, I must not be as smart as the person who could get out in 4 years." It is important to be able to reflect with a mentor about this time pressure and what time means to a student. Everyone has different

family circumstances and different issues. Being able to work within a realistic time frame that one has developed for oneself, making it individual, is what is important.

The last element that Einstein talks about is motion. In terms of motion, we came up with two metaphors. The first one is an express train, which is very much related to the time issue. "I have a lot of things to do. I do not have very much time to do them. I am going to get on this express train and make as few stops as possible." The problem with that frame of mind is that most of the time the "stops" are the most meaningful experiences as a graduate student. The next metaphor is the Tasmanian Devil, one of my favorite cartoon characters. I can relate to this image right now, as I am preparing to do my dissertation and all the other things I am involved in. It feels like a big whirlwind. I sometimes feel as though I am whirling around and I cannot see where I am going, because I am whirling around so fast. As students, we have to remember to give ourselves psychological space so that we can move in a more thoughtful direction and feel peace about being in the middle of the whirlwind.

To sum up, these three elements—time, space, and motion—are all relative, because we each (mentors and mentees) have different perspectives as individuals but also in the different roles we embody. Graduate students are developing. Our mentors are developing, too, but at a different level and pace, and they have already been through what we are going through. There is much room for conflict and tension within these differing perspectives. We hope the audience members will share with us their experiences and how they have reconciled these different perspectives within their mentoring relationships.

John Fantuzzo: It is important to note, as Christine McWayne was saying, that mentoring is rocket science. I am a neurotic mentor. This is a true confession. I wanted to let you know and Julia Mendez will provide social validity for that concept. My conflict relates to the fact that I am obsessed with this process as a neurotic mentor. I take my lead from famous Italian philosophers, Ernst and Julio Gallo: We present no scholar before her time.

In relation to this obsession with time, I am concerned. I get upset with the multiplicity of things that my students must do. They should be singularly devoted and singularly committed to becoming a scholar, which means they have two things on which they must concentrate. All the rest is trash. That is, I am obsessed with them being steeped in the "what" and the "how" of research—steeped in theory, steeped in the empirical literature. I want them to fully experience the multiple levels of scientist–practitioner partnerships. I want them to partner with their colleagues. I want them to partner with parents. I want them to partner with administrators. I want them to partner with teachers. They have to do that. That is important. Everything else is not that important.

There is a treatment I could get from Cathie Tamis-LeMonda about balance, but right now I am obsessed with the substance. I am also obsessed with space. That is, they are not taking enough space and time to be grounded as a person. They should be reflecting more about their inquiry. They should be attending to the "what is" going on inside of themselves. They should be talking about what they resonate with. I want to know what they resonate with, and how that relates to their careers. I am obsessed about the need for them to spend more time reflecting when they come into my office.

Last, there is motion. Do you know what I spend most of my time doing as a neurotic mentor? Saying: "Slow down. Another draft, please. More analyses. Check that additional reference. Gather more data. Go back and talk to that parent. Slow down. No, no, you are moving. This is a pregnant moment. This is not chronicles time. This is not tick-tock time. This is *kairos* time. You are never going to be here again. Get everything you can get out of it." My obsession drives them to think about that.

I want them to understand the realities of my suffering as a faculty member. They do not understand me. It is a demand-supply thing. It is hard work doing this time, space, and motion obsessional stuff. I want them to think about the fact that I have to deal with trying to set up the

auspices of their research. I have to deal with the funding of their research. I have to deal with the crazy psychotic politics of my department, and I have to deal with creating networks for their future jobs. It is driving me crazy.

My perspective is that these obsessive things will get them to where they need to be. Their perspective is, as Christine advocated, a different one on time, space, and motion. We also feel there is a correction to Einstein's famous equation: $E = MC^2$. We believe in mentoring physics that it is $EM = C^2$: Effective mentoring is a relationship of two-way communication.

Bulotsky: You can pick two of the four topics: autonomy, balance, tension between applied research and basic science, and perspective-taking. I am going to turn it back to the panel to talk about strategies they have found as students and as mentors, to meet the challenges of balance and perspective-taking.

Thomspon: I would offer one comment, picking up on something that John said. I say this repeatedly to students at all levels, and they never believe me, so I will try again. One resource that you do not know that you have is time. Think about it this way. How much difference will it make whether you have taken 4 years, 5 years, or 6 years to do a Ph.D.? From the perspective of career development, it makes absolutely no difference. You can afford to extend your degree program if it advances your professional development, and if you do not waste time, but develop a research program to pursue an interest much in the way that Jason has done.

By contrast, when you are our age, to take 1–2 years off to do something is a major consideration for career development. I find that students do not believe this because they are in a hurry to get their degree for many reasons. One is that so much of their education has been timed already. You have to get through 12 grades in 12 years. You have to get through your undergraduate degree in 4 years. You go to graduate school and expect it is going to be done in 4 years. I find myself telling them more and more often that being on time in graduate school is less important than being well-prepared.

That comes from keeping an eye on the prize: what it is that you want to become as a professional and devoting the time that is necessary to make it happen. I wish more students felt that way because if they did, more of the reflection would occur. One could look at graduate education as an opportunity rather than as a credential to get in order to get the life one truly aspires to. As John may have begun to convince you of, it ain't all that great once you get there. So take the time to do what you ought to be doing.

Fantuzzo: One thing we could see for part of the strategy is that it is a process and it is a valuable experience. This is a formative time. So what can mentors and mentees do? That is where we are basically providing the equation. The issue is how one creates the two-way conversation in the midst of the Tasmanian Devil activity. There are a couple of different strategies that Ross is underscoring, such as the issue of having a big picture.

A student has to have a working model of what they want to be, and there should be an ongoing dialogue. That student should be held accountable to basically determine relevant and irrelevant activities based on that working model; it is not just doing what one chooses to do. That is where the evolving autonomy comes. The mentor has a responsibility to that big picture goal and to help the student figure that out. Ultimately, it should be the student's choice in terms of the student's valuing of whether or not they should take that year and to what degree the mentor could provide resources. The mentor can provide a good focus for them to think about what the big picture is. Are we providing time along the way to actually have students reflect on that?

I have had students, quite frankly, who as part of my informed consent to work with me, agree that these are the things they must do. Not many students will want to do that. Needless to say, I am not a generic mentor. However, when one gets students committed, and students

basically reflect on themselves and where they want to be, that can be distracting. I have got to get my work done or those students do not stay as my mentees. The issue is that we have an ethic, and we cannot afford to produce people who go out there with neurotic models of what it means to be an academic, because we suffer through every faculty meeting from many of those dysfunctions.

The question is, how do we do this, and what support can we find for that? I want to ask my colleagues how they struggled with creating the space to help their students think about their working program of study, and how it relates to what they want to be. How do you have that dialogue?

Raikes: As I listened to the lecture this morning, I was thinking that being a graduate student might be the ultimate adult challenge of self-regulation. I do not worry so much about time, and I appreciate the importance of investing and all of that. The other side of it is the emotional day-to-day experience of being in graduate school. One of the things that I struggle with is that I am impatient by nature. It makes me crazy how long it takes me to do everything. It makes me crazy how long it takes me to finish. That is my issue and that is not anyone else's problem.

At the same time, that influences my sense of the time I want to take in graduate school. Money is part of it; there are also personal concerns. Then there is the other part of it, where we realize that academic time is different from the time that takes place in the rest of the world. One has to become more comfortable with this idea that one will develop over the course of 20 or 30 years and that where one ends up at the end of that time is different from where one starts out. Approaching it from that angle always helps me maintain perspective.

As a student, I am not rushing to get through anything. It has more to do with an adjustment of what one's sense of oneself is. It is great if one knows what that self will be in 20 years, but I do not know that one always does.

Question: How did you figure out how to manage all of the balance, time, where you want to be, and how you are going to get there? Was that something that you had gotten from different mentors in your life? Was that something you just needed to come to on your own?

Raikes: It was through conversations with people, but probably more on my own. When I started graduate school, I was a little older, which was helpful because it helped me maintain a sense of the long-term trajectory of being in graduate school and of career development. However, it is not a challenge that I have mastered. There are days when I wonder how many home visits are going to be canceled before I can just get 50 families. How long does it take? For me, it is also helpful in terms of developing relationships with other students in the program. It helps that everybody has a sense of support about what they are doing.

Question: When it comes to finding a job after graduate school, what are your expectations, and how do you navigate through this process with your mentor?

Mendez: I can talk about that, because I secured a great job 3 years ago, and it is still fresh in my mind. It is an important point and it relates to the question that John brought up earlier about how one finds time to have a discussion. As an illustration, here is a quick story. During my last year in the program, I was complaining to my father about all this reflecting because when you reflect, you look back. It is hard to get going again. I recall complaining to him, and saying, "How do I know where I am going to wind up? Where am I going to be in terms of employment? I do not know." I went on and on, and my father, in his infinite wisdom, listened for about 25 minutes. Then he said, "Are you getting a Ph.D.?" I said, "Yes, I think so." That is the agreement that we got to after this reflecting. Then, he said, "I think that getting a Ph.D. is supposed to be hard," and he left the room. John would never have done that. We would

have talked for another couple of hours about why getting a Ph.D. is hard. That was a good balance there.

As a student, one is constantly talking about being in graduate school, getting things done, and all the things one has to accomplish. However, one has to remember that it is not about being in graduate school; it is about getting a doctorate and using one's doctorate to advocate for people who do not have that position in society. So what I found when I started looking for jobs was not what classes I could teach or what I had to offer in terms of faculty senate or committee work or search committees. It was what I wanted to accomplish and how the department could provide me with resources to help me accomplish my goals. I was lucky to find that in South Carolina.

For the job that you eventually seek, whether it is in academics, a community agency, Head Start, a research firm, or public policy, the goals of your job have to match your training experiences. What your mentor does is network you with people that share your goals and values so that you can go out and get the resources to do your work. John connected me with people that had similar perspectives so that when I get to my job, I can do the work that I went to graduate school to learn how to do in the first place. That has been much more important to me than being on the tenure track, trying to publish, or coming to conferences. It has been being around people that have similar interests and values. It matters where you wind up.

Fantuzzo: I would echo that in terms of thinking about locus of control with one's statement of a job. If the student is talking to me about a job and it is an external locus of control, the student is not ready for a job. If the student is talking to me about their passion and their connection and what they want to do, that person is going to get a job, given the training we give them. Here is what I want to do and here is how my Ph.D. prepared me for that, and I have a passion about a job. Those people get hired. People who say they have to get a job do not get hired because they do not have depth and do not reflect the kind of scholarship that is needed to sustain and get tenured.

We serve people by helping them come to the intrinsic or internal locust of control when they articulate what a job means to them. If you do not have a passion, then you are not going to get too far and you are never going to make tenure with all the things one has to do in academic institutions. You have to have something that will sustain you, and it is important for us to make sure there are burning coals in that furnace.

Thompson: The one thing I would add to this is that there are many pathways to the destination one is looking for. There are many ways of getting to where the professional place will be that will cause one to thrive and contribute. It blows me away to look at the people that I went to graduate school with and to see where they are now, and to plot the different ways in which they got there, ways I would never have anticipated when we all got our degrees. Some have done the postdoctorate route while others have been in one position their entire careers. Some have moved from one position to another and some have gotten midcareer retraining. When I was in graduate school, I was so linear about the process because my education had been linear up to that point. Get your Ph.D., get your job, get tenure, get promoted. There you are. You are happy at 35. One of the lessons I have learned from watching the career pathways of people who were part of my generational cohort was how nonlinear the process can be. This can be tremendously reassuring to students in recognizing that all the variance of one's future is not determined the first year after one gets a Ph.D. Isn't that wonderful?

McWayne: I would like to give another student perspective. In talking about values, we were reflecting on the issue of giving yourself space to think about your values. If one is working with a mentor who does not necessarily share one's values or reflect the importance of process, then it is important to have a conversation with him or her. One might need to find someone else to

work with, because this issue of congruent, or at least not completely dissonant; values are important. Students often feel disempowered in the process of education. A genuine mentor will help one find their voice in the process: to say, "this is what I care about," "this is what I am passionate about," and "you can help me get there." It is critical to give yourself time and space to reflect on why you chose this path and whether you are here because someone told you that you needed to go here or whether you are here because there is something inside of you compelling you to accomplish these things.

Downer: I want to piggyback on that because I want to put out a challenge to all of the students here no matter where you are in your program. We also have a responsibility, as we negotiate this process and begin to appreciate not just looking at the hoops we are jumping through but what we are learning as we do it, to mentor younger students. I have been at USC for a long time, because I wanted to learn more before I left. When I first got there, I would tell new students to just get it done. There is this, this, and this to do. You can do it. Make sure you know what you want to research early on, find that mentor, and finish. However, the longer I have been there, the more often I sit down with a new student and ask, "What is your passion? What are you excited about? What are you interested in?" I do it in friendship. I say, "That is what is important. If you can do that quickly, that is wonderful, but if not, it is okay." One thing a mentor might do with older students is to promote that kind of social responsibility toward younger graduate students so it is not all on faculty mentors. Older students can take part in that.

Question: Can you speak to the role of the university in either enabling or hindering your ability to be a great mentor?

Tamis-LeMonda: All faculty members have constant tension, of course, with administration. That is the way it is. At NYU, if I agree to teach 40 courses per semester and write 3,000 articles, they would be thrilled, but the reality is, what you can do? It is our responsibility to educate administrators and be bold about that on behalf of students. I recall my 3rd year at NYU. I sat in the dean's office and the dean looked at me and said, "Catherine. You have a lot of publications but you do not have many sole-author publications." I looked at the dean and said, "If that is going to be the only way for me to receive tenure, I am never going to be tenured." Do I knock off all the students here? Do I knock off my collaborators? I was doing cross-cultural work. Do I take out the faculty affiliate at University of Tokyo? Whom do I knock off to appease you? I fought this, and so there is now no law or rule at NYU about having to be a sole author in psychology. There is an understanding. I fought for understanding about what collaboration was and the importance of having students collaborate on pieces. I am using that as one example. We need to educate administrators because, in essence, there could be issues about work, teaching load, and so forth.

We have this thing called scholarship where one is rated on one's research and then on one's teaching. I said to them, "How come we have these two as separate? Why isn't my research a piece of the teaching?" It is the most important part of it when I am mentoring students and they are engaged in research. That work outside the classroom is more valuable than any work in the classroom. I went to war on what I considered to be an artificial dichotomy. I happen to have a responsive administration, so the deans always listen to what I say. That is important because it could be a hindrance to the development of students. We need to go to battle about these issues.

Fantuzzo: We handle the issue of sole author by spelling it differently: s-o-u-l author. Ethically, if there are soul authors, which is the ethical sharing of all of the people who contributed, that accomplishes that. The battle with administration is crucial. It helps to reframe things, and in

some ways, the students are actually the best fighters. An example is this cross-university experience that Cathie and I have been involved in. The students have been going to the Dean with proposals, operating like Columbo. Students go to the dean and say, "Gee, would you be interested in supporting our scholarship? Would you be interested in increasing high quality experiences across major universities?" The dean says, "Of course. Wonderful." If we proposed it, we would hear, "There is not enough in the budget." However, the dean would have to sit in front of these incredibly bright, capable students who put together this well-formulated plan and say, "I do not care about your education. I am not going to spend $3,000 for your education."

You basically know what you need to be productive. You are not going to wait until the seventh inning stretch. You are going to present the things you need to be productive as you negotiate your position. Julia is a strong advocate for saying mentoring does not stop. Do not take a job if they are all losers in the department or if you cannot find someone whom you could have as a mentor in the department: someone who cares about you, who has talked with you, had eye contact, and actually had some tone of empathy when you interviewed. If there is no one there like that, stay away.

The notion is to use your skills to basically determine where you want to plant yourself. Julia was thoughtful and picked a wonderful place with wonderful colleagues who encouraged her to do the things she was trained to do; but you have to take responsibility for that. A job is not just a job. A job is an adult decision that one is making. An onus is on us. Everyone who is tenured has a responsibility to mentor the assistant professors who are not tenured. It is difficult. The autonomy thing is scary there. It is hard to be seen as paternalistic and telling people what they need. That is even more difficult than mentoring students. I do not have any ideas on that one.

Question: My question is different because I am a full-time graduate student and a full-time employee. One of the things that I find interesting about faculty is that because they have not done it a particular way, everyone assumes it cannot be done. Try to follow your own path, but at least listen to what others have to say.

I just finished up my Master of Public Health, and I started my doctoral studies in the fall. When I started, every faculty member said, "You can't take four classes. You're going to flunk. You can't finish in 2 years because you're a full-time employee. You're going to die." Then, when I did finish, everyone said, "Okay. You did it, but now you're going to be a doctoral student. You can't do this because you're going to fall apart." I want faculty members—because I do not have a mentor—to open their minds. See that there are many different ways to do things, and follow the student. If, as a student, I come to a faculty member or mentor and say, "Do you know what? I have been doing this and it has been working for me up to now, but I think I need to make a change," I want the faculty member to be willing to listen.

Oftentimes, faculty members are so stuck in their ways and in what they have done that they do not always give students the opportunity to create their own place. To me, that is important, especially because as part of my studies now, I am joining a field that is relatively new—spatial analysis along with youth violence. When I went to faculty members and said I was doing spatial analysis, everyone said, "That is so great. We will work with you." I said, "Good. Are you going to teach me something?" They would respond with "No, we want you to teach us because we do not know how to do this." So, try to get faculty members to be more willing to support you and to connect you with others. Sometimes, some faculty members are not willing to do that because it is something they have not tried. As a graduate student and as an employee, I am looking for people and looking for an experience with faculty members who are more willing to open their minds.

Salandy: First of all, I appreciate your comments. I have listened to many comments that I am dying to get at. One is that prior to students coming into the department or right when they come into the department, it is important to meet with a mentor and talk about expectations.

That is extremely important. I have been privy to two mentors: one horrible mentor as my major professor when I was doing my undergraduate degree, and one great one. I started doing a Ph.D. in molecular genetics and had a terrible mentor who said, "Stick with me and I will make you a star." That was one of his first things, and we never laid out what he expected of me and what I expected from the program.

I left there after 1 year and ended up doing a Ph.D. in human development and family studies. Right when I got in there, I spoke to another mentor who said that one has to talk about one's expectations with a mentor, whomever one is going to be working with. I did and that was extremely important. It framed our relationship and the journey that we were going to be embarking on for the next 2 years. That was extremely important, although that is not to say that things will not change. They change, but they change within the framework of the relationship that you build based on the expectations that you laid on the table initially.

Another point that I wanted to bring up is about the university valuing mentoring. It is coupled with the point of promoting mentoring in institutions and departments. Given the types of people who come to these meetings, we are preaching to the choir. There are faculty members in the audience who are interested in mentoring, and they know what is going on. There are people on the panel who are interested in mentoring, and they know what is going on. We need to reach the other 99.9% of the people in universities who know nothing about mentoring. They do not have a clue. One of the things I am appreciative of is that every year I go to a national institute of teaching and mentoring for ethnic minority doctoral students and faculty members. The ethnic minority doctoral students—Latino, Native American, Asian American, African American—bring their major professors to this institute every year. They have to go through a rigorous, intense, 3-day mentoring workshop with the student.

I took my major professor there the first year of my doctoral program. He came back and was a totally changed person. He said, "Everyone needs to know about this thing. They need to learn about this." When you go back to your department, it is important to try to get a mentoring mechanism established within the department and the institution, so faculty members know how to mentor. It is extremely important for ethnic minority students. There may be some unique issues involved in the mentoring relationship when one is mentoring a minority doctoral student. Faculty members need to understand the unique issues involved and get specific training.

How does one approach this issue of space? How does one navigate this to figure out whether or not to do it in 4 years or 6 years or rush through the program? A mentor taught me that graduate school is like a game of Dungeons and Dragons. One goes through this game slaying people and then capturing assets. One can capture magic potions and other things that help get through the game. He said, "Approach graduate training like that. Picture the bad people as toxic agents in your graduate life. Throw that away along with these other things that are not good in your life."

However, there are other things that are assets one can acquire, such as internships or fellowships like the "Putting Children First" program at Columbia University. There are many different assets that one can pick up along the way. They may extend your graduate program, and you may see people leaving. However, one has the map, and one can choose to map the layout the way one likes. One chooses one's map and goes through the game and slays the toxic things and collects assets. Then guess what? When one finishes, one can use those assets to get a job, be marketable, or decide to do more fellowships and gain more assets until one figures out exactly where one wants to be. I have my assets now, and I am going use them. I am going to use my potion and my wand. That is one good way to look at it. It may not work for everyone, but it worked for me.

Bulostky: I want to say something from the student's perspective. One of the things that I found as the best strategy to meeting some of these challenges is to recognize, as a student, that you are

your best asset. You should be real with your advisor to explore those avenues that will encourage you to move on your trajectory, to take advantage of all the opportunities that are out there, and to recognize those things inside yourself that you can foster and those interests that you want to build upon in the future. Many students do not feel empowered to recognize that they have a wealth of assets, and that they should be real with their advisor about where they are and what they want. Oftentimes in the beginning, at least when meeting with an advisor, you do not want to say, "I do not understand what you are talking about," or "that is not what I am interested in at all," because you do not want to look stupid. It is important that you come to a place where you can say, "Do you know what? This is what I want. This is who I am. This is what I believe in. This is where I want to go."

It is a two-way street. It is not just the mentor telling you what to do. It is you being able to tell the mentor what you want and who you are, and being real about your capacities as a person and where you want to go. That is critical. Students should feel as though they can be honest about who they are and be real with their advisor.

Question: I would like to throw something else in the mix. I would like to ask this panel about a mentor–mentee relationship with a practitioner in your research. Have you had that experience? How valuable has it been? What kind of lessons can you tell other students?

Downer: I can speak to that. There is one person in particular whom Julia talks about all the time, because she has been a mentor to our whole team. Her name is Ogie White, and she was a director of one of the Head Start centers with whom we worked. When I first started working with Julia, I did not know much about Head Start. It was very new to me. White was one of the first people in the center to show me what Head Start was all about. I told her that she did not have any idea how much I learned about the process of a Head Start center, and what the teachers do with children. I learned so much from shadowing her at the center and hearing how she enjoys promoting parent involvement, as well as her energy and excitement about what she was doing. I thought it was important for her to know that, too, because I am not sure that we always express to people in the community that they are important in the learning process of building partnerships and helping families and children.

Mendez: When I met White, she was a center director. The center was short on teachers, so she was also the lead teacher in the classroom, directing five classroom centers. I mention that to offer a sense of her commitment. I arrived and said, "Let me tell you about peer play and why it is so important for social competence and children." We talked and she listened and nodded for about 20 minutes and then said, "That is great. Do you know anything about parents?" I quickly realized that we were going to have a conversation, and our work grew over time. She helped us develop the parent intervention program that we are doing now. It speaks to the idea that research is continually evolving, and practitioner input is needed. One needs people to be real and have those conversations. That was very much her style.

Stephanie Childs' style is much more reflective and safe. When you talk with Childs, she makes you feel as though any idea that you have about a Head Start child is the most wonderful thing anyone has ever thought of. It is very motivating. Some of the practitioners whom we continue to work with make the work meaningful. They remind you why.

Raikes: Julia, something you said about autonomy not equaling independence resonated with me. A trap that many graduate students run into is that their advisors are phenomenally busy, so they feel as though they need to do everything on their own. Otherwise, they fear being seen as incompetent. What do you say to your peers when you see them struggling and you realize that if they were just meeting with someone on a regular basis, they could do so much more and better work? How do you tell your peers that this is so important?

Mendez: The great thing about having mentors is that you can quickly give others advice and have time for more questions. I will let you know what Margaret Spencer says about that. When you have a mentor or when you are a student, mentors give students permission to bug them. That is what it is about. Mentors are extremely busy because they are mentoring and creating opportunities. As the student, you have to say, "You agreed to mentor me, too." I always keep that in mind. I always say it is permission to bug me.

Even now, I know that I have permission to e-mail John even though he is incredibly busy with new students. That is why the expectation idea is so important. A student needs to be able to go to a faculty person and say, "Do I have permission to talk to you about these issues?" If they say yes, then you have that permission. If they say no, you have to keep looking.

Fantuzzo: I have my mentees talk to my family, because they are part of my family. I look at how I spend my time during the week and say, empirically speaking, that I spend almost as much with you as I spend with my family. What does that say to you? The notion is that we are talking about something important. The students need to realize what percentage they are of the faculty person's world—it is rather significant.

Downer: Julia and I have been creative about how to meet and how to talk. I will suggest having a quick lunch or grabbing coffee in the morning. It is not necessarily meeting in the department, the office, or the lab, but trying to squeeze in one or two questions here and there. That has been enjoyable as well as helpful.

Cristofaro: It is absolutely important to be in contact with one's mentor. As tremendously busy as she is, I know Cathie's office door is always open for me. There have been numerous times when I have walked into her office with a question about a home visit—something sensitive or challenging that I do not know how to address—and she always makes time for me. We set dates way in advance or have impromptu meetings in the elevator. It has already been mentioned for the student to take that initiative, because mentors are so busy. It shows your interest, values, curiosity, and passion for what you are doing. Without that initiative, one cannot achieve success.

Thompson: You also want to form the concept of a team because, first of all, a team is economical. The team is a nice place for junior people to hide until the senior people launder their biggest concerns and worries and create a dialogue, so they do not have to be the first person on the block to bring up a problem. It is important to have your peer colleagues actually surface tensions and conflicts. Then you know that you can build off of that. You can get some momentum from their raising the issue. It is important to utilize a good, effective team.

Downer: As a student, you should never have to make excuses for being curious and having questions. In a positive mentor–mentee relationship, even though both sides are busy, questions are always good.

Question: My first question regards institutional policy for becoming mentors. Obviously, mentors should somehow be qualified persons. I am from the Mayo Clinic, and I was an intern at Yale. The Mayo Clinic has an informal policy about becoming mentors, specifically, taking graduate students under their wings. Usually at the assistant professor level, there is no rule about taking someone under his or her wing unless someone is a M.D. or Ph.D. I would like you to share the policies from your experience in your institutions.

The second question is for the graduate students. There are many factors to consider when choosing a mentor. It involves many of these issues as well as the qualifications of your mentors. What are the most important factors to make you think, "This is the one I would like to labor with during my training?"

Fantuzzo: Vivian Gadsden is the chair of our graduate group at the Graduate School of Education. She has actually created a task force on mentoring. We have a doctoral Spencer Grant on urban educational research. Gadsden has collected an incredible collection of articles on doctoral research mentoring. If you sent her an e-mail, she might send you a bibliography of wonderful articles she has collected on mentoring. There is a literature out there, and there have been task forces at the American Psychological Association and at the American Educational Research Association (AERA) about these issues. What are standards for mentoring between doctoral students and faculty? People could use those standards for formulating policy.

Tamis-LeMonda: I would strongly encourage all universities to have these standards. We are doing that as well. The variation within any given institution or department is immense. I think of it as the meeting of the hearts and the meetings of the minds. Two things that are important when talking with your mentor is that you feel a connection and you feel that the person is there for you. I am flabbergasted when I hear colleagues of mine who have 3-week or 1-month waiting lists when their students sign up for half an hour. That seems absurd to me. If you are not passionate about the areas of the research in which I am involved, or if you want to explore other areas of psychology, you would not be working with me. It is important for you to get passionately involved.

An earlier question described faculty looking to their students for expertise. It does not sound like the initial format that I would encourage students to enter as their graduate experience. I always say to my undergraduate students who are applying to graduate school that they are not applying to a university—they are applying to a person. Do not say you are going to apply there because it is Yale. Who is the person at Yale with whom you are going to work? I applied to NYU because I wanted to work with Mark Bornstein. He was wonderful. I was excited about his work, and I applied because of him. I did not apply for any other reason. It is important in graduate school to apply to a place where you know you will be mentored appropriately both at the point of the heart and the mind.

Cristofaro: From a student perspective, when I was applying to graduate school, I was absolutely captivated with Cathie's work with parents and young children. I had tons and tons of questions. I sent her e-mails with 12 or 13 questions, and she replied to every single one of them. At one point, she gave me her home phone number to call her at anytime, and I did. That showed her commitment to her students, and that has been played out ever since. One gets this feeling right away from a potential mentor.

Salandy: I wanted to comment on something that Jason said about reaching back to students in your department to mentor them. It connects with perspective taking, because while I was going through, I mentored younger students. We created an association called the Doctor Scholars Association, which is made up of about 140 doctoral completers from the Southern Regional Educational Board Doctoral Fellowship program. Right now they are faculty members. We mentor approximately 440 doctoral students from ethnic minority backgrounds. We do that through a listserv and annual meeting, but the listserv has proven to be effective because we get doctoral students asking questions about all kinds of things from "Can we collaborate on a paper?" to "Can I room with someone at a conference coming up?" It is something that is real and ongoing. Once one starts mentoring younger students, one starts understanding the perspective of one's own mentor. When someone sends you e-mail, reply quickly. When something is due, make sure to have it on time and things like that. Once one becomes a mentor, one becomes a good mentee in one's relationship with his or her own mentor.

Fantuzzo: I appreciate you all coming and letting us share with you. Clearly, I want you to realize that mentoring is rocket science. Think about Einstein's equation—about changing it

around and establishing two-way communications. You have heard wonderful examples of people who are struggling with the process. No one has this process cracked, but the fun thing is that there are colleagues who are contemplative about the struggle. That is what we have to do to make the invisible visible and get people talking.

I am excited that this topic is on the conference agenda. We have to write and talk about this issue. This is a vital relationship for the future of our field. Perspective-taking and finding people who give each other space to talk about these important issues is essential. Lobby with administrators and policymakers who say at the federal level, "This is important." We have to say it is important to talk about the next generation of scholars and the quality of work they are going to be doing, and how well we want to care for them, heart and mind.

Bulotsky: On behalf of all the students, we want to thank everyone for coming and for having such a great conversation. Thanks to all the mentors who support us and made this happen.

WORKSHOP

Statistics and Common Sense: A Quantitative "Head Start" for Researchers and Practitioners

PRESENTER: Howard Andrews

This workshop provided an introduction to basic issues in research design, measurement, and statistical hypothesis testing. The focus was on design and analytic issues that frequently arise in conjunction with Head Start research and evaluation projects. The following topics were discussed: statistical power, reliability, validity, Type I and Type II Error, chi-square, *t*-tests, correlation, multiple regression, multilevel analysis, "significance" versus "importance," choosing statistical and data management software, and furthering Head Start research through a central registry of Head Start enrollees.

Miscellaneous

Creating Integrated Early Childhood Learning Programs

CHAIR: Ruby Takanishi
PRESENTERS: Rachel Schumacher, Sally Coleman Selden, Jessica Sowa

Ruby Takanishi: There are many early childhood education and care programs in this country and many funding streams—federal, state, and local. The best image that I can think of is that when one looks at all the funding streams that come down to programs or families, it looks like a rabbit's warren or spider's web. It is tangled and byzantine. It takes discipline and detailed orientation to figure out how one can have terrific programs that serve the needs of children and families at both the family and child level.

In this particular session, we will present policy-oriented research. This is research on early education and care and the policies that drive program delivery and impact children, versus many of the other sessions that focus on children's development, intervention, families, and so forth. Focus will be on studies in the states of Georgia, Ohio, and Massachusetts, and some locally-based studies in New York and Virginia funded by the Charles Stewart Mott Foundation that particularly look at Head Start and child-care collaborations.

Rachel Schumacher is a policy analyst at the Center for Law and Social Policy (CLASP) in Washington, DC, a national public policy and law organization that works on the economic security of low-income families. Her work focuses on early care and education policies that both support children's development and the needs of low-income working families.

Sally Coleman Selden is an associate professor in the School of Business and Economics at Lynchburg College in Virginia. She will report on her work supported by the Charles Stewart Mott Foundation on assessing early childhood collaborations, including Head Start, in two states. Jessica Sowa is a research associate working on investigating partnerships in early childhood education. She works with Selden and is a doctoral candidate in public administration at the Maxwell School of Citizenship and Public Affairs, at Syracuse University. In planning this session, we saw it as a conversation between individuals who have been studying the challenges in integrating all these funding streams and early childhood programs.

Rachel Schumacher: I will start by presenting the federal overview of the programs. People here might be familiar with different parts of different programs, and I am sure a lot of you here know about Head Start. I want to show you the three major sources of funding and major places where children are being served in early childhood education. These factors determine how these programs are being delivered, the ability of programs to work across systems, and the content of what is delivered to children.

The first program is Head Start. Almost 900,000 children are served by Head Start, based on statistics from the most recent year available. Head Start received $6.5 billion in federal funds in the last appropriation. One can compare that to the Child Care and Development Fund

(CCDF). The CCDF is a block grant used by states for state child-care subsidy systems. CCDF serves 2.2 million children in an average month and receives around the same amount total in funding in terms of appropriations. In fiscal years 2001 and 2000, there was a trend of using the welfare block grant for child-care funding. The reauthorization under discussion has major implications, not just in terms of the child-care block grant, but also the welfare funding that is being used for child care. This is an important point that many people do not know about. Lastly there are state pre-kindergarten programs.

Question: Do the numbers include matching funds?

Schumacher: The Head Start number is just the federal appropriation. The CCDF number is $4.8 billion in federal funds, and the $2 billion is what the states have to match. Often, when numbers are thrown around at the federal level, they do or do not include matching funds. One has to ask the question of whether it also includes state contribution.

On the state pre-kindergarten question, the $1.7 billion is based on the Children's Defense Fund (CDF) research, which is described in the *Seeds of Success* book that they published a couple years ago. We do not have good national figures on the state pre-kindergarten program, on how much money is spent, or for how many children. CDF tried to pull that information together a couple years ago. Based on those figures, about 724,000 children are served, with the program receiving about $1.7 billion in that school year. We do not know how many of these children are being served in multiple programs and how much overlap exists.

The basic parameters of the Head Start program are that it is a federal to local grant program; the mission is school readiness competencies for poor children, not just cognitive, but social and emotional development, and family support. It serves children 3 to 5 years of age, but there is also an Early Head Start program. The program is free and is not tied to parental work status. There are many factors that go into the flavor of the program and its mission. The program is scheduled for reauthorization next year, which means Congress is going to take a look at whether it was adequately funded, how much they want to fund it for the next few years, and what they want to change about the parameters of the program.

The Child Care and Development Fund is a block grant to states. It has a different flavor than Head Start, which is an actual program that goes down to the local level and that has parameters for how it serves children and families. On the other hand, states get to make many decisions about how CCDF is implemented. Most of it goes out in the form of vouchers received by parents, which then go into the child-care market.

States set eligibility levels. They can set them up to 85% of the state median income, but most states set limits much lower than that. They do not have enough resources to provide the full extent of possibilities of such a program. Our research shows that we still only serve one out of seven children who would be federally eligible for the program. Most parents have to pay a copayment; it is not free. Only 4% of the funds are set aside for quality, compared to almost 25% for the Head Start program. CCDF is being reauthorized now.

Regarding state pre-kindergarten programs, we know that 41 states and Washington, DC have some type of pre-kindergarten program. Many of these programs are extensions of Head Start, where state dollars are used to expand the Head Start program. These programs are primarily funded with state dollars, although there is some use of federal dollars. There is a new phenomenon of using Temporary Assistance for Needy Families (TANF) dollars, which are welfare block grant funds. As state funds have been freed up in the last few years, they have used that money for early childhood initiatives.

Most state programs are limited to certain categories of children and are not universal. There is a trend to thinking about offering universal pre-kindergarten, but Georgia is the only state that has done that for 4-year-olds and is one of the states we profiled in our research. Other states, including New York and Oklahoma, are working toward that goal.

The programs are usually part-day, part-year. They often allow delivery in settings that are not the school, which is something people often do not know. There is great variety in how high a level of quality they look for, like whether there is a curriculum standard or any type of comprehensive services in addition to the educational component. There is a wide variety of quality in these programs.

I want to focus on some of the key areas of difference that we should have in our minds and some of the challenges for people coordinating across programs at the state and local levels. First of all, there are the missions of these programs. Work support is the focus of the Child Care Development Fund, and child-care subsidy programs tend to focus on that. Children need a place to go so that their mothers can work. Other programs focus on child development and education, which makes a big difference on how policies are formed.

Eligibility requirements and the processes that parents go through to get into the program and to keep their child in the program also differ between programs. Factors include the age of the child, family income, parental work status, and changes in family circumstances. If the family income changes, does that mean the family has to pay a different amount or suddenly cannot be in the program, even though the program blends funds from CCDF and Head Start?

It was also interesting how important distribution of funds was, in how the funds come down to programs, what impact that can have on the program, what they can offer, and how much they can plan ahead. Head Start money comes down as a grant and one knows how much one has for a year. Child-care subsidies come down as vouchers; parents can come and go from the program as they please, so there is a different flavor to that type of situation.

Lastly, and most importantly, are the standards for programs, with the strength of requirements that must be met in order to serve children, what programs must be offered, and what the staff must look like. Those standards are different among the states and federal programs and are important issues to consider when thinking about how to integrate across programs.

The CLASP study that we did in partnership with the Foundation for Child Development posed the research questions: To what extent the federal rules hinder collaboration when states seek to promote early learning, and what examples exist of where they promote collaboration? What lessons can be learned from looking at states that have made efforts to promote early learning through major early childhood initiatives?

We looked at three states: Georgia, Massachusetts, and Ohio. Georgia has a universal pre-kindergarten system that is free of charge to all 4-year-olds in the state. Their pre-kindergarten program and Head Start programs now serve approximately 70% of 4-year-olds in the state.

Their Office of School Readiness administers the program. It is separate and not imbedded in any other particular agency. The money comes from a state lottery. As a note of comparison, the funding for this program in Georgia is bigger than the entire CCDF child-care subsidy program for children ages 0-13 years of age. It is clearly a well-funded program, and it provides early learning opportunities for children 6.5 hours a day, 5 days a week. It does not have to be delivered in schools; it is delivered across programs.

Different approaches work for different states. States have different expectations and cultures of what they want to see done in terms of integration. Georgia wanted something focused on pre-kindergarten and early learning and wanted to talk about it in that way. In Massachusetts, we attempted to choose different approaches, because states can integrate efforts in many different ways.

Massachusetts has Community Partnerships for Children Program for 3- to 5-year-olds where funds from the Department of Education go to local communities. These communities organize councils with representation from Head Start, child care, and the schools. They sit down together to discuss their needs and then develop plans for how to best serve their community. Those funds serve children and families with incomes that are up to 125% of the state median income, so it is a relatively high income level. They charge a copayment. They have some similar policies to their child-care subsidy system; however, all the programs that participate have to become accredited within a 3-year period.

It is not exactly like the Georgia program, but it tries to improve quality. The number of accredited programs in Massachusetts over the last few years has skyrocketed. They have the most accredited programs of any state, and they are not a big state.

Ohio has a Head Start child-care partnership model. They were out in front and have been doing this for a long time. What they do is put state funds into Head Start programs to expand their services to provide full-day services. They pay particular attention to working with child-care partners in their communities, including family child care, to provide an array of services to the Head Start-eligible population in the state. Their original goal was to reach as much of the Head Start population as possible. Our overall finding was that collaboration is difficult, in that the federal rules present challenges to the states.

We identified five key areas of collaboration challenges, which we will talk more about. They had to develop comprehensive vision, expand fiscal resources and address the regulatory differences across these programs, and figure out ways to get the structures in the states to cooperate. It is challenging to build constituencies across states where people have not talked to each other before this point and have thought of themselves as serving different children.

Lastly, they had to track their progress and measure their results, because if they do not, they may lose their political support. That is a big issue. In summary, collaboration is difficult but not impossible.

Sally Coleman Selden: I want to take a few minutes to talk about the purpose of our presentation, which is essentially threefold. First, I will describe our research design, then Sowa will talk about our research question, and then lastly we will go over some of our findings.

As we approached this project, we were residing in Syracuse, New York. New York State had a universal pre-kindergarten program in policy but not in practice, so this study was built upon good ground. I will talk about why we chose New York State and Virginia, and then what we have done and found thus far within each of the two states.

First of all, we used a structured, comparative case study design. That involves the use of an intensive data collection protocol in each of the selected cases. On average, we visited sites at least four times throughout the duration of the study, and we have just finished our 2nd year of fieldwork. New York State was particularly interesting because in policy, it has a universal pre-kindergarten program. It does not have that in practice, but the state requires at least 10% of the pre-kindergarten programs be provided in community-based sites. That is important because we were essentially interested in programs that are partnering or collaborating using at least two public funding sources to provide full-day, full-year care. In order to be incorporated into our study, they had to use at least two public funding sources, which usually means subsidy money, preschool dollars, or Head Start dollars. Full day is not the school day; full day is typically before school and after school care. In other words, we were looking for programs to support working parents. That is essentially why we started with New York State.

We chose Virginia because it also has an interesting policy context. The way they have implemented their preschool program is essentially mutually exclusive from Head Start. If a child receives Head Start funding, the child is not eligible for the Virginia Preschool Initiative. That is not true in New York State, where community-based programs are encouraged, but Virginia does not have that written into their policies.

We thought these two states were at different points in terms of their early care and education policy. In each of the two states, we have chosen 10 sites that are collaborating or partnering across at least two of those funding sources. We were careful to choose both urban and nonurban sites because we were interested in what is going on in rural areas. Our site selection in New York State was not based on an understanding of the universe of programs; it was too complicated to get that information. In Virginia, before we selected our sites, we did go into the field and identify all of the programs in the state that were collaborating or partnering to provide full-day, full-year care. From that point, we tried to draw from urban and nonurban

areas. Then we had two control sites that provide full-day, full-year care to children from families with low incomes, but who do not receive preschool dollars or Head Start dollars.

Lastly, I talked a moment ago about the fact that we are using a structured comparative case study design with multiple data-collection tools. We are conducting a series of interviews with different stakeholders, administering a series of surveys within the organizations, doing structured classroom observations, and doing extensive document analysis. Our research study has both the policy orientation and, more importantly, an organizational approach.

Jessica Sowa: In designing the study, we realized that we wanted to share our findings with multiple audiences. Generally, we were concerned about the challenges that collaborations and interorganizational partnerships might pose for the management and implementation of these programs. In addition, we wanted to know about the how and the why of collaborations.

First of all, why are people getting into this? What are the benefits for different organizations to come together to provide services? How do they do it? How do they institute these partnerships and bring together the multiple sources of funding? We have found that there is not a set model; there are many different ways to put these funds together. We also wanted to know the impact of policy-level variation on what is occurring at the organizational level.

From our preliminary field work and pretesting, we saw that Head Start and federal funding has a big impact on nonprofit child-care centers that may not have been exposed to any broad federal regulations before. We wanted to measure the impact of different levels of federal funding on organizational conditions, human resource management, financial management, implementation decisions, and classroom quality.

Finally, we wanted to evaluate the impact of variations in setting and services on the organizational conditions. The collaborations have various levels of intensity and various degrees of comprehensiveness of services. Finally, we wanted to know how they impact the parents themselves and whether the collaborations affect their assessments of how well their children are learning and how flexible the program is in serving their needs as working parents, and whether the collaborations affect the quality of the relationship between the teacher and the child and between the teacher and the parents.

We have completed our 2nd year of data collection, so we have finished our primary data collection and are moving into analysis and writing. We have done some initial policy white papers looking at why organizations collaborate and how they reconcile the policy contradictions that arise in putting together these collaborations. Those are all available on our web site.

Takanishi: Two study teams have reported on several states and also at the local level about some challenges and issues in creating these kinds of integrated learning programs.

Question: I have not heard about children with disabilities. We are trying to find inclusive sites for these children, so I am curious if you looked at that issue.

Selden: Several of our sites focus heavily on that issue, and one of our New York sites is a particularly interesting case. It is a for-profit organization that specializes in providing services for children with disabilities, but they also run a child-care center in an urban area. They are partnering with a local Head Start grantee, bringing in Head Start funding to that child-care center. They have the Head Start teacher and a full-time special education teacher together in the classroom and have brought all those services together. The two lead teachers have some challenges just figuring out the best way to run this collaboration, but it seems to be working well.

In Virginia, they are partnering with school districts to create inclusion classrooms. Some are inclusion classrooms by design, and some are by default. The ones that are by design have infrastructure set up as they enter into that partnership; the others realize they have children needing special services so they approach the school district to provide the support services. The relationships are developing, depending on the need.

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Schumacher: We did not look specifically at that issue, and our work is more at the state policy level than individual programs. A point of interest is that the Massachusetts Community Partnerships program grew historically out of the Department of Education's concern about the need for inclusiveness. It was built on a network of community partnership councils that had been formed to deal with inclusiveness issues; they found that the schools could not do this alone and needed to work with community-based providers to offer inclusive care.

Takanishi: One of the issues we did not talk about has to do with how the studies were conducted, and the "leave no child behind" legislation. It also funds preschools, so that is another funding stream entity that needs to be taken into account. The other is what you mentioned about the children with disabilities. That will be reauthorized next year.

Our web site, ffcd.org, will soon have a working paper by Don Bailey, head of the Frank Porter Graham Institute at the University of North Carolina, which addresses some of these issues. It is an interesting twist addressing what people can do to increase access to good early childhood programs and the provisions of preschool programs for children with disabilities. He wrote the paper because we felt that any effort to be more inclusive in the early childhood program area needed, as well as an important funding stream, preschool provisions like those found in the Individuals with Disabilities Education Act (IDEA).

Question: In Ohio, data are collected electronically through Galileo software, and some full-day child-care directors are struggling with not just with how to use it, but with the implications of what it means when the state collects that information. I wondered about the other states and the response to outcomes. How does one integrate that? Are you looking at how people respond to those findings?

Schumacher: We found that in organizations partnering with Head Start, as either a grantee expanding certain classrooms to full-day, full-year care, or a child-care center bringing in Head Start funding, the partnerships can present challenges for the teachers in those classrooms. The efficacy of the Performance Standards and the outcome measurement has been shown, so we are not suggesting that that should be revised. There needs to be thought given as to how that works in a full-day, full-year classroom, and the challenges it presents for the teachers. Many of the teachers we have seen experience high levels of stress and burnout because they have paperwork, home visits, and other responsibilities. Finding time to do all those tasks is a real challenge.

Tools like information technology can facilitate the teacher's work. Even additional funding for substitutes can be helpful. One of our sites had one full-day classroom and a Head Start grantee. That teacher felt left out of the overall organizational culture because the part-day programs had meetings and even lunches together, but that teacher could not leave class to attend. Some thought must be given to what we need to adjust and support now that we have moved toward expanding Head Start services.

Selden: There have been discussions in New York State. Virginia is participating with a dozen other states that are collaborating to identify what would be the appropriate school readiness measures to collect. Virginia is not yet at a point where there is much formal integration across the programs. Sowa mentioned that it is based on site-by-site models. Every single site has a different approach. It is a huge stumbling block and a barrier when one is talking about collaborating with Head Start, because especially with the community-based programs there are teachers, for example, who are required to use particular record-keeping procedures, but who are not trained to do it. It does create additional red tape and requirements, so that is a barrier to collaboration.

Sowa: We have spoken to teachers about that issue. They all see the paperwork as valuable; they do not see it as actual red tape, but are struggling with how to fit that in and manage it.

Comment: The issue on getting the data for the part-C or part-H IDEA money is in the 21st Congressional report. It has been captured for the past 5 years, indicating the number of children served since 1995. Part C was called Part H. Head Start has tracked dollars and children since 1966, but the IDEA funding is only tracking the last 5 years by age.

Schumacher: There is such an array of programs, large and small, all filtering down to state and local levels. What we do not have is federal leadership or a sense of how to put these data together in a comprehensive way so that we can understand where children are being served, and if they are being served in multiple programs. That is one piece of the puzzle that we would all like to see solved. In our study, we found that state leadership is necessary, along with federal guidance and resources. One of the other barriers we saw to building a complete picture of where children are is an incredible lack of resources and capacity of data systems at the state and local levels. Most of this is driven by what the federal government requires to be reported, so there is a large role for the federal government to require good data reporting as well as the resources to have that happen in a coordinated manner.

We saw the states going out on their own and approaching data collection in different ways. Back to the first question, Georgia tried to look at school readiness and how children were doing by the time they reached kindergarten. Georgia's Office of Education Accountability, which traditionally focused only on kindergarten to 12th grade, has now made it clear and has the governor's go-ahead to start focusing on appropriate ways to measure the school readiness of these young children as they enter kindergarten. Over the next 4 years, they will likely struggle with the appropriate way to measure this issue.

Massachusetts has always been clear that they do not want to target individual-child outcomes and to get into this in a way that could be used against particular programs. On the other hand, they thought it was important to have data showing how resources in programs affect how children come out of programs. They have conducted a cost, quality, and outcome study that was replicated across the state, and they found interesting information. For example, staff serving children from families with low incomes were much less likely to have degrees than staff serving children from families with higher incomes.

Ohio is part of a nationally funded partnership impact study to see how these collaborations are working. Hopefully, results of that research will come out soon. Someone brought up the outcomes study, which was just in its infancy when we were writing this paper. Computers have been placed into pre-kindergarten programs including Head Start and some child-care programs to collect data about child outcomes across systems.

The idea of outcomes measures is taking hold at the national level. We definitely saw it in the educational format, and it will probably come down the pike through other early care- and education-focused legislation. We will also talk about Senators Kennedy and Greggs' legislation on early care and education. Even though the research is not clear on how to move forward with outcomes measurement in a productive way, something is definitely coming down the pike.

Question: I am a Head Start director in Palm Beach County, Florida. I will try to tell the Florida story in a nutshell, which involves school readiness legislation. It created a state partnership forum whereby the state would have responsibility for all publicly funded preschool programs. Local coalitions, which could be multicounty or single-county coalitions, had the same responsibility at the local level. The membership of the state partnership, as well as the local coalitions, was predetermined by the legislation. It included the Head Start agencies with their local coalitions. Also, because the Head Start funding was not a part of state block grants, there was opposition from the state government for a waiver that would allow the Head Start funding to

be integrated. Now, 2 years down the road, my local coalition is interested in functioning differently. That has resulted in the traditional providers and services no longer being provided by us, but being implemented by other state agencies providing services and the child-care resource and response services funds going to us.

It will be instrumental to look at how your work informs us of what others are doing at the ground level, in the early stages. Some of this work is early in the process. There are some who tend to look at what some of the other states are doing, such as Georgia. I struggled with trying to say to the programs and to the policy makers that collaboration can occur. It is happening well in communities all over the state, but it did not have to happen in one single way with all the money going into one pot. My question was whether you looked at local programs and collaborations.

Sowa: You are absolutely right. The various models and ways in which people collaborate differ. In looking at our local arrangements, in only two places is there local infrastructure where one government entity receives all funding sources and then contracts with various entities to provide those services.

It looks different everywhere one goes, so we are interested in knowing the implications of these different arrangements, in terms of impact on the organizations, classrooms, and parents. We are finding that there does not appear to be a single best model. Funding sources can be blended or partnerships can be created in multiple ways. Only one model blended fiscal resources; there are other ways in which people are partnering or collaborating. For example, sometimes they are housed in the same building, so it is easier to create a partnership where there is a sharing of resources and services but not necessarily sharing of dollars. Many ways of collaboration exist. We are still in the beginning process of sorting through the implications of those models.

Selden: We have found that the degree to which people believe in collaboration impacts the kinds of models that arise. In New York, everything is devolved to the local or county school district level. Especially with pre-kindergarten, we found that people's level of commitment in working with community contractors significantly impacted how these collaborations were arranged. In some places, people get money and never see the school district again; in other places, they work together to bring the community together for training, to set up billing systems, and so forth. The variation in commitment has a big impact on what occurs, especially in New York.

Question: I am from Orlando, Florida. One of the issues I am talking with the local program coalitions about is that there needs to be three separate coalitions. For two of our coalitions, the public school districts help them out. The third one is getting other funding. My question is about parental choice, which seems to be a huge issue. Have the school districts dealt with the issue of parental choice?

Schumacher: You raise an important question. Whether there is an imperative to have parental choice and whether that is in the policy intent or not makes a big difference, because that will affect the programs.

Comment: It is in the Florida law.

Schumacher: The Florida law says that parents should be able to choose from an array of all the programs in the community. How that is worded can make a big difference. Essentially, one of the issues that have been raised is what one must do to make sure everyone comes to the table and stays at the table. In the research that we have reviewed, it seemed that people need incen-

tives to come and sit at the table. People often come because they know they might receive some benefits out of participation, such as funding, increased enrollment, or quality improvements.

Comment: There is only one outcome that drives the funding eventually, and that is a performance outcome when the children start school.

Schumacher: However, with the Florida program, there was no new money coming in. You were given an opportunity to have an influence over the existing funding but not an incentive of new funding.

Comment: The state was asking for us to serve the same number of children with increased quality but no increased dollars.

Comment: There is one other issue raised—that no other partner in public school districts must charge fees.

Selden: When talking to people in the field in Virginia, they feel as though there is competition between Head Start and the Virginia Preschool Initiative (VPI) because of the way it is set up. If one is served by Head Start, they cannot be served by VPI. They are mutually exclusive at the child level. That does not mean the organization could not deliver both. We only found a few organizations doing both the Virginia preschool program and Head Start. It is much more prevalent in New York State.

What is interesting about New York State is that a child can be served a half-day by the universal pre-kindergarten program (UPK) because its funding source is based on a half-day model, and Head Start can fund the other half-day for children. There are some benefits to that system in terms of available resources.

Virginia is interesting because they require a local match for Virginia preschool; the UPK program in New York does not. That makes it more difficult, especially for some school districts where resources are much more limited. They cannot easily afford that local match. Their day is considered the school day, as opposed to New York where it is half a day, so the amount of money from the subsidy pile is much smaller in Virginia as compared to New York.

These issues create dynamics for parents. It is an issue of access. Access is centralized in some places, as in one local office. In other places, the point of access is where the service is. Sometimes, one goes to the school district and they decide which preschool program will enroll the child. Every county differs, and that is the challenge in Virginia and New York State. All these decisions are made at the local level, from reimbursement rates to eligibility determinations to how services are accessed. There is no centralized process that transcends those counties across the two states, so it can be confusing for parents.

Schumacher: There are some important issues raised here that resonate with our research. One issue is getting back to how one brings people together in a way that will be productive. Funding incentives are important, where there is something that people will get out of it and where they think they will be able to deliver a better service and have more funds available.

People also need enough time to plan and get to know each other. People cannot be thrown together and expected to make a plan by next month. They need to interact with each other in a facilitated environment with someone who is helping them to understand each other's programs. Sometimes people have not worked together before. Tools for collaboration are available through the Quality in Linking Together (QUILT) program. Some states have created their own type of QUILT; Georgia has now funded a Head Start-child care collaboration entity that will provide technical assistance. These infrastructures need to be built in order for collaboration to work. It is not a one-shot deal, and resources will need to be available throughout the whole collaboration process.

The second important issue that I heard is the way funds go out plays a big role in how collaboration works. It can be done in such a way that makes people feel like they are competing, or it can happen in a way that makes people feel like they are making the best out of limited resources across programs. It should not be set up with an idea that there will be double-dipping or fraud. That type of worry often leads to policies that make it difficult to collaborate.

For example, Ohio had a policy whereby if child-care subsidy dollars were put together with state Head Start funds for part of the day, one could not charge for a whole day of child-care subsidy. They backed out the part of the day that was served by Head Start. If that happens, there are not enough funds to do a high-quality, full-day, full-year program. It costs more than what is currently put into the child-care subsidy system to do high-quality, full-day, full-year care, and that is what we want for the children. How the funding goes out can make a big difference to the collaboration processes because everyone has a bottom line to work with.

Comment: In anticipation of the issue of measuring child outcomes in our state, we wanted to develop a partnership institute, similar to what Schumacher mentioned, to promote partnership between Head Start and child-care programs to yield useful information about outcomes down the road. We promoted these partnerships and this institute, and we hired someone to provide technical assistance behind the partnership. These partnerships require an ongoing look, rather than forming the local communities, walking away, and hoping they do well. The ongoing technical assistance is beneficial.

We have used a framework for categorizing the partnerships, looking at four or five different stages of development from introductions to full maturity; those are the developmental stages of partnerships. What are the contents of the partnerships? What are they made of? Are they only training? Are they sharing transportation? Are they sharing funds? We have a lot of rich information about the collaborations aside from the typical descriptions like, "Well, we are collaborating." Collaborations can have a sophisticated framework.

Then we want to be able to look at how to measure child outcomes in Georgia. I will tell you that even though we call ourselves the Office of School Readiness, we do not have a clue what that means.

Question: Haven't you been collecting some data? I thought you had collected data on outcomes or classroom quality.

Comment: We have collected data on classroom quality, not child outcomes. However, we have a governor who says that he sees an increase in Iowa Test of Basic Skills (ITBS) scores in the third grade, and he thinks it is a result of the Georgia pre-kindergarten program. We are nervous about that because we do not want that to necessarily be the measure of the effectiveness of our program. It is great, but we are not in business solely to raise test scores in the third grade.

We now have a framework where when we start collecting child outcome data in the Georgia pre-kindergarten program and overall in our early care and education system, we will have one way of looking at whether or not collaborative partnerships have any effect on child, community, and family outcomes. We are looking at a variety of issues, but at least we will have a framework that can evaluate both items in the Georgia pre-kindergarten program and the Head Start or child-care programs, as well as whether the mix provided by collaborations improve overall quality of programs, child outcomes, and community-based involvement. We are moving in the right direction, but this is 6 months old and just a framework.

Question: In looking at these collaborations, are people thinking about taking advantage of the formation of these collaborations to further some other outcomes, like community outcomes? In some of these populations, there are so many other issues.

Selden: There is a locality in Culpeper, Virginia that has done just that at the community level. It is one of the only places that have put it in that larger context, in terms of the whole community. What has been striking to us is that no matter what is happening at the state level, people in some areas remain uninformed about what is going on at the state level. Everything that is occurring at the local level is based on what we consider the entrepreneurial leadership where people have a need and a shared desire to meet the needs of working families and children and they are seeking ways to do it.

QUILT just came into Virginia, and they conducted a series of focus groups all over the state. I attended one and was struck by the fact that some local partners had absolutely no knowledge of any other policies. They did not even know about the Virginia Preschool Initiative (VPI). I was startled that they did not even know that the Department of Social Services set the rates. It suggested a huge disconnect—a major gap. There is a policy world out there, and there is a practice world in the field. I applaud the work that QUILT and other people are doing because they are desperately trying to bridge that gap and encourage service providers to get involved.

Exciting happenings are coming down the pipeline. They are searching, looking for partners to serve the children and their families in the way they need to be served. We have one site that decided to participate in our study because they were desperate to collaborate with Head Start and they did not know how to gain access to Head Start. They felt that participation in this project was an avenue. These are exciting prospects.

Question: Are there state collaboration offices?

Selden: Yes, in Virginia, for example, they have finally hired a collaboration director, but the position was vacant for over 1 year. She is initiating this effort with the people at DSS and Head Start, and it is on the governor's agenda.

Schumacher: Head Start funds a collaboration office in every state. Some of them are excellent, influential, and strategically placed in either the governor's office or elsewhere, like the Office of School Readiness in Georgia. There is great collaboration across programs, but in some states, they are marginalized. It depends on the state. It is an issue of politics and funding. In Ohio, they had an active collaboration person, but she moved to the Child Care Bureau and the position has not been filled yet, so it is a challenge.

Question: We are having difficulty as far as the quality of the program. We wanted to make it more of a development program. How do you hire, how much you pay, and so forth? We are having difficulty collaborating in that manner. Is there anyone who can help us with that, to see how we can make it happen?

Comment: I have collaborated with close to 20 child-care centers. Before I entered into partnership with them, they had to make a commitment in writing that they shared in the vision, the comprehensiveness of the program, and focus on quality. Then we could enter into a partnership and they could participate in all of the training and technical support that we provided.

Schumacher: The mission and orientation is incredibly important as a basis. The time and learning about each other is important, but much of this comes down to resources, and child-care programs traditionally have not had anywhere near the resources of Head Start programs and some pre-kindergarten programs. Their services are usually paid for at the barest minimum. They do not get that quality component set aside, and they do not get extra money for salaries. When we looked at collaborations, we saw that Head Start grantee agencies sometimes invited a child-care partner to attend a training, and the child-care people could not take advantage of it because the training was on Friday, a day on which they teach. Child-care centers may not have

any money for substitute care, so they cannot pull a teacher out and they do not have the funds to attract teachers at a higher income level. With a higher training level, salaries must be higher. These all factor in, so if Head Start grantees have extra money to collaborate, some of that should go to the child-care provider or they will likely not be able to participate.

Comment: They should develop an agreement. We have to make sure they are getting enough so they are not being set up for failure.

Selden: You are doing exactly what we found in places that have been highly successful. You mentioned the issue of teacher salaries and quality. In the collaborations studied in New York State, a career ladder emerged. People would enter the ladder through a child-care center, then they would go to Head Start, and ultimately, they wanted to get into the school district, because the school district in New York State paid the best salaries. This created some weird tensions. To address this issue, some people have agreed that they will not hire people who work for another agency in the partnership, which helps the partnerships to work a little better. However, this does not address the wage differential issue, which has been problematic. For example, some places have paid their Head Start teachers more, whether they are VPI teachers or UPK teachers, because of the required credentials. In order to get people that have these credentials to meet the quality standards, they must pay them. This creates all kinds of organizational problems.

One of the biggest challenges is with the Head Start Performance Standards. That creates an enormous barrier. The grantees that we talked to have essentially said that it is a relationship that creates the quality. In some places, they only look for accredited programs, and that works well in some areas, but it will not work in many nonurban areas where nationally accredited programs do not exist. It starts by setting those expectations before entering into that relationship, by literally bringing people along. It is a painful process on both sides; it is painful to the people who are saying that we have these quality standards that have to be met, and to the people who believe in their own minds that they run a quality program. It is all based on how one structures and interacts. That is individualized to the particular sites, but setting those expectations is one important way to start.

Sowa: I read something the other day about the idea of a collaborative dating period, like when one is getting to know a significant other. If organizations can come together and talk about their vision, their orientation toward early care and education, and get to know each other first, those sustained relationships will help keep the collaboration going in the future. We definitely saw that in one of our sites. They had a difficult time getting together; it took them about 3 years and three different models. They had QUILT come to them to mediate and figure out how to get it to work. It was that dating period and the relationship between the two directors and their shared vision that helped keep it rolling, rather than deciding early on to scrap the partnership.

Selden: The one message I would send to people is not to give up after 1-2 years even though many people throw in the towel. For those programs we have seen that are effectively partnering and collaborating, it usually takes a period of 1-3 years before they get to that point.

Question: Someone mentioned salaries and qualifications for teachers in 2003, and that Head Start teachers will have to be college educated. How will that affect these partnerships?

Schumacher: They will be in trouble. This is a huge concern for people. We are starting to see additional resources emerge such as teacher programs. They are trying to figure out ways to access programs. At least one Head Start grantee has developed its own relationship with the local college, but we hear this issue voiced time and time again. They are extremely concerned about that requirement.

Comment: Especially if they are full-day, full-year programs. They have to be in class at 5:30 p.m. in the evening.

Schumacher: Absolutely. One fairly unique program has a relationship with a college who does it during the working day, so that gives them release time. It takes many resources to do that.

Question: I am concerned about the collaboration of Head Start, child care, and day care. I am from a Head Start agency in New York City. They come together to collaborate, and I do not mind sharing my Head Start dollars, but if I am responsible for performance standards and have federal reviewers evaluating my program, my feeling is that anyone who receives Head Start dollars should be under the same criteria. New York City ignores the federal performance standards. Until we get politics out of people wanting to run the program for day care, we will definitely have problems in terms of partnerships. My colleagues in day care need to have training and all the other kinds of resources that Head Start has. I do not mind sharing as long as we are on an equal basis in terms of quality. What also bothers me about 2003 in terms of credentials for teachers is that in New York City my teachers now have to be certified.

Question: My question is more of a reflection on what I have seen in programs. Collaboration is happening in wonderful ways across the country, at the state and local levels. Federal regulations are not getting in the way. If federal leadership means more money, I am with it. If federal leadership means more regulations, either child care would have to look more like Head Start or Head Start would have to look more like child care, and we will drive the market in uncomfortable ways. We will get in the way of these partnerships that are happening out there. Could you tell me what you mean by federal leadership?

Schumacher: When I mentioned federal leadership earlier, I was talking in particular about data and research, which most people can agree on. Collaboration is certainly happening now, which was a major finding of our report. We had expected to come up with a list of specific issues, such as a piece of legislation about barriers, that should be changed in reauthorization, but that is not what we found. We saw that many changes are in progress already.

However, other changes would be helpful and I lean toward allowing more flexibility. In a world of finite resources, and with a mandate, particularly in the child-care programs, to serve working families or those in education or training, there is concern. Many state child-care subsidy policies get in the way of collaboration because they make it difficult for families to get in and stay in the program. The federal leadership has said, "Look, if you are collaborating, you can have some more flexibility." I am not sure that the message has gotten out, and it is still difficult for states to follow through on that.

States are worried about being caught serving one parent who is no longer working, when they may have a waiting list of 300,000 people. It is definitely one of the constraints, and there are ways to allow more flexibility. There are all these barriers: copayment requirements, state-set eligibility levels, and frequency of families having to determine child-care availability. These are the states' choices. We need some federal leadership to say that it is okay to be more flexible, but the mentality of the program is not based on a collaborative approach. There have been many efforts in the last few years, with Head Start collaboration directors and QUILT. Head Start has done a lot to promote collaboration, but there could be more. Some of it comes down to the nitty-gritty rules, and we just need a signal giving states more flexibility with their programs.

Takanishi: We will use the last part of this session to talk about what we see in the future, and what are the next steps. It is obvious that collaboration is difficult, but on the other hand, there are ways to do it well. There is experience that we can share and learn from. The National Conference of State Legislatures (NCSL) has information on their website. They recently com-

pleted a 50-state survey looking at legislation state-by-state to find out how programs can better work together. That resource has been useful for some people, and I recommend it to you. Clearly, what NCSL's analysis shows, depending on one's spiritual orientation, is that either the devil or God is in the details.

To keep us from falling into great despair, we thought it would be useful to talk about what is on the horizon and about pieces of relevant proposed legislation with a possibility of passage either this year or in the immediate coming years. This includes some of the training, collaboration, compensation, and regulatory issues. The handouts here arrayed the proposals as to what we know and looked at the different provisions and how the proposals compare. I encourage people to make their views and experiences known to the individuals who are making these proposals. I would like to underscore the word proposals. These are what people are saying they want to do, but they may change their minds with some input.

Schumacher: The President recently announced an initiative to promote early literacy. What was interesting about that in terms of integration is that he has discussed proposals around Head Start and child care. There were items mentioned about integration, increased training for Head Start people on literacy, and inviting child-care people to be involved in that training. There was also emphasis on the Head Start side about putting items in the child-care legislation reauthorization to require more measurement of progress and more focus on quality. Unfortunately, there are no new dollars for any of these initiatives. The handout shows the provisions of the Bush administration plan, the final House legislation on child care and welfare, and the Senate bills that are currently in play. From where you sit, what would help states with collaboration in early education? What would be helpful to move people forward?

We have the provisions of the Kennedy, Gregg, Murray, and Voinovich legislation, the Early Care and Education Act. We expect this piece to go forward at the same time as the Senate Health, Education, Labor and Pensions (HELP) Committee considers the statutory requirements of the Child Care and Development Fund (CCDF). The Finance Committee is meeting today; they set the mandatory money for CCDF, which is obviously important. The HELP Committee has not met yet; it will probably meet in July. They provide all the provisions of the actual statute, so it is an important committee. Senator Kennedy is the chair of that committee. He has filed this legislation, so we expect it to go forward at the same time.

The Early Care and Education Act will be administered by the Department of Health and Human Services and the Department of Education through a joint agreement. States would need to apply to receive funds. In order to do so, they would have to put together a state council or appoint an existing council if there is one already. Some states are ahead of the game and have developed a coordinated plan of early care and education for the system, including how they will get there, how to measure it, and what they will do to improve the school readiness for all children.

There is a menu of allowable activities to promote early learning including professional development linked to compensation. This was a big part of the discussion in the drafting. People felt strongly that there had to be this link, and it looks like it got into the final language. Funds could be used for public awareness campaigns, parent education, and evaluation, but they do not have to use the funds for any one of these purposes. They obviously have to do some of them. Conceivably, a state could do public awareness and not professional development, but the reviewers of the grant would have to decide whether that was adequate.

The other major highlight is that bonus funds are set aside that would be used as an incentive for states to demonstrate measurable child outcome improvements. Congressional representatives and senators got excited about the Education Reform Act and the idea of being able to measure outcomes. As they start to look at preschool education now as the next step, we see that issue arising as something they think is essential.

This particular provision would have the National Academy of Sciences and other major federal research organizations develop recommendations for how to best measure child out-

comes. States could use those recommendations in their design or submit an application for something else. Many states have said they wanted this provision for some money that they could use as "glue money." They want to be able to do planning, and they want to be able to pull their programs together, so they need federal money that is not tied to a particular program. We would like to talk about how this would be useful for your states, whether this is something that would act as a catalyst for collaborative activities, and whether there are concerns about it.

Takanishi: I would like to add that a number of people have talked about which child outcomes would be measured. There is a provision for the National Academy of Sciences to look at which outcomes should be measured and how they should be measured.

Schumacher: It was part of the drafting, and it was something that people pushed hard for. If one looks at the research that is out there now, there is no consensus on how best to do this. It is in flux.

Comment: Having worked with child outcomes in Head Start for some time now, Head Start needs to be proactive. We should have by now the 2nd year of our outcomes work, the 1st year being a quasi-experimental year. Every program must have measured child outcomes. It is important that Head Start federal and local staff with outcomes experience be part of the collaborative outcomes discussion, not just the Academy of Sciences, who might come up with something that does not resemble anything we have had experience with before.

Question: We just answered an RFP and chose an outcome measure that was in Creative Curriculum. One picks it, and that is it. They will implement it in August and it will be used within 45 days of the child starting kindergarten. They will eventually give funding allocations on that. This year, they are even including the checklist as part of the coalition's funding allocation. As someone has already said, it is an irrelevant checklist because it is done differently in every district, but they are using it anyway.

Comment: One of the items of concern in this provision is that once implemented, it would be 20% of the total funds. That would obviously be a major incentive for states to go this route. One would want to make sure it was a productive measure, and that a situation would not arise where someone did a 50-state chart saying that these states are improving and these are not. Whether that is a meaningful measure or not would obviously be important.

Comment: It is already being implemented. A good group was working on it. I appreciate their expertise, and it is being implemented right now. They are conducting training across the state right now.

Question: The problem with all of these assessment systems, even the ones that Head Start is using, is that they are teacher administered. As soon as states are put on this system, programs will not want to take the children who are difficult to serve because their scores will not look good, and teachers may feel a need to inflate scores when they rate children. It is a difficult bind that we are all put in that is required by the President or the SZ-2566 legislation, in order to create an assessment system. If money can be taken away based on the outcomes, it is difficult to see how everyone will administer them fairly.

Schumacher: There are many important issues under the rubric of child assessment. We have certain provisions in place already, but how the different fields, including the provider field and scientific field, respond to those provisions and attempt to modify them will be key in terms of children's outcomes. The Academy will offer one way of doing it, but it is not the only way. It clearly is an issue that everybody should pay attention to.

Comment: I have another point about state councils. Special education calls for developmental state councils to set up an early infant and toddler system. Those have been invaluable to states because it is mandated membership, and it forced the different departments and entities to come together and sit at the table. One issue is that they revised the councils and there are different opinions from state to state. There is some incredible value in having requirements set by a council.

Schumacher: Provisions are an interesting issue. The advisory councils right now are involved in helping write the plan; what is not clear and what would be interesting to have new ideas on is how to keep them involved over time. It is not laid out, and we are trying to come up with ideas. I would be interested in your councils' ongoing roles in monitoring the progress, perhaps in reviewing research reports about how your states are doing on their goals and coming up with policy changes. There is also an option to have the plan that the state submits for this be the same as their Child Care and Development Fund plan. States have to submit their plans every 2 years to the Child Care Bureau, so that is a way that has been recognized for states to integrate.

Takanishi: I would like to thank Schumacher, Selden, and Sowa for their presentations. The whole idea is to widen the disciplines and perspectives that are presented at this conference, and today we have heard from a number of people trained in public policy analysis and public administration. Their training and perspectives are useful to the work that each of us does.

Successful Transitions to School: Factors That Dramatically Increase the Success of Former Head Start Children in Kindergarten Through Third Grade

CHAIR: Robin Gaines Lanzi
PRESENTERS: Sharon L. Ramey, Craig Thomas Ramey

Robin Gaines Lanzi: This discussion centers around findings from the National Head Start Public School Early Childhood Transition Demonstration Study. This study was a 4-year study on the importance of children's transition from Head Start to public school. This project was launched to test the value of extending comprehensive Head Start-like supports "upward" through the first 4 years of elementary school. Intervention and supports were provided in four main components: family support services, parent involvement, activities to facilitate developmentally appropriate approaches to education, and health services. This project, administered by the Head Start Bureau of the Administration of Children, Youth and Families, funded 31 local Transition Demonstration Programs in 30 states and the Navajo Nation from the 1991–1992 to 1997–1998 school years.

This longitudinal study involved over 7,500 former Head Start children, more than 4,000 non-Head Start children in the same classrooms, and more than 450 public schools. Data included baseline and then annual assessments of children's academic performance (based on school record reviews) and standardized test performance, interviews with children's primary caregivers, children's own perceptions of their adjustment to school, ratings of the school climate, ratings from classroom teachers and school principals, annual observations of participating classrooms, and local site visits by an interdisciplinary team. In addition to standardized tools, a number of open-ended questions and qualitative data from local site evaluations (including participant observation and ethnographic data) were obtained prospectively. Census-level data and community data also were collected about local schools, school systems, and neighborhoods. The social-political climate also made many major transitions over the course of this project, spanning the presidency years of both former Presidents George Bush and Bill Clinton. During this time, major welfare reform occurred, Head Start expanded its research base and adopted more rigorous Program Performance Standards, and the concept of "transition supports" and "developmentally appropriate practices" both became widely endorsed concepts by early childhood educators. In addition, a national group was convened to consider the future of Head Start research and the most pressing issues to study.

Based on the national 31-site randomized trial of extending Head Start-like services and supports from kindergarten through third grade, we have identified many former Head Start children who had highly successful transition-to-school experiences. In general, these children are characterized by good social-emotional skills, performing at national level or above on standardized tests of reading and mathematics, reporting that they enjoy school and do well in school, and having supportive and involved parents. Many of these children came from homes with multiple challenges and/or schools with serious administrative and financial constraints.

Our discussion today will focus on the different types of challenges faced by former Head Start children and their families, and the factors most closely associated with "beating the statistical odds." To put this in context, Sharon Ramey will provide a brief overview of the project and findings. Craig Ramey will provide a description of how we are operationalizing children's successful transitions in terms of social, academic, and familial components.

Sharon Ramey: This particular study presented some major findings that caused us to pause about some of the well-known "facts" about former Head Start children. I want to highlight

these as part of the introduction. One is the fade-out effect. It is not clear that there were ever compelling and adequate data that fade-out is a true phenomenon, although what probably is true is that children from Head Start-eligible families face a lot of increasing challenges as they get older. But this study was motivated by the desire to prevent fade-out – to have former Head Start children maintain the gains into public school (as described in the Congressional authorization for this study).

Indeed, what we have found is that overwhelmingly, the majority of these former Head Start children enter school initially below national average and in kindergarten and first grade especially. In second and third grade, they continued to show progress and the progress they show relative to national norms places them by the end of second or third grade well into the average performance on all of our outcome measures, including reading, math, and social adjustment.

These are children who are not necessarily stars and in some of our classrooms they are not doing quite as well as nonpoverty peers in the same classroom. But they are not falling way out of the range of normality of performance. On average, even when they enter school, they are showing continued gains, if you will. Schools are helping these former Head Start children on average.

Now, our sample is limited or perhaps selective for two main reasons. First, the sites competed nationally and were required to complete the application during a relatively short amount of time over the summer. We did look at the kind of communities that applied for grants and on average they have more resources as evidenced by census bureau indicators. These are, therefore, communities that have somewhat higher resources to be able to develop a competitive application in a short time and enact the intervention.

Further, the Request for Proposals (RFP) included a detailed description of the intervention, including the four main components and specifications of what needed to be included. It provided basically the blueprint for what was then and still now is the most articulated conceptualization of what children need to do well in the early years. Also, in many cases, when schools found out that they were randomly assigned to the control condition, they were able to garner the resources to put in place what was virtually identical to the treatment group condition.

What the project showed that was a bit disappointing, although understandable upon reflection for the reasons just described, is that children in the intervention group did not perform a lot better than those in the randomly assigned control group. When we look at our control schools, in at least one third of the sites they enacted interventions equal to or greater than the funded one. In fact, it turned out the competition or the quality of supports extended to the control schools and children were greatest in the sites that enacted the best intervention. Often the people who enact good interventions are the kind of people who are kind and generous and they allow some of their staff or teacher training programs to be open to anyone, including teachers in the control condition.

There was no prohibition or denial of services and supports to children in the so-called typical "untreated" setting. It then becomes difficult, even when you have a good design, to say that the control condition is untreated. What we did was further explore the kinds of supports in place in the children's lives that led to success because across the 31 sites there is not a major treatment effect.

What was exciting about this proposal, and especially rewarding for me, was that we did not pick one and only one outcome. We did not decide it was going to be something like just IQ or just achievement tests or just the teachers' ratings of the children. What we did was develop a multiperspective, multidimensional definition of what it means to succeed in school and have a successful transition. Craig Ramey is going to describe to you this definition of what it means to be a successful child in the first 4 years of elementary school.

Craig Ramey: I would like to begin by saying that I believe that the world has become more complicated than some of our standard research designs are now taking into account. Our task as researchers interested in finding out how to be helpful to children and families is not to try to force programs into an artificially constrained research design. Our task is to increase our sophistication about research design and measurement so that we can figure out how these programs work. With that said, there are a number of conceptual issues that we in this consortium discussed at great length.

In 1991 when we first met, it was a meeting held in Washington in a hotel not far from here. About 500 people showed up who were the leaders, leaders in Head Start programs, schools, and universities involved in carrying out this project. There were different understandings of what was about to ensue. From that initial conversation, we collectively crafted a thoughtful, functional consortium in which we invented some rules for how to make decisions and how to explore issues in a timely way to arrive at a rationale for why a given course of action was being taken. I want to thank the Administration on Children, Youth and Families for allowing that process of developing the consortium, our bootstrapping of ourselves, which was an important sometimes hard-hitting way to deal with difficult controversies, to talk about them, and argue them to resolution. Though it seems there was little unanimity on any issue.

What was clear at the beginning was that we needed to come to some general agreement about how we were going to decide whether the children who participated in this, those either in the treatment group or in the comparison condition, were successful. We were not dealing with just children because the intent of the intervention was to bring Head Start-like services, including services for parents, health services, social services, as well as state-of-the-art educational practices, into the public schools from kindergarten through third grade. Obviously the goals of Head Start, which include achievement in school, go beyond doing well in school by any simple measure.

Now some of you who, again, might know a little bit about my past know that I have frequently used, along with other measures, measures of standardized assessments of cognitive and intellectual development to mark how well children were doing in various intervention conditions. But I am not a strong advocate of relying on those measures alone and I think that it is extremely difficult to get an adequate evaluation of a complex process by taking a single measure in time.

Therefore, how then were we to conceptualize success so that the default option was not the child's score on a standardized test of reading or math by itself at the end of all of this creative and extremely difficult work on the part of what turned out to be more than 7,000 children and 450 public schools? It was a massive effort!

At a conceptual level, the National Transition Research Consortium endorsed a definition of "successful transitions" for children that emphasizes multiple, interactive components: integrating good academic and cognitive development with social adjustment, positive feelings about school and learning, and mutually supportive relationships among children, families, and schools. Following on this conceptualization of transition as a multifaceted construct, a multiperspective definition of transition-to-school was developed. Six indicators of successful transition were identified and scored in the final year of study participation (which was the child's 3rd and 4th years of school). These included the following: (a) that the parent indicated the child's academic and overall adjustment to school were good; (b) that the child indicated his or her own adjustment to school was good, by saying they liked school and thought they did well in school; (c) that the teacher indicated satisfactory school adjustment; (d) that the teacher indicated satisfactory academic adjustment, comparing the child to others in the child's classroom and to grade-level expectations; (e) that by objective standardized assessments of reading skills, the child's achievement in reading was at or above the national average based on national norms; and (f) that by objective standardized assessments of math skills, the child's achievement in math was at or above the national average. Having five of the six indicators classified the child as being in the successful-transition-to-school group.

Dichotomous indicators (yes = criterion was met; no = criterion was not met) were created for each of the six indicators and then summed to obtain an overall transition score (range 0 to 6). The transition scores were then divided into three categories: (a) highly successful transition (score of 5 or 6); (b) moderately successful transition (transition score of 2, 3, or 5); and (c) poor transition (transition score of 0 or 1). Thus, to be classified as having achieved a "highly successful transition," the child had to be broadly judged as having made a good adjustment to school and having exhibited an average to above average achievement in key academic areas. We ended up with about 30% of the total sample being classified as highly successful. Now if you think about this from a perspective of just a few years earlier where these children were expected to have great difficulty in school, 30% of those being highly successful is a substantial amount.

Interestingly, when we look at the overall sample, there were only about 14% of the children who were rated by these criteria as making a poor transition to school. Only 14% of the children did not meet the criteria of being successful, so I want to reinforce something that Sharon said earlier. Interestingly, a high percentage of these children, based on national norms, are doing well. Bear in mind that some of these sites are in places like Montgomery County here in Maryland where you have sort of the Lake Woebegone phenomena where the average child is well above average. We will be talking a little bit more in a moment about some of the contextual factors that have to be taken into account.

Question: Could you speculate about a design that would be more likely to identify treatment effects?

S. Ramey: Yes, I will speculate about it because we have probably done more thinking about this than anything that I have tried to wrestle to the ground conceptually for a while. It may be that it is a level-of-analysis problem where I would recommend selecting sites randomly to serve as treatment or comparison sites. That would likely attenuate some of the more obvious mechanisms for what Susan Gray a long time ago called horizontal diffusion when she was referring to program sort of leakage out to other places in the community. That is the best I can come up with at this point.

Now that does not make this area any different from any other area. If you want to test whether a particular pediatric regimen works or not or you want to test whether a particular pharmacological agent works or not, you have some of those same issues. I just think in this case that—and this is a left-handed compliment—the people who wrote the RFP were just brilliant. They managed to capture in the RFP such a clear description of the consensus in the field of what young children from Head Start backgrounds needed that if you were not one of the schools, but you were a resourceful principal or a resourceful teacher, you could go and try to broker those services some other way.

Lanzi: When we conducted analyses based on the successful transition categorization, we found that children of caregivers not born in the United States were nearly twice as likely to experience a highly successful transition as children of U.S.-born caregivers. This association did not appear to be related to the language spoken in the home. Therefore, it may be a reflection of a different attitude toward school and learning on the part of the families. We also found that the majority of the primary caregivers in the "highly successful" families had college degrees. In addition, children of families experiencing greater and more chronic poverty were less likely to experience highly successful transitions and were more likely to experience poor transitions. Similarly, children whose families moved more often during the early school years were less likely to experience highly successful transitions and more likely to experience poor transitions.

We conducted similar analyses to identify "successful families." This involved running a series of analyses to develop a typology of former Head Start families as they enter school. The general

strategy used to develop the family typology included 15 variables known to describe relevant family characteristics: percent receiving AFDC, percent receiving SSI, percent employed full-time, mean percent of poverty, percent finished high school, mean caregiver age (when child entered school), percent positive depression screen, percent with chronic health problem that interferes with parenting duties, percent with father active in child's life, percent with mother absent from child's life, mean number of children, percent born outside the United States, percent reporting a language other than English as the primary language spoken in the home, percent of families who have moved two or more times in the past year, and percent of families who were homeless in the past year.

The data set was randomly divided into two equal groups. The cluster procedure was then applied to each data set, using the same 15 variables to determine if similar solutions were obtained. The findings from this analysis indicate that, among the families participating in this National Transition Demonstration Study, there are remarkably clear distinctions, with seven different family types. Interestingly, the largest group, 42%, is what we refer to as the "resourceful" families. These are families in which they were characterized by having two parents in the home, the mother and the father, and the father was active in parenting. Not only did he live at the home, but he also was active in his parenting duties. They had primarily a college education or some college and were at higher income levels.

Thirty percent of the families were characterized as being single-parent welfare families. They were on AFDC at the time, SSI, and it was mainly the mother who was the single parent. The next one was the foreign-language families and that was 11%. They somewhat paralleled our high-resource families in terms of the composition of their home. What brought them out of the cluster analysis was their place of birth and the language that was spoken in the home, which was a foreign language. Then the next highest was 6% with our highly mobile families, and what discriminated them was whether or not they moved two or more times in the past year. We found that the break off began when they moved at least twice in the past year. Interestingly, the next group of families was characterized by the mother not being active in the child's life; that is, she did not live in the home and she did not help with parenting activities. These families tended to have older caregivers and more primary caregivers with health problems. Finally, the last two family types that we found were the chronic health problems and the homeless ones at 3% each.

If you take that way of grouping the families and looking at the dynamics of what is going on within their home and compare it to the transition-to-school grouping as Craig defined, you find that the highly resourceful families and the foreign-language families had proportionally more children with successful transitions than families in the other family types.

One other way in which we have looked at what was successful was solely based on academic achievement. Nancy Robinson and Rich Weinberg, along with Sharon and Craig Ramey and myself, examined the children's academic achievement. Specifically, we examined which children performed in the top 3% in terms of their reading and math skills. We found that these children were more likely to have families with somewhat higher resource levels, fewer stressors, and parents who endorsed more responsive and nonrestrictive parenting styles than did other Head Start families. We believe that these academically talented former Head Start children represent an important group who are likely to benefit from increased early learning and language opportunities, as well as other academic enrichment activities.

There is one last set of interesting findings that I would like to present relating to the analyses based on the child's perspective. Craig Ramey talked about looking from the child's perspective. This is one of the few times that we have asked kindergarten children what they think about school. As you can imagine, children love to talk and are open. They will let you know what they think and they sure did let us know.

About 7% of the children indicated that they did not think they were doing well in school and did not like school during kindergarten. If you think about what the course of 3 to 4 years

can do to a child who does not like school and does not think he or she is doing well—how much effort will the child put into school? We found just those two questions alone were able to predict which children in third grade were not doing well in school on standardized academic and social adjustment measures. Talking with children, finding out about their likes, dislikes, and feelings will provide a wealth of information about what is going in the lives of children both in the classroom and outside the classroom, even in kindergarten.

Question: For the children who expressed that they were not doing well in school, did you ask them how they knew they were not doing well? Was it something the teachers say or was it something their mothers say that makes them feel that they are not doing well? Did you get a sense of that?

Lanzi: It would have been nice if we could, but the short answer is no. It was a questionnaire that Sharon Ramey developed with colleagues from the University of Washington. Children are asked "how well do you like school." The children respond on a 3-point likert scale from not at all to a whole lot. What was so amazing was the children who did not like school and said they are not doing well also tended to have a lot of other issues. They were a little less likely to think they got along well with peers, a little less likely to like their teacher, a little less likely to say that they were trying hard. But their intelligence or their academic ability, their receptive language skills, their reading skills, and their math skills were not below the other children when they entered kindergarten. Therefore, these were not children who were already different. We could not find any ways that the children who had a bad kindergarten experience had qualities at the time they entered school that were different from the other children, and it was not that their families did not value school. That did not differentiate them. They had bad kindergarten experiences and, again, we do not know the full reason for that, but it was highly predictive of their progress in school.

Question: I was wondering if anybody plans to conduct a follow-up of this sample?

S. Ramey: There is no extended follow-up. We thought that would have been a wonderful opportunity in the sites that implemented the strongest programs. We would love to go see how those children are now doing in seventh and eighth grades.

C. Ramey: We learned a fair amount from this study and a lot of people put their hearts and souls into it and the data and all the supporting documentation have been archived. We hope that other people will continue to use these data to ask important questions.

Lanzi: The public use tape is available through Westat.

C. Ramey: The good news is that I think these findings are absolutely contradictory to what Head Start has lived with since 1968 when the Westinghouse Learning Report said that fade-out was the characteristic of the effects of Head Start. I mean that study was not a randomized trial, it used a post hoc matching, and so whether the phenomena ever existed is in question. These results, I think, have to be understood in light of being contradictory to that central thesis. Then they raise a whole host of issues about appropriate research designs for investigating complex phenomena, understanding the variation in families and program and the contribution of those variations to changes across time. I think that it may have taught us also that we should have come to the end of an era of one kind of understanding of what the gold standard is. We also need to bootstrap our own competencies and try to be more in tune with the complexities of the way the world is working

Lanzi: I agree. I would like to add that the dedication of project and school personnel was commendable, and yielded dynamic and effective programs, even in the presence of significant practical, programmatic, and policy obstacles.

A key issue is whether there are ways to apply the lessons learned from the National Head Start-Public School Early Childhood Transition Demonstration Project so that other children, families, and schools will benefit. Examples of pathways to better-than-expected outcomes include children who leave special education and perform well in regular classroom settings, children who shift from early poor adjustment to positive adjustment by second or third grade, children for whom English is a second language who show rapid gains in academic achievement, and academically gifted former Head Start children. Children from the most impoverished homes, including those who were homeless, without a regular mother or mother figure, or from families where the primary caregiver had serious health impairment (including chronic depression) also show variation in how well they adjusted to school.

If you are interested in accessing the final report for the study, it is available at: http://www.acf.dhhs.gov/programs/core/pubs_reports/hs/transition_study/trans_study.html

POSTER SYMPOSIUM

Issues in Partnering With Communities to Improve the Lives of Young Children and Their Families

CHAIR: Hiram E. Fitzgerald
PRESENTERS: Mary Ann Walker, Elsa N. Brizzi, Jenine Mescher Nolan, Rosemary Flanagan, Kimberly Spencer, Ellen Horvath, Celene E. Domitrovich, Anne M. Doerr, Alison Rosen, Mary Deluccie, Marcia Manter, Mary Mills

■ The Golden SLPA Project: A Head Start/Community College/State University Collaboratively Developed AA Degree Training Program for Speech-Language Pathology Assistants (SLPA)

Mary Ann Walker, Gabriella Abarca, Elsa N. Brizzi, Ellen Horvath, Judy K. Montgomery, Jenine Mescher Nolan

■ Head Start-University Partnerships: Common Goals and Unique Perspectives

Celene E. Domitrovich, Anne M. Doerr, Alison Rosen

■ Beyond the Child Development Associate Credential: A Collaborative Model of Educating Head Start Teachers to Work With Children and Families in the 21st Century

Mary Deluccie, Marcia Manter

■ Collaboration Between Occupational Therapy and Head Start

Mary Mills

Hiram Fitzgerald: I have been the director of a graduate program that focuses on university and community collaborations for the past 10 years at Michigan State University. In December, I became Assistant Provost and I am responsible for outreach. Outreach is defined as community/university collaboration across the domains of research, teaching, and service.

This focus on outreach is not unique to the university. The scholarship of engagement is being discussed in academic institutions nationally. Principles of practice are developing and emerging. However questions still remain. How do you engage communities effectively? How do you deal with multicultural issues while engaging communities, particularly when multiculturalism includes race, socioeconomic status, and the rural and urban locations where people live and carry out their programs?

This session features four examples of university/community collaboration from Pennsylvania, California, Louisiana, and Kansas, across the domains of research, teaching, and service. Each person will comment on his or her program. Hopefully, they will make provocative statements that will engage us in conversation.

I have a couple of questions for you to think about during this session. What have we learned about community/university partnerships that have made them successful? What do we now know about engaging communities that we did not know before? What have we learned about barriers to engagement? How should we justify university involvement in community collaborations and community involvement with universities?

Ellen Horvath: We were delighted to be approached by Judy Montgomery, past president of the American Speech and Hearing Association, with an idea for a partnership. The dean of Cerritos College approved the idea and that was the beginning of the Golden SLPA Project: A Head Start/Community College/State University Collaborative Training Program for Speech-Language Pathology Assistants. The Golden SLPA Project is a collaboratively developed AA-degree training program for Speech Language Pathology Assistants (SLPA).

We already had a history of partnership with the Developing a Partnership (DAP)/Parent Early Childhood Career and Employment Program, in which students who were referred by a Head Start grantee enrolled in classes that would begin them on their college career. Some of the students who went into the Golden SLPA Project had taken 12 units or so in the DAP program.

Successful community partnerships develop a common vision and mission to create solutions for identified problems. The Golden SLPA project targeted a primary and a secondary problem. First there is a shortage of speech-language professionals available to provide services for Head Start enrollees. A subset of the primary problem is that those speech-language professionals who are available have not been trained to provide developmentally, culturally, and/or linguistically appropriate services for young children.

The secondary problem addressed is the support of Head Start families moving from welfare to viable work options that support self-sufficiency. The Golden SLPA project created a supported training program for Head Start parents interested in becoming an SLPA. In addition, in order to qualify the graduate to receive California State registration as an SLPA, the Cerritos College AA-degree curriculum works with California State University bachelor degree programs in communication disorders. This gives the graduate the opportunity to work as an SLPA and/or continue along a career path leading to a speech-language pathologist license.

The Golden SLPA project identified two areas of concern—created a common vision and mission—and utilized other elements that support community partnerships. Those elements include building on preexisting relationships, leadership, ongoing communication with key community constituents, scheduled time to meet, understanding the parameters and resources of each partner, and a ripe social/political climate. The project utilizes the movement for student voice that grew out of the democratic schools' movement for responsible citizenry on social issues. Therefore, the three collaborating agencies, Cerritos College, the Region IX QIC-DS, and the Los Angeles County Office of Education embraced the parents as the fourth partner. Parents sit on the Advisory Committee and guide the prioritization for specific student support.

The program included eight new classes and the coordination of several others to make it happen within the short time of 9 months. The classes were approved with much assistance from the curriculum committee, the Dean's Council, and the State Chancellor's Office. We also received tremendous support from Head Start; as we were developing the curriculum, they were developing the student base.

It is eagerly anticipated that the Golden SLPA graduates will work in Head Start classroom settings. However, their employability and earnings hinge on individual school district's fiscal and human resource decisions. Many Head Start programs have been able to use interagency agreements to solidify partnerships that address beneficial special education service delivery models for Head Start children with disabilities. The employability, earnings, and benefits to children are the topics of future research.

Since the inception of the Golden SLPA Project, three other community colleges have linked with Head Start programs in an effort to reach out to culturally and linguistically diverse students. Documenting successful elements of support for these students, as well as tracking and measuring their success in school and employment will provide additional information to support replication of the Golden SLPA project.

Rosemary Flanagan: I have had four children in Head Start. With the first three there were not many opportunities for parents. With the youngest child, however, I was introduced to various

programs, and I was given the opportunity to attend Santa Monica College. If I had not received positive feedback and encouragement from Head Start, I would never have gone back to school. After a year at Santa Monica College, I started the DAP program, which introduces Head Start parents to become preschool teachers or teacher assistants, and I received my first 12 units in early child development. I would not be sitting here today without Head Start and the help of Cerritos College.

Celene E. Domitrovich: The Head Start Bureau encourages the collaboration of university faculty with Head Start and Early Head Start programs and views collaboration as a necessary first step for any research to be conducted successfully in the Head Start setting. Both groups need the knowledge and expertise that the other has to offer. Head Start administrators and staff know the most about the children and families they serve, the issues they face, and how to work with them in a supportive and respectful way. They know the Head Start priorities and standards, and the best ways in which outside individuals or organizations should integrate with their system to be most effective. Researchers have access to empirical findings and knowledge of how to evaluate programs and services. Many universities are developing innovative training models and evaluating existing models that have the potential to contribute to the professional development of Head Start staff. Research is essential because it benefits Head Start participants directly and it helps justify the program, which ensures long-term sustainability.

I will present one example of a University-Head Start collaboration that resulted in the successful implementation and evaluation of the Promoting Alternative Thinking Strategies (PATHS) program for preschool children and to discuss the essential elements that made this partnership and the program a success. PATHS is a teacher-taught social-emotional curriculum designed to improve mental health outcomes of Head Start children by teaching them emotional awareness, self-control, and communication skills. The University-Head Start partnership involved in this project adapted the elementary version of the PATHS Curriculum and implemented it in 20 classrooms within two Head Start programs in Pennsylvania.

I work at the Prevention Research Center at Penn State University. Penn State Prevention Research Center had a social-emotional curriculum for elementary school children called Promoting Alternative Thinking Strategies (PATHS), created by Mark Greenberg and Carol Kusche. They always had a goal to develop a preschool version and we knew that Head Start was a good fit to do this. In collaboration with Head Start programs, we would gain insight into how best to meet the needs of Head Start families and do this adaptation.

Creating a strong partnership is a challenging task but successful partnerships share two essential characteristics: respect and investment. Each party involved in the partnership needs to understand and respect the other. Head Start directors and researchers have different goals and needs. It is essential to find common ground and align in this area before moving forward. This starts by finding a common language, which is followed by setting mutual goals, sharing information, and clarifying expectations. Investment is the second characteristic of a successful partnership. New programs or initiatives often require extra time and resources. Therefore the partners need to be completely committed to the endeavor on all of these levels. With the foundation of respect and investment, University-Head Start partnerships are in a better position to be flexible which is also essential at the beginning of a new program or project.

When a University-Head Start partnership involves the implementation of a service or program, the partnership must work together to ensure high-quality implementation and long-term sustainability. It is important to maximize the integration of the new service within the established Head Start program, including the activities or content of the program, the nature of the training and supervision provided, and the monitoring system that ensures the ongoing quality of the activities.

Mary Deluccie: My project was initially funded by the U.S. Department of Education, through funds for the improvement of postsecondary education. That investment of a little over $240,000 was critical in getting us started. I am happy to report that after the 3-year period, this was a self-sustaining, self-funded program.

We redesigned the undergraduate early childhood teacher education program to meet the needs and unique strengths of Head Start teachers in the state of Kansas. Primarily through video conferencing, we offer more than 71 credit hours of professional coursework in early childhood education. Forty-one of those hours are based on the current curriculum. It is the same material that is completed by on-campus traditional students, slightly modified in delivery to better meet the needs of the Head Start faculty. After 3 years, we recognized a need for different types of coursework. Consequently, we developed 30 more credit hours of courses, including infant/toddler curriculum, coping with life crises, family communication, and a death and dying class.

I think our program was successful because it was not an exchange model where the university and Head Start offered services for each other. Instead both entities submitted their professional expertise and resources, and created a program that was larger than either one of us could have done separately. It demanded a great deal of trust and it presented an opportunity to refine strong levels of respect for each other and the expertise we all had.

Fortunately in Kansas over the past decade we have established a strong foundation for those types of relationships. In 1992, we established an early childhood education stakeholders group across the state, including around 24 agencies. Any services, institutions, or agencies that were involved with children and families came together and developed a document titled *Quality Standards in Early Childhood Education*. Thanks to that foundation, we were able to hit the ground running in the design, delivery, and then evaluation of our project.

In addition, at Kansas State University we recognized the need to develop a professionally sound and academically strong program, which incorporated the Head Start perspective. Head Start was interested in improving the oral and written communication skills of their staff. We were not aware of this objective in Head Start when we began the program. It was identified during the first semester that was spent designing courses and trying to determine what aspects of current courses were appropriate and what needed to be dropped, revised, or replaced.

The federal monies were critical, but we also had the expertise of Head Start staff at the local agency and state level, and faculty with expertise in secondary education, elementary education, special education, clinical psychology, and speech and language pathology; all working in an integrated fashion. There are not many stand-alone experiences in the courses. They are sequenced and many assignments carry across courses, either taken at the same time or in subsequent semesters.

Another important element that the Head Start agencies provided was on-site mentoring. Every agency with staff in the program agreed to provide on-site support. There was faculty serving as facilitators of learning, Head Start staff serving as mentors and supporters, and students who were engaged as active coconstructors of knowledge.

Mary Mills: I am the mental health coordinator at a county community-action agency Head Start serving approximately 1400 children with an Early Head Start opening up as well. Our project was a service project. The Louisiana State University Health Sciences Center Department of Occupational Therapy developed a project to support three courses, which needed to include research, clinical reasoning, and community involvement.

In Head Start we frequently receive referrals where the primary concern is not mental health. Issues that present as behavioral problems are a developmental concern; although the child does not qualify for mental health services, they are struggling to play and learn successfully. We thought that occupational therapy could help us since children's occupation is play. The process involved preplanning and dialogue to identify the exact needs and assess if the partnership could meet the needs of both agencies.

We established a mentoring type model where students entered the classroom in teams; this way they could support each other. They developed a screening instrument specific to this age population using elements from a number of tools. The teachers learned to use the instrument from occupational therapy students. The team building began from the start when the students were able to meet the teacher's needs from the start by allowing them to choose the time and the most opportune work style.

Many times Head Start teachers feel that professionals come into the classroom and "call the shots." This project was not developed that way. The occupational therapists presented the service and requested teachers' input regarding how to make the program work. The teacher was a full partner.

In the next stage, the teachers and the occupational therapy students collaborated to develop activity-based interventions in the classroom. The students explained the theory behind occupational therapy and why certain strategies worked. They taught task analysis, sequential skill building, and discussed children's activities and behavior. As the children developed the capacity to learn new skills, the students were available to help the teachers focus on and understand what they were observing.

It was a successful partnership and it helped the students to value community service in their profession. They learned to work within a culturally diverse population, with a new age group, and they learned as much from the Head Start teachers as they taught them.

We have continued this partnership in different ways. Through the years we have adapted a slightly different focus each time the students start the program, but we have found the students in the field of occupation therapy to be a tremendous resource for the mental health content of Head Start.

Walker: A successful partnership involves the information shared with you during my presentation but it cannot happen without a vision, commitment, and passion about the problems that you service.

Linda Share: How is the number of speech and language pathologists limited by ASHA requirements?

Mary Ann Walker: All 4-year institutions with graduate-level programs in speech pathology must have a ratio of one full time professor to six graduate students to retain their accreditation. We have a labor-intensive department.

Share: Do you train paraprofessionals to provide their services in an inclusive environment?

Comment: Yes. This is an extremely important part of their training.

Share: Are the paraprofessionals working with children who are not diagnosed addressing sensory-integration issues?

Comment: Yes. Sensory integration and fine motor are the two primary areas. They also help teachers identify issues outside those areas.

Comment: We have difficulty obtaining services for children with sensory-integration issues; this is a way of providing services without giving a diagnosis.

Comment: We also address mental health concerns. We can make early intervention plans and begin services immediately upon parent signature. Traditionally, children with pervasive developmental delay or suspected autism are included in our mental health area; we can now address some of their issues as they go through the evaluation.

Ji Hyun Kim: What is the approval process for the project?

Domitrovich: A key aspect of any research/community partnership is that each group has its own standards and requirements. At Penn State any research, whether in a lab or in a community setting, must have full Institutional Review Board (IRB) approval. We had our own consent form approved by Penn State. Then our partners created a mechanism where teachers obtained consent during the process of enrolling students.

The implementation of the curriculum was a choice the directors made, but families gave consent to participate in the evaluation. We also paid participants with part of our funding from Head Start.

Kim: How did you receive funding?

Anne Doerr: A competitive grant that is announced annually by the Department of Health and Human Services.

Comment: I believe there was a peer review process within Head Start, as with most of their grants.

Fitzgerald: As far as I know, the Head Start system does not have an IRB.

Alison Rosen: Our agency has a research review process to ensure that the rights of our families are respected. The teachers also signed consent forms. The project also had to go through our process.

Comment: There is a general Head Start requirement of informed consent for any activities involving children and/or families.

Kim: What is the funding program?

Comment: The University Head Start Partnership Grant. It is listed yearly in the federal register. Somewhere between 7–11 new grantees are accepted each year and funded for 3 years. There is a variety of research in Head Start that is funded by many sources.

Walker: We hold the training and technical assistance cooperative agreement for Head Start and Early Head Start programs in Region Nine. As part of that agreement we were required to develop a special project with a grantee, which allowed us to develop the partnership with the Head Start program and Cerritos College. There are numerous funding avenues in Head Start that support partnerships.

Comment: The reality is that the project cost more money than the funding grant typically will cover and there are unexpected costs. It might not have been so successful if our partners had not been invested in it personally, and if they had not been able to find some extra funds to manage the unexpected bumps in the road. It takes financial investment as well as emotion and time.

Fitzgerald: At Michigan State University, our project on the national evaluation of Early Head Start started with four faculty members, each from a different department. We added more faculty members along the way to address our community partner's needs. We now have seven faculty involved and four separately funded projects with our community partners.

Our projects are based on scholarship. We require informed consent procedures, IRB approvals, sound methodology and design, and publishable outcomes. These projects involve all the

components of good scholarship. From the faculty member's point of view it is a way to publish in academic journals, get grants, and connect with the community in ways that the university values.

These projects can work if there is a vision, work plans, and mission statements built in at the beginning and then developed in a shared partnership way. It works if the community partner recognizes and understands the need faculty have for good scholarship, and if the faculty recognize that the community partner needs outcomes and better programs.

Comment: Many of my colleagues and I have a longstanding concern for the low incidence of underrepresented groups in speech pathology. On a national level, the rates are 4% or 5%. When the Golden SLPA project surfaced I felt it was a tremendous conduit through which we could move forward.

I wrote a grant application for the project under which, minimally, we had to show representation of at least 15% of the groups. The SLPA program consists of 67%; it is the highest incidence of underrepresented groups in California. That would not have occurred without the support of Head Start and the visibility of the partnership to our college community.

Fitzgerald: It is heartening that so many of you are interested in funding opportunities. I am now managing a number of programs involving partnerships with universities and colleges serving special populations: Native Americans, Latinos, and African Americans. The understanding is that the institutions will work with Head Start programs to do one of three tasks: (a) develop models for staff development or teacher training, (b) cultural and language preservations, and (c) technology.

The Head Start programs' most prevalent problem is nurturing and retaining teachers even though there is money for teachers to come to these institutions and to provide substitutes. Second, most of the teachers have reservations and many teachers in programs serving a large majority of African American children have difficulty with remedial courses.

Comment: I want to emphasize the building of preexisting relationships. The Los Angeles County Head Start program already had tremendous experience in supporting parents who had been out of school for an extended period of time; they had low self-esteem and poor skills in terms of studying, test taking, writing essays, and so forth. The program provides support for those parents by having monthly meetings for tutorials, to help with the financial aid packet, to practice taking a multiple choice test, and so forth. They meet every month and address an issue for which the students have expressed the need for assistance. Students wanted help to feel more comfortable on campus and confident in accessing the resources available to the general campus population.

Flanagan: Most of the students in my class are Latino and African American. We had teachers who had to revamp their whole syllabus, their whole teaching style, to accommodate this class. For example, in our phonetics class, the women did not have a base in English phonemes. Many of the phonemes do not exist in their native language. He paired up an Asian or Latino student with an English-speaking student. We worked together and he utilized both students instead of having the class fail the course.

Comment: We have also found the origination of learning communities to be successful. We take two courses, sometimes related, sometimes unrelated, and the teachers develop common goals and objectives. We went through an extremely careful process to hire individuals who could be successful teaching at the community college level. We rejected applicants who were nationally known and who held Ph.D. degrees because we felt that they could not communicate adequately to our students. In addition, I have enrolled students having difficulty with phonetics in the speech clinic on campus.

Pauline Turner: In New Mexico, we recently finished a 3-year project. One of the goals of the project was to recruit Native American and Latino students. Another goal was to make our programs more accessible, and more culturally and linguistically responsive, to those students.

Many of the students had been working in ordinary education settings or programs for a number of years. Most of them had never had a college or university experience, and many were the first person in their extended family to attend college.

One of the highly effective strategies was a mentoring program. You can pay tuition, buy books, pay for child care, and pay for transportation, but you must have continued support from an individual who will help you manage the higher education system. There were six institutions involved in the project. In one site, they managed to bring in early-childhood professionals from the community as mentors for no pay, and it worked out well. At another institution, each student enrolled in a career class, and worked with their mentor/ advisor to develop an individualized education plan catered to their needs.

For students who had never received any formal education, it was important for them to have that first experience in their own language. We created a 2-year preprogram in Arizona that was built on Navajo language and culture and is taught completely in Navajo. They are now serving only Head Start teachers.

It is a real challenge but it is one of the most rewarding experiences. At a recent conference, the Navajo woman hired to work with these institutions and implement these programs, stopped during her presentation and started to cry. She said, "This is so moving for me because these students never ever would have had a chance to get an education if it had not been for this project."

Kimberly Spencer: I would encourage students not to give up. They should not be embarrassed to ask for help because that is important to continue their education. I have worked with students to find ways to manage their time and fit in the studying while maintaining the family. I made myself available to them.

Question: For those of you at institutions with associate programs, do students matriculate to 4-year programs? How easy is the matriculation within your state or system?

Horvath: The Dean at our institution wisely guided me through those steps as part of the curriculum development. By the time our curriculum was approved we were also working through the matriculation process. Our program has nine units of speech and language pathology courses that will transfer for people continuing on to 4-year degrees.

Community college programs, at least in California, are attracting people with bachelor's degrees to specific training programs. In the fall, I will have approximately 10 young people who have received their bachelor's degrees in communication disorders and want to receive SLPA training. The matriculation, back and forth, between institutions is an important piece that should be addressed.

Fitzgerald: In professional programs, one of the barriers to transferring is in the interpretation of accreditation standards relative to specific courses. A course with the same title may not be transferable, because it does not have the same content. In our system every state institution is autonomous. We are currently trying to set up 2-year associate degree programs for early childhood (0-5 years) across the community college system. It is a real challenge because all the 4-year institutions have different ideas about the content of this course.

Comment: Community colleges in California have recently started to offer bachelor's degrees in certain fields. I made a point to visit key people and talk to them about our concerns. There has been a back and forth and it is working. Those people had concerns about students with

bachelor's degrees who might not be accepted in graduate-level programs. It is almost required to have a 3.8 or higher to be accepted to a master's program in our field.

Comment: There are multiple concerns developing and solutions are not easy. Another problem is that although Head Start standards specify an AA degree or an AAS degree, one is transferable to a bachelor's degree and the other is a dead-end degree.

Turner: In New Mexico, every piece of coursework articulates to the next level. It has taken us about 8 years to do this through the legislation we helped to design. If you have an AA degree from any 2-year institution in New Mexico, you can transfer it to any 4-year institution without losing any credits.

Comment: To return to an earlier question, I originally approached Penn State for Early Head Start research grants the first year it was required. I began my relationship with the university in that way. Before the prevention center existed, I spoke to a person who no longer had time to do any of the research I was interested in. Later the prevention center was created. Full-time faculty members probably do not have the time to invest in the partnership demands our program places on them.

Comment: Referring to the earlier example of a larger initiative, an individual faculty member can join a large study. That is different from a situation where a faculty member is trying to respond to approaches from the community. You may want to do the work, but it is time consuming and difficult. The one-on-one approach from a local Head Start is challenging to fit in with a tenure track position.

Comment: I think relationships are important; when the opportunity arises to fund a project, the relationship has already been established.

Comment: Exactly. That is why trying to meet some needs of the community is important; maybe not the full evaluation that the Head Start requires, but some ongoing relationship building is beneficial, and then be ready to respond.

Improving the Quality of the Workforce Through Professional Development

CHAIR: Gerald Sroufe
PRESENTER: Linda Espinosa
RESPONDENTS: Marilou Hyson, Carol Brunson-Day

■ Standards and Early Childhood Professional Development

Linda Espinosa

Gerald Sroufe: I work for the American Educational Research Association. Linda Espinosa will present the relationship between professional development and quality of early-childhood experiences. Marilou Hyson and Carol Brunson-Day are two individuals who run programs designed to improve professional development. They will talk about their programs and experiences. We are making the argument that professional development is a reasonable intervention strategy for improving the quality of children's experiences. At the end, I will put this topic into the context of larger policy and research issues and give the perspective of a person outside the field.

Linda Espinosa will be at Rutgers University in Fall 2002, where she will be the codirector of the National Institute for Early Education Research. She is currently a member of the Head Start Technical Work Group on Child Outcomes and is a consulting editor for *Early Childhood Research and Practice* and *Early Childhood Education Research Quarterly*. She also served on the National Research Council's panel, which produced the report *Eager to Learn: Educating our Preschoolers*, and much of her presentation will be on that topic.

Marilou Hyson has written a book called *The Emotional Development of Young Children: Building on an Emotion Centered Curriculum*. She was the editor of the *Early Childhood Research Quarterly*. Her research is focused in three areas of interest to us: early emotional development, teacher and parent beliefs concerning early development and learning, and classroom practices of early childhood programs. She has been with the National Association for the Education of Young Children (NAEYC) since January 2000. She is also a member of the Board of Examiners of the National Association for the Accreditation of Teacher Education, which is developing standards for child-care teachers.

Carol Brunson-Day is President and CEO of the Council for Professional Recognition. The Council serves as the home of the Child Development Associate National Credentialing Program as well as the National Head Start Fellowship Program. She is been involved in the early-childhood profession for many years, including her current work with the human development faculty at Pacific Oaks College in Pasadena. She will talk about some research demonstrating that professional development programs change behavior, salaries, and expectations.

Linda Espinosa: I want to primarily talk about the findings and recommendations from the report *Eager to learn*. It was a 3-year, intensive investigation into early-childhood or preschool pedagogy, including aspects of professional development and teacher preparation. We initially convened in 1997, and we issued the report *Eager to Learn* in January 2001. This report is available on the Web through the National Academy Press (NAP) at www.nap.edu. It can be downloaded from the website or one can call them to receive free copies.

The committee itself was comprised of 17 scholars from a variety of disciplines including anthropology, sociology, psychology, and education. There was a range of opinions, backgrounds, and perspectives, and we had to reach a consensus. It was one of the most stimulating, growth-inducing, and provocative opportunities for me to look at our field. What is the research

base and what kinds of recommendations can we make around curriculum and professional development?

The committee had four basic charges. The first charge was to review and synthesize the research on early childhood pedagogy. The second charge was to come together and discuss the issues. We wanted to focus on the teaching and learning of young children between the ages of 2½-5 years, with consideration for special populations such as children living in poverty, children with limited English proficiency, and children with disabilities.

The third charge to the committee is the one we will talk about this morning, which is the report with a coherent distillation of the knowledge base and its implications for pedagogy, training of teachers and child-care professionals, and practice in early-childhood programs. Eventually, we will get to the policy implications, although I will not discuss those in any depth. I also want to reference some additional literature that has been published since this report came out.

The Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill has recently published studies on the characteristics of the early-childhood workforce and teacher preparation as well some other studies that offer additional insight on this topic. Some of these studies have confirmed our conclusions and some of them add new information. All of the available information that we reviewed converged around a central finding. The professional development of teachers is related to the quality of early-childhood programs, and program quality predicts developmental outcomes for children. It is nothing new, but it is scientifically, empirically supportive, which is important right now. I am sure you are all aware of the need to have evidence-based policies and recommendations. The programs found to be highly effective in the United States, and the exemplary programs abroad, actively engage teachers and provide high-quality supervision. This nuance is included in the set of recommendations from *Eager to Learn*. We know that high-quality teacher preparation is important for high outcomes for children.

In reviewing all of the literature on model programs that have led to long-term improvements in children's functioning, supervision is another key aspect. In the French system, for example, the other feature of effective programs is a well-trained, supervisory body. The teachers are not left without a mentor to help that teacher reflect on and continuously improve their practices. Those systems have a highly qualified teacher trained in early-childhood education, usually with a master's degree, who is the supervisor and coordinator. In the Head Start program, the resource teacher would be the equivalent.

The first issue to think about when thinking about supervisors for classroom teachers is that they are involved in upgrading their own skills. For me personally, that person would need to have a master's degree in early-childhood education or child development. Or, there are people with Ph.D.s, often through a collaborative relationship with a university, where some faculty members work with the teachers in a professional development capacity. One should be constantly plugged in to sources of current research and information. The mentoring relationship centers around dialogue, helping the teacher reflect on what they are doing, and for what purposes. A reflective practitioner should be an outcome of that mentoring relationship with the supervisor.

Research shows that teachers are among the most important factors in determining how much a young child learns. It seems as though we are seriously pursuing the magic curriculum that will solve problems for children who have difficulties learning to read or controlling their behavior. This report, the follow-through studies from the 1970s, and a huge cumulative body of research point to the fact that there is no single curriculum.

There is no best pedagogical approach. It is mediated by and influenced come the characteristics of the teacher. The professional qualities of the teacher, including the professional knowledge, ability to make good professional judgments, and ability to work collaboratively are the characteristics that will determine whether or not the teaching practices are effective, and

children learn what they need to know. Another aspect to this involves the system where those teachers reside. There are systemic issues in supporting high-quality teachers. This report and other research highlights that improving the quality of the teaching force is a higher priority than finding that magic curriculum.

Question: In your study, did you find it important that knowledge and skills include being able to articulate a curriculum or a set of goals, which is different from saying there is a perfect one? I was recently in a long conversation with someone who was arguing that in many cases, for example in research settings the teachers could not articulate a set of goals. That is problematic to argue, and different from looking for a single curriculum. Did any of your results speak to the importance of this?

Espinosa: Yes. There is a coherence to the approach, and the major goals and objectives for the children flow consistently from a central set of beliefs. I will talk about that more when I describe the specific aspects of professional development, but we all approach active learning in different ways. Every single one of us was a student. We have implicit beliefs about what the student and teacher roles are, and how that should be carried out. Many times, what we think is the natural order of that teaching/learning relationship is, in fact, not what is best for young children.

There is a need to address those beliefs in professional development. What are the implicit beliefs, and how can those be made explicit? How can we help those beliefs to be consistent with a coherent, theoretical perspective that what we do builds on itself? That was definitely part of the literature.

Some of the main points we found about teacher qualities were related and that is nothing new. Teachers form relationships. It is foundational in early childhood, but it is important to get underneath those reciprocal, positively supported relationships between adults and the environment they are responsive to and contingent upon children's cues. Creating interactive, reciprocal relationships takes training, and is not always a natural capacity of people who go into early childhood, although 99.9% will say, "I love children." However, there are some specific, well-researched aspects of their behavior that can support a positive relationship, which requires training and development.

Know how to select and teach the big ideas that underlie school learning. By big ideas, we are not talking about simple facts because the facts will add up to conceptual understandings, which is what the teacher would have in her mind about why she is doing a particular activity. For instance, teachers need to understand the value of the scientific approach. It is important for children to propose ideas, questions, hypotheses, and the scientific method. They should think about what they are going to experience and make some predictions.

Collect information, collect data, and then review or analyze those data. Children can think deductively about the information they have been supplied. I am not going into the curricular recommendations, but one of the other major findings of this report is that young children can think conceptually and abstractly, and they can reason deductively at younger ages than we thought if provided the right opportunities.

Therefore, teachers have to be skilled in how to promote that thinking at higher levels. We have heard about school readiness and what will be expected of children. Teachers must have that broad base of a liberal arts background around disciplines—math, science, social studies—all those subjects that constitute general education courses. They may be required to know how to interpret children's behavior and how to interpret children's knowledge from their behavior.

I want to talk about appreciating similarities and differences in children's home environments. When one views a child's behavior, one should accurately interpret how it fits into the context of that child's previous learning, which varies by culture, community, and ethnicity. In the schools where I work, teachers frequently misinterpret children's behavior as being willfully

defiant. That is not what that behavior means in the context of how that child is reared in the home environment. We need to better understand and respect those differences as they come into the educational environment because a 4-year-old or a kindergarten child does not follow a three-step direction. It does not mean they are being willfully disobedient. They may truly lack the processing ability to listen to, understand, remember, and do one, two, and three. I have spoken with some kindergarten programs in the country that expect children to be able to follow five-step directions upon entering into kindergarten. Think about that for a minute. If I were to issue a five-step direction, how many of us could do it?

The recommendation from the panel based on everything that I have said, is that each group of children in an early childhood education or child-care program should have at least one teacher with a bachelor's degree in early-childhood education or a related field. There should also be access to a qualified supervisor and a career ladder with different pay levels. We do address the compensation issue in the report, and that is probably one of the major challenges in our profession, but other people have talked about that at length.

For preservice education, some of the issues have to do with foundational knowledge. We need to have a broad base of knowledge across disciplines to be able to teach those who work with 3- and 4-year-olds to teach at an appropriate level. We need to know about pedagogy and the appropriate teaching strategies. The practicum experience should be carefully supervised. Field experience must have certain qualities in order to be effective and help teachers learn the practices that will lead to the accelerated school outcome expectations we have for children.

There are five challenges in preservice education, which come from the Frank Porter Graham research. The first challenge is the shortage of experts. There are estimates that we need to increase the early-childhood teacher faculty at institutions of higher education by at least 55% in the next 5 years, to keep up with the rising demand if we phase in the recommendations of the report. There is definitely a shortage in the field.

The second major challenge that we face in teacher preparation is diversity. We do not have a diverse higher education and early-childhood teaching faculty. Eighty percent are White and women. The chairs of the departments said their single greatest challenge was to recruit and retain diverse faculty. We do not have good teaching conditions either. We teach more students with fewer resources and less support. That is absolutely true in my institution. We are undergoing budget cuts, and over 50% of our faculty are leaving college education and will not be entering in other teaching preparation programs.

The third challenge in teacher preparation is coursework. In a survey of institutions of higher education, 1,250 institutions currently prepare early-childhood teachers. What they tell us, which is confirmed by graduate reports and research, is that we do not have enough courses or depth of knowledge in three areas. Early childhood special education teachers are not qualified to teach in inclusive classrooms, although the vast majority does. Our teachers are woefully unprepared to teach children who are English-language learners. A stunning statistic is that only 10% of our programs offer coursework on how to teach children who are English-language learners. In California during fall 2000, 70% of incoming kindergartners were non-White. Forty percent of that 70% did not speak English. As for Head Start, statistics from April 2002 show that 40% of the enrollees in Head Start currently do not speak English. They enter Head Start speaking a home language other than English. Teacher programs currently do not have the programmatic resources to adequately address this issue. Our coursework also falls short in giving prospective teachers coursework and practica involving infants and toddlers; less than 30% provide that training. Yet, we are usually certified to teach birth to 8 years of age.

The fourth challenge is the articulation between 2-year and 4-year degrees. The 2-year programs are more diverse, and the candidates have more practical life experience. We need to support that candidate pool and provide incentives for them to continue on to 4-year colleges. However, those articulations are difficult to work out, primarily from the 4-year institutional side.

The fifth challenge is the diversity of the candidate pool. Twelve years ago, the survey data indicated that around 70% of early childhood teacher candidates enrolled in our programs were White and of nonminority status. As of 1999, that figure went up to 78%. Our teaching candidate pool is increasingly White, which is in contrast to our increasingly diverse student population. We need to address recruitment, retention, and preparation, capitalizing on the availability of diverse teacher candidates. Hyson will talk about the standards that have helped our teacher preparation programs move in that direction.

Question: Is there information on how to raise the level of workers in all of those areas?

Espinosa: There is research showing that in-service education can be a powerful force on improving the teaching capacity and ability of current teachers. We know that within Head Start, as well as within our Title I programs, there has been a push to improve quality through professional development and in-service training. We also know that it is not consistently high quality. It can have an impact on teaching behaviors, teaching knowledge, and teaching ability to apply new knowledge, if it is continuous, coherent, and individualized. However, we also know that the vast majority is fragmented, chaotic, incoherent, and is not necessarily the best use of available training dollars. I want to give you one example of how I participated in this unknowingly.

Recent statistics show that we spend close to $100 million in Head Start for quality programs. In Title I, that amount has been increased tremendously. There is a tremendous amount of money for states to engage in professional development, to help teachers learn new approaches to early literacy. I was recently asked to do a series of workshops on multiculturalism and second language. The organizers asked me to come before a specific date in June. I asked, "Why? It does not make sense. Your program is ending. You will have turnover in staff. It makes more sense for me to come in September when we can do something continuous that will contribute to the program, beyond doing development." They said no, that they had to spend the money before the end of June. I went out and conducted a series of four workshops for child-care center teachers, preschool teachers, and others. This was the early part of June. The teachers came in with no idea about what the topic would be. They came in, sat down, and did not even have paper and pencil. They came in because they had a requirement to satisfy a certain number of hours of professional development. The administrators did not come. They had no idea what I was saying or teaching. They had attempted to zero out their budget by finishing up this professional development, not even thinking about follow-through or how this fit into anything else going on in their program or in relation to children's learning.

I would argue that this is probably fairly common. My recommendation is that we develop standards for in-service education, just as we have standards for professional preparation of teachers.

I propose that if one submits a plan to spend public money for training, they should have results-driven and job-embedded standards that focus on helping early-childhood teachers become knowledgeable in both development and pedagogy. They should include coherent, integrated content that is cumulative and directly linked to what the teachers do in the classroom. There should be participant involvement. Participants should have some say in what training is offered. Their needs should be elicited from them, and included in the decision making.

Training should be site-based. I was a principal in an elementary school. I finally decided not to send my people off to different trainings, but instead to do our professional development on site because we knew our children, community, and families. About 90% of everything we did was site-based. Training should also be continuous and supported with follow-up mechanisms. One of the other issues that I realized is that there is little follow-through application in the classroom unless there is some in-classroom support, mentoring, or coaching.

One has to be in the classroom with the teachers in order to help them understand how to apply these concepts. One should address knowledge and beliefs so that staff can reflect on those theoretical understandings and their practical teaching knowledge. The next standard that I would suggest is that results should be evaluated. If one engages in staff development, there must be a plan to evaluate the effectiveness that goes beyond what used to be called "post-mending reactions." It should go beyond that and link staff development efforts to child outcomes. Do children learn more? Are children better off because of staff development? Finally, the training should be linked to compensation so that the people who participate in training achieve some kind of credit or incentives. That training should help them move up the differentiating career ladder. I would suggest that when we engage in developing plans for professional development, we only get funded when we address standards in these categories. Otherwise, we spend money, but we do not know what we are getting for it. To summarize, I described the following standards: results-driven and job-embedded, participant involvement, site-based, continuous and supportive, addressing knowledge and beliefs, results evaluating, and linking training to compensation.

Carol Brunson-Day: I would like to talk about the Child Development Associate (CDA) credentialing program and what we have learned about it from the inside. The CDA program was designed in 1975 as a way to organize the informal preparation of personnel who were working with young children of 3 and 4 years of age in Head Start programs in community-based child-care centers. For the purposes of this discussion, one of the important issues about it is that it has a definition of the end point. The CDA is essentially defined as a person with the skills to nurture the development of children in group care programs and who has demonstrated those skills through a competency-based assessment.

CDA credentials are issued in several categories based on our understanding of the workplace. There is one generic credential, but the person has to do different issues depending upon the credential type that he or she applies for. There are three basic types. One is for personnel who work in center-based settings. Another type is for the person who works in family child care settings. A third type is for home visitors and those individuals who essentially work with parents and children in their own homes. Under the center-based setting, there are two age-level distinctions. Infants and toddlers are one specific age category and preschool children are a second age category. All of the credential types are available to people who work in bilingual settings.

CDA is a professional category or a classification of worker as opposed to a specific job description or job title. In order to become a CDA, a person must complete an assessment designed to collect evidence about his or her work in relationship to six competency goals. These goals have essentially remained unchanged since 1975. All of the material about the CDA program is available from our offices in Washington or from our website at www.cdacouncil.org. There are six areas of competency standards that were developed by consensus over a 2-year, research-based process, with input from all of the various constituencies and professional associations with an interest in the welfare of young children. They are general, and can be broken down further into 13 functional areas, which are essentially the skill areas that the CDA must demonstrate.

The most important aspect about the assessment is that it is directly related to what teachers do in the classroom. The CDA system is directly concerned with a demonstration of practical skills. There are approximately 150,000 CDAs, and we issue credentials to about 10,000 or 12,000 individuals each year in all 50 states, the District of Columbia, Puerto Rico, the Virgin Islands, and U.S. military bases worldwide.

One of the important issues about the profile of CDAs is their ethnic makeup. It is a diverse population in regard to race and ethnicity. It is more diverse than the U.S. population as a whole, but it is consistent with, and reflective of, the population of children in early-childhood programs, especially the population in Head Start. People with CDA credentials are 52% White,

24% African American, 12% Latino, 4% Native American, and 1% Asian American. Those figures are shifting, but essentially that is the CDA population.

What happens to people after they become credentialed? The CDA research shows evidence that the system is powerful from a standpoint of professional development. Every 3-4 years since 1983, there has been a national survey of CDAs. The latest survey of CDAs was conducted in 1999. We chose a sample from the entire population of CDAs in our database. Then we sent out a survey to 5,000 of the CDAs. We had a response rate of about 20%, which limits the generalizability of the findings. However, these findings were consistent with findings from previous surveys.

In 1999, we looked at CDAs who had just received their credentials. We also looked at what we call mid-level CDAs, who had been credentialed for 6 years, and we looked at veteran CDAs, who had been credentialed for at least 10 years. The results I will describe are most related to the power of the professional development system, showing the changes in a couple of areas that the population experienced over time, which we believe is a result of the CDA credentialing.

One area is continued training. Another area is professional position or change in professional position. The third area is change in salary, or changes in what we call "tenure in the field." In terms of educational background, over 40% of the CDAs in all three groups—the new, the mid-level, and the veterans—had already completed some college by the time they received their credentials. However, in subsequent years, there were a larger percentage of individuals who had attained 2- and 4-year degrees. The trend was strongest among the mid-level group who had been credentialed for 6 years. Once individuals receive their CDAs, they tended to continue their formal training. The percentage of CDAs completing advanced graduate degrees more than doubled for veteran CDAs, and increased slightly for new CDAs, so that we saw a trend over the years of CDAs continuing through the higher education system.

Professional position was another area of concern. Did CDAs change jobs, or did people change jobs once they become a CDA? We asked questions about positions such as early-childhood assistant teachers, teachers, and center directors. The percentage of respondents who were teachers increased over time from 37% to 40%. The number who were center directors or supervisors grew from 9% to 14%. As a result of their credentialed status, people were receiving an opportunity to work in positions of higher responsibility. The interesting part about the CDA program is that it is not designed for program directors, so this was an anomaly; but as people received more formal training in early childhood, they tended to be pushed up to higher positions.

We are always concerned about the salary question. Are salary increases the result of attaining higher levels of professional development? All groups reported increases over time. However, the increases were minimal in relationship to the entire occupational marketplace. First of all, the average salary of people entering the CDA program was about $15,000. In fact, 61% of new CDAs earned under $15,000. In comparison to that base, we saw increasing trends. Less than one third of the mid-level and veteran CDAs still earned $15,000 after 6 years. However, 60% of the veterans reported annual incomes between $15,000 and $29,000. The percentage of veteran and mid-level CDAs earning $20,000 or more annually more than doubled, but in terms of absolute dollars, it was still not much money. We are seeing an impact on salaries at the higher levels of credentials.

One of the more important findings of the survey was related to the stability in the workforce. Traditionally, the early-childhood population was plagued by high turnover, and some national surveys report as much as 40% annual turnover at some centers. In light of that, when we looked at the CDA respondents across the three groups, 87% reported that they were still in early-childhood education after 1 year, after 6 years, and after 10 years. In the veteran group, close to 77% were still working in early-childhood education. Eighty-one percent of the mid-level group was there, and 90% of the new CDAs were as well. In our report, we caution against generalization around this finding, due to small sample sizes.

However, in light of the contrast between these figures and what is seen in the general population, the CDA program, as an example of a professional development model, contributes dramatically to retention in the field and to stability of our workforce and programs. Three issues make the CDA program so powerful. First of all, it draws its participants from the community. Forty percent of the CDAs are former Head Start parents. When we look at the workforce, we face the future need for an ethnically, culturally, and racially diverse force. The ethnicity figures among the CDA population become extremely important for meeting the needs of the teaching workforce now and in the future.

The second feature that makes the CDA credential so powerful is that it is enjoying growing acceptance among employers. It now exists in a stable, regulatory climate. At one time, the CDA program served the Head Start population. Eighty-five percent of applicants to the program in 1985 were from Head Start. In the year 2000, Head Start represented about 60%. Now, in 2002, 60% of the credentials are issued to people outside of the Head Start system. The program's impact is now felt in the broader child-care community, and is not just benefiting the Head Start population.

To some extent, this change is related to stability and the regulatory climate. Forty-eight of the 50 states list CDA as a qualification for teachers in licensed child care. It is not a requirement, but it is simply recognized as a potential qualification for teachers. In more states, it is mentioned as a qualification for the director of the program, rather than for the teachers, due to the fact that the licensing laws are so poor in terms of staff qualifications. When the advocates went to the regulatory bodies to get CDA written in for teachers, they looked at what was written in for directors, and all that was needed was a driver's license and a tuberculosis test. It did not make sense to require higher qualifications for teachers than for the directors, so they added CDA as a qualification for the directors. As a result, they are CDA-credentialed, but that is not what the CDA program is about.

The third powerful force, which we are trying to strengthen, is that more of the CDA training is now in the hands of the higher education community. At one time, CDA training was exclusively an in-service training model, with some demonstration. The federal government funded some higher education institutions to design CDA training, but those were primarily 4-year colleges. Now 2-year schools are becoming the primary CDA-training institutions.

It certainly helps to stabilize the quality of the training and make it comprehensive. We recently did an informal survey of about 300 applicants over the last 2 months, asking CDAs where they received training. We required that they have 120 hours of training delivered by a formal training provider, but we had a broad definition of who qualifies as a formal training provider. These data are baseline data for us, and we hope to show some upward trends in the future in terms of where CDAs receive training.

We found that 37% received credit for their CDA training, which is not good. We are in favor of CDAs going from CDA training in the community to the 2-year institution, and then to the 4-year institution as part of an educational path. Receiving some sort of training or college credit for the training is important.

Thirty-one percent of the CDAs received a certificate, but we are not sure whether those represented credit-bearing education or whether it is just a certificate. We will find out more about that in coming years. We would love for those certificates to be credit-bearing. Twenty-five percent are still obtaining training through their agencies, and 9% reported some sort of combination. We sometimes waive formal training requirements because, in principle, the CDA system is a competency-based assessment system. If one can demonstrate competence, they will be awarded a credential regardless of their training background. We still have some applicants who request those waivers.

The CDA program is a bridge between informal and formal training, and it is a bridge for people in the community and those who become interested in this work because they love children. It gives them a way to access the formal training right in their own communities, and

receive credit as they move higher in the formal training mechanism, eventually toward those Bachelor degrees in early education, which we believe are coming. It will indeed benefit children. We want to make sure that the personnel who receive those credentials truly are part of the community where the child care is delivered, and that they have an ethnic and cultural profile that is present in the CDA program.

Rubina Azhar: I am from South Texas Community College. Some problems we are having in my CDA credential program are in support and funding. Regarding support, while there is the education requirement that students complete their 120 hours, they do not have somebody to follow through with in the community. They also do not have money to ask somebody to do the credentialing. How can I help more students get a CDA?

Brunson-Day: There is a lot of money in Texas for CDA scholarships. A scholarship is available through the Child Care Development Block Grant. How that money is used depends on the politics or advocacy levels in one's state. Programs in 21 states offer scholarship money for at least some of the CDA training and credentialing fees. There is a growing body of dollars to help individual candidates get support to pay the fees.

The advisor issue is something that has continued to come to us over the years. At one time, a person who participated in training could not conduct a formal observation, but that has not been true now for 10 years. We encourage the training providers to recognize that a candidate cannot go out and find an advisor unless the training program helps and participates in conducting that observation. We encourage training programs to provide that service for the candidates.

Cathleen Armstead: One of the issues faced by CDAs is that the local university will not always accept their credit. Professional organizations can help make the case that their curriculum is more theoretical.

Brunson-Day: When I talk to people in communities where the college does accept their credit, the college faculty successfully advocated for it to be accepted, not the CDAs at the college. The faculty members who became the advocates were able to describe the CDA program in an academic manner. We have done our part by writing a curriculum. In fact, my office has several documents available that may be helpful in terms of how to structure CDA-training programs in ways that make sense to colleges.

We also have a document that refers people to programs in areas where the negotiation was successful. One can talk to somebody from another higher education institution, in another community, who has been able to make the case at the college. That work cannot easily be accomplished by CDA candidates. It has to be done by the people in higher education.

Comment: I am from the state of Washington, and about 31% of our workers receive certificates, which is generally the equivalent of 1 year of technical college.

Brunson-Day: I hope that most of the certificates are those kinds of certificates, but we do not know. We did not do that level of analysis, but we will do it for the next survey.

Marilou Hyson: Today's handouts include a description of some of the work NAEYC is doing in the area of teacher education and early childhood. The other handout is a short article that was in the March 2002 issue of *Young Children* about NAEYC's new and improved standards for early-childhood professional preparation at the Baccalaureate or initial licensure level. The entire standards document can also be downloaded from a website.

I want to offer some ideas that are broader than those two handouts. They go back to how we will move toward the vision that Espinosa and the *Eager to Learn* report laid out for us, of having

classrooms led by teachers with excellent knowledge, skill, depth, and professional preparation, culminating in a Bachelor degree. Our goal is to help young children learn and develop, and to support their families in the best possible way, because the quality of our preparation should be at least as high for children before they go to kindergarten as for 5-year-old children in kindergarten. In fact, it should be even higher, because of the developmental significance of those early years. I want to describe three categories of work that require attention: pipelines, programs, and policies. I will focus on preservice higher education. Certainly, it connects with some of the other issues we have discussed. We are talking about pipelines into higher education both for future teachers and faculty.

As a person formerly involved with higher education, I know how critical that shortage of faculty is. Some of the issues we need to think about include reaching out to high school students in the interest of increasing the diversity of those who will eventually teach young children. The K-12 teacher recruitment field has had some success with teacher academies that identify high school students who may be interested in going into education, providing hands-on experience with children, and connecting them to the higher education world, so the students can visualize themselves entering this field. We can learn something from the K-12 high school teacher academy recruitment strategy. We also have many students in higher education who do not know what they want to do. Those of us in higher education need to think more about how to lead those undecided students toward the value, rigor, and joy of a career teaching young children.

We also need to nurture those Associate degree students, if we want more of them to go on, either immediately or later, to the Bachelor degree. We work hard to create those linkages between 2- and 4-year programs so that students do not waste credits. We must think about how to reach out to Associate degree students to help them make the transition to 4-year programs. We must create consortia of 2- and 4-year institutions. We must create opportunities for students at 2- and 4-year programs to share student organizations or take courses at one another's institutions. We must make that 4-year transition more visible and accessible to Associate degree students.

We also need to look more closely at who is currently teaching young children. That is where the CDA link is so important, because CDAs are significantly more diverse and more grounded in the real world of young children and families than many other groups who might potentially be part of that pathway. Through personal support and formal mechanisms, we can connect CDAs and other paraprofessionals with anyone in Head Start or community child-care training programs. What can we do to help them see what pathways might exist?

We also need to consider the long-term view. It is tempting to do quick-fix solutions, host summer crash courses, and put warm bodies with minimal coursework or mentorship into classrooms. Only 2,000 of the 8,000 people who were trained through Teach for America are still teaching, and although that is not early childhood, this should be cause for pause. Data show that to reduce turnover, investment in 4-year and even 5-year higher education programs leading to teacher licensure are cheaper in the long run. Those teachers are more likely to stay in the profession than those who enter under some sort of an emergency credential.

There are implications for the way in which we approach our planning for a well-qualified early-childhood teaching force. The faculty pipeline is critically important. A national study by Diane Early and Pam Winston showed that faculty diversity is a real challenge, as is the knowledge of faculty in some critical areas. The long-term approach is promising in terms of expanding the faculty pipeline.

The Society for Research and Child Development (SRCD) has recently put together a model called The Millennium Scholars Program. They are reaching out to undergraduate psychology and child-development majors, specifically students of color at historically African American- or Latino-serving institutions. They are bringing them to the SRCD conferences with junior mentors, who are graduate students in the same fields, and senior mentors, who are leaders in

the field. They hold a 1- or 2-day preconference intensive orientation to help them get the most out of the conference and follow up with continuous mentoring. The idea is that in the long run, those students may see themselves on a path that leads to a faculty position in a higher education institution.

Some of those long-range strategies may be helpful to encourage community college adjunct or part-time faculty to gain support to continue on the path toward more advanced degrees. It may possibly lead to some persons entering a full-time career in higher education. Some people have asked, "What is magic about the Bachelor degree? What is magic about an Associate degree?" There is no magic, but it does provide people with a depth of conceptual knowledge, stronger verbal and written language skills, and pedagogical skills that will translate into good outcomes for young children.

However, the fact is that many higher education programs do not measure up. I am concerned because there is pressure to expand the number of programs, at both the Associate and the Bachelor level. We must pay attention to what is going on in those programs. We will not see the translation of getting people into the pipeline and attaining those degrees into better outcomes for children unless we pay close attention to the content of those programs.

Among other issues, NAEYC is concerned about having quality standards in place for those programs in regards to what students coming out of those programs should know and be able to do. One of the handouts is a summary of the revised NAEYC teacher-education standards. They are a vision for high-quality, professional preparation, but they apply specifically to Baccalaureate or initial teacher certification programs. We also have standards for advanced graduate programs and Associate programs. We are in the process of revising standards for both of those.

There is more information on our website, which is at www.naeyc.org. We are looking for feedback, both about the Associate and the advanced programs. We are saying less about specific courses, although coursework is certainly important, and more about what the results should be, which links to the CDA. There are five critical areas, which well-prepared candidates and future teachers should know and be able to do. These areas are (a) promoting child development and learning, (b) building family and community relationships, (c) observing, documenting, and assessing children's development and learning, (d) building content knowledge through a wide array of teaching strategies, and (e) standards on professionalism.

Through our affiliation with the National Council of Accreditation of Teacher Education (NCATE) these standards have teeth in them, because in some states, every higher education institution that prepares teachers must be accredited by NCATE. If the institution is going through that process and they have an early-childhood program, they must submit documentation to NAEYC that says they meet those standards. The bottom line is that we have some real opportunities there. We also need to support faculty development, and the Head Start Bureau has put some money into a higher education and faculty development initiative. That kind of work needs to be expanded with attention to the areas of gap that Espinosa identified. These critical content areas include literacy, mathematics, and so forth.

If we were honest with ourselves, those of us in higher education would say that it is not always easy to keep up with the latest research. Many faculty are in isolated teaching situations. As early-childhood faculty, they do not have resources for professional development. We need to figure out how to give them the knowledge that they need so that their students are not just hearing warmed over, outdated information that gives them the illusion that they know something, when in fact they are lacking the necessary information. That is a challenge for us. We need to see what is promising and effective out there in higher education.

There is not enough research about the effectiveness of various models of delivering preservice teacher education. More research is needed to identify and showcase what is good out there. No good ideas will be enacted without policies and structures to support them. I talked about compliance with national standards, and we can effectively use those national standards and the higher-education accreditation systems. We also need to use teacher licensure and

certification as a tool in the states. It is all over the place in early childhood. There is great variability from one state to another. NAEYC and others support a vision of birth to 8 years of age for teacher licensure. We are not there yet. In many states, there is great inconsistency. NAEYC, in conjunction with several other groups, has a position statement on teacher licensure, and we need to do a better job of using it as a policy tool. Much more is also needed in the way of scholarship support.

TEACH is a model in 21 states, with state and other support, providing scholarships for current staff in early childhood programs to take courses. When linked with compensation initiatives, that is promising. From a policy perspective, we also need to continue looking at differentiated staffing models in early-childhood programs. As we talk about the Bachelor degree as a goal, it may not be optimal in programs where, unlike the public schools, we need and want a number of adults in each classroom to combine as a team to do the best job that they can.

Often, that process has been chaotic and fragmented. A policy and general professional goal is to think about differentiated staffing as a way of directing our resources in effective ways. These pipelines, programs, and policies are some of the tools that we can use as we work together more comprehensively, looking at both the challenges and some promising possibilities and practices to get us where we need to be in professional preparation.

Susan Hegland: I am from Iowa State University. We used to have an accredited early-childhood teacher education program when we did not have NCATE accreditation. However, like a number of other research institutions, we have chosen to move from NCATE to the Teacher Education Accreditation Council (TEAC), and NAEYC is not yet affiliated with TEAC. What can we do to begin that transfer, because TEAC is results- and outcomes-oriented rather than course check-off, input-oriented? I think it is compatible.

Brunson-Day: TEAC is another accreditation system for higher education, which is much smaller than NCATE. It currently does not have any system for specialized professional associations to affiliate with it, so I do not know how that would work. I also want to make sure that people understand that neither NCATE nor TEAC are course check-offs. Both are performance-oriented. We should not set up that type of contrast between TEAC and NCATE simply because we know more about NCATE, having been on the Board of Examiners and having been affiliated with NAEYC. There are many similarities. We need to look carefully at the development of TEAC, and our bottom line needs to be what we can do to help programs. However, I hope institutions that are not affiliated with NCATE or TEAC would look to NAEYC's standards as a possible tool for faculty professional development, and share them with students to encourage alignment with courses and so forth.

Sroufe: In K-12 education, we now have dueling certification programs, and we also have efforts to create status for the professional, like the National Board for Professional Teaching Standards. Each of the groups, like CDA, is under some pressure to demonstrate the added value of the process that they have people go through. I mention this not because there is anything wrong with this, but because it poses some difficult research questions.

I am not confident in the data that NCATE is putting out to justify the added value of their program. I have some questions about the research methodology that has been mentioned about the CDA in terms of control group aspects. This is difficult work. It does not mean that it cannot be done or that it should not be done, but when we say that we should do more research about the added value of professional associations, one has to look at what intervention is there. Can we describe it enough? Do we have a theoretical base for it?

Beverly Hooker: I am with the Head Start program in Missouri. I understand that teachers who receive a Bachelor degree in education can apply for certification. The Head Start program is not associated with school systems, because maintaining those types of teachers that are required to

keep their certification is difficult. It is my understanding that they must go into the public school system for 1 year to keep their certification. Our mandate to have Bachelor degrees in our classrooms is difficult, and I am trying to figure out how to keep my teachers.

Espinosa: Students need a Bachelor degree with coursework that qualifies them to be recommended for early-childhood certification through an institution of higher education. The university recommends them for certification to the Department of Elementary and Secondary Education (DESE). They must then take a test to get their initial certification.

Brunson-Day: I suppose it would be different in every state. They have early-childhood certification that qualifies them to teach in programs from birth to 3 years of age, from 3-5 years of age, and kindergarten through third grade. One could definitely be teaching in a preschool program or a child-care center and keep their early childhood DESE-approved certification. One has to fulfill certain additional educational requirements. One does not have to work in a public school setting to satisfy that. In Missouri right now, if one has a teaching certificate in any subject area, including high school biology, and one wants to get an add-on certificate, like an early childhood add-on certificate, one only has to take the early childhood practices. One can get early childhood certification without taking coursework. Maintaining one's certificate does require one to keep up with the additional hours that DESE specifies, but one does not have to teach in a public school or take another test.

John Bancroft: I have a question about the latest findings from the 2000 FACES study. They are comparing Head Start programs that were using the High Scope preschool curriculum, Creative Curriculum, and a third category of "other." The "other" category includes everything from programs using no curriculum to programs that write their own. I am concerned that there would be pressure to use or create a packaged curriculum. The other finding is that when they compare the Head Start programs by quality, the level of degrees of the teachers was not a significant factor. Teacher beliefs were a factor in quality, and those might be a function of teacher training.

Espinosa: Within Head Start, there are several curricula used most frequently, including High Scope and Creative Curriculum. A program uses a specified curriculum with certain training requirements to implement it as well as some specific guidelines about what is in the curriculum, and neither one of those is terribly directive. I would call them frameworks rather than prescriptive curricula. It is not surprising that they would get better child outcomes, because it means the staff members are organized around a central position and set of beliefs about how children learn. They have probably been provided with more consistent and coherent staff development, training, and supervision. Both models focus on supervision. Implementation is another focus. We do not know to what extent they were true to the curriculum model, but it is good that they could articulate it. The existence of "other" programs is not surprising.

I want to address the other comment you made, that Head Start employees with degrees did not necessarily have better child outcomes. A 1999 study by Anne Epstein looked at Head Start, public school, child care and professional development, and in-service training. She found that Head Start programs provide more and better quality in-service training than public schools. The variable of teacher preparation at the Bachelor degree level was significant for public schools because their initial preparation was significantly related to their quality of teaching and the outcomes for children. For Head Start, it was not as significant of a relationship because they have ongoing in-service education, which addresses those kinds of competencies.

Sroufe: It is difficult to do this type of research. One has to know what the intervention is and be able to describe it. Then one has to know what the outcome is that is being received.

Bancroft: Nick Lyons, on President Bush's team, spoke recently in the Northwest. He provided a sweeping condemnation of the higher education/early-childhood area, making broad generalizations that those people—those of us in this room—are going around teaching our kindergarten teachers and preschool teachers not to use letters and numbers. However, when they are surveyed, they go home and teach their own children letters and numbers. I am concerned that if research comes out saying that higher education degrees from early-childhood departments are not an important factor, it will be likely that the training will go in a different direction than the higher education or early-childhood field.

Brunson-Day: It is important for early-childhood people not to circle the wagons and get overly defensive because the fact is that there are weak teacher preparation programs out there, both at the Associate and the Baccalaureate level. There is certainly a body of persuasive research showing that college degrees are good. It is better for early-childhood teachers to have degrees than not to have them. However, having said that, we do have to be honest and strategic about acknowledging the validity of the criticism for teacher education at the early-childhood level and at the elementary and secondary levels.

Sroufe: Like all sessions on Head Start and early childhood, we end up thinking that advocacy might be an important aspect of our work. I found the demographic data fascinating. These were probably familiar data to many people, but I found it quite interesting, particularly the comment that Head Start teachers felt unprepared to teach in inclusive classes.

Meeting the Challenge and Opportunity of Diversity

CHAIR: Gerald Sroufe
PRESENTERS: Donald J. Hernandez, Howard Markel, Betty Ansin Smallwood

Gerald Sroufe: First, we will offer some information about the demographics, including who the people are in childhood programs, some insights about immigrant experiences in the United States, and the health and well-being, and cognitive learning of children. Betty Smallwood will focus on working with child-care providers to address issues of multiculturalism.

Howard Markel has a fascinating background, but what caught my eye is that Mayor Giuliani named him the "Centennial Historian of the City of New York," based on his research on public health and immigration in New York City. Markel is a practicing pediatrician, a medical educator, and a medical historian. He has written a number of books about pediatrics including *The Practical Pediatrician*, named "Best Book of the Year" by *Child Magazine*. One of his recent books is especially relevant to our discussion today, *Formative Years: Children's Health in the United States, 1880–2000*. Markel will personalize some immigrant experiences and inject personalities into the data.

Donald J. Hernandez is a professor in the Department of Sociology and Center for Social and Demographic Analysis at the State University of New York at Albany. For many years, he was Chief of the Marriage and Family Statistics Branch of the U.S. Bureau of the Census. He developed the 10-year panel study to assess the consequences of Welfare Reform legislation on children. He has written and edited several books, including *Children of Immigrants from Generation to Generation: The Health and Well-Being of Immigrant Children*.

Betty Ansin Smallwood is a coordinator of school services for English language learners at the Center for Applied Linguistics in Washington, DC. She has been there since 1996, providing staff development, conducting needs assessments and program evaluations, writing curriculum materials, and coordinating national programs for educators who work with English language learners.

Howard Markel: Over the last 10 years, I have been writing about the history of immigration and health in America. It is an extremely fascinating history that unfolds every day. I would like to present excerpts from the first chapter of a book I recently sent off to my publisher. It is called *When Germs Travel: American Stories of Imported Infections*. The book looks at the last 100 years of instances where immigrants were diagnosed with infectious diseases or imported them into the United States. Each chapter revolves around an individual immigrant or a few immigrants, because one of the lessons that I have learned as both a historian and physician is that stories have power. They explain situations, people connect to them, and while there are many other forms of data, stories are what I like most for this complex issue.

Under the shadow of the Ambassador Bridge, a thoroughfare that spans the international border between Detroit, Michigan in the United States and Windsor, Ontario in Canada stands a century-old ramshackle former convent on the grounds of Detroit's oldest Catholic church, St. Ann's. Today, the red brick building with its 40 bedrooms, 2 bathrooms, kitchen, offices, and common areas serves as a hostel for refugees who come to the United States seeking asylum. It is aptly named Freedom House, and is situated on a barren stretch of land near Detroit's Mexican village. Along with the Ambassador Bridge, the church is one of two identifiable landmarks in the desolate neighborhood inhabited primarily by outdated industrial buildings, Mexican immigrants, and crack houses.

Over the past few decades, however, Detroit has become a stop on the underground railroad of our era. It is a popular way station for many refugees and immigrants who arrive with the intention of crossing still another international border to Canada. At any given time, 25 to 40 different nations are represented at Freedom House, making every interaction a linguistic and

cultural challenge. The residents' travel routes vary, but the predominant means of transportation are jet airplanes that can bring anyone from any point of the globe to the United States in a matter of hours. Large airports such as John F. Kennedy in New York or Miami International are as permanently implanted in the minds of today's most recent immigrants as Ellis Island was for so many newcomers a century ago.

In fall of 1997, the executive director of Freedom House asked me to volunteer some time. In addition to the complexities of assimilation and social hostilities, the workers at Freedom House wrestled with a portfolio of problems that accompany today's immigrants; problems that might have shocked their predecessors. These problems include harrowing escapes from political turmoil, physical violence and death in war-torn nations, drug and alcohol abuse, few social support networks or relatives living in the United States, and a host of other legal, economic, psychiatric, and medical problems.

As a physician who studies health and immigration, I was naturally eager to help, but I had relatively few illusions that either the staff or the residents were interested in me based on my years spent in libraries or seminar rooms writing and arguing about these topics. No high-flown academic theories were needed in this living, breathing, and social laboratory of human experience. Instead, I was recruited because of my medical license and willingness to provide basic and free medical care for the children and adults who found their lives disrupted and unfolding at Freedom House.

Let me begin by describing my first visit in January of 1998. Dominating the entranceway of Freedom House was a large and somewhat unstable appearing staircase that sagged in the center of each step, as if an elephant had just climbed and left an imprint. Off to the side of the steps was a pay phone with phone numbers written on the surrounding wall. Most memorable, however, were the 15 residents standing in the vestibule, from Africa, the Middle East, and Central and South America. Despite the ethnicity many wore on their faces, their clothes were primarily drawn from the collection box at Freedom House; hence the odd ensemble of a Muslim woman wearing a veil and a Detroit Lions sweatshirt and sweatpants.

The most striking sensation during my first entry into the harsh realities of the modern immigration experience was the overpowering smell. The odors were strong and attacked my nose with relentless aggression, redolent with the scent of 60 people living in crowded conditions, combined with the remains of countless meals prepared in the kitchen just behind the staircase and a faulty toilet two floors above. It was not difficult for my mind to be transported to a different time and place, such as one of the holding rooms at Ellis Island, which were filled with immigrants who had just come off the boats without bathing for a week or more.

The Ellis Island doctors, of course, lived in a period where one was hardly shy about making the obvious, if not crude, observation, "You stink." They lived in the era when many ascribed the spread of epidemic disease to smells and gases emanating from rotting garbage, sewage, and ill people. Consequently, when confronted with the overpowering odor of so many unwashed bodies, the Ellis Island physicians often worried that such exposure might prove injurious to themselves or others.

Fast-forward a century to our modern era of medicine and there I was in Detroit, crinkling my nose and slowing my breathing pattern as if such a preemptive move might protect me against an invisible illness. Catching myself in my mind's eye, I tried to mask my revulsion with the equanimity of the doctor's visit. However, I know that a few, if not all, of the immigrants knew exactly what was going through my mind, as though my thoughts were being telegraphed. The sour smells, the broken toilet, the anxiety and sadness that pervaded the crowded shelter that day serve as a powerful reminder of how vastly different the lives of these immigrants are from the American doctors and health-care professionals assigned to their care.

Among the residents who first befriended me was a trio of brothers who were born in Ethiopia: Musa, age 18; Abraham, age 16; and Todel, age 12. As a result of war and famine in the late 1980s, the boys and their mother fled to Windsor by way of Saudi Arabia, the United

Kingdom, and the United States. They finally came to Canada because immigrant services, up until recently, were more receptive to welcoming immigrants than the United States. The family stayed in Canada for 6 years, when they received a letter from the Immigration Services stating that they had to return to the last international port they entered, which happened to be Detroit Metropolitan Airport. Hence they left Windsor for Detroit, and they found lodging at Freedom House.

The three boys though Muslim in background attended a Catholic parochial school connected to St. Ann's. At first glance, such a situation reflects a confusing mélange of cultures, but the boys mastered their situation with aplomb. Indeed, they flowed from one culture to the next, depending on the demands of the immediate situation. They speak with their mother, who knows little English and relies primarily on Arabic, their schoolmates, who are predominately Latino and African American, their fellow residents at Freedom House, or visitors like me. They are citizens of the world and understand better than most adults that national boundaries are far more arbitrary and artificial than we care to admit.

The middle brother, Abraham, was an especially thoughtful young man. One afternoon, he and I discussed his experiences at Freedom House and more broadly, his experience as a refugee moving from country to country without finding a permanent home. He said the following:

"It is like being on a long and monotonous train ride that has no destination, only you do not know that at first. It took me a long time before I realized that instead of being on a trip that went from point A to point B, I was on a circular track that goes around and around. The train stops at several points on the track, and newcomers get on and get off, like those four over there."

At this point, Abraham pointed to a young couple and two small children who had just arrived from Rwanda. While worn out and tired from their journey, they were clearly excited to be at Freedom House. Abraham continued:

"You may be excited to arrive, especially at the first few stops, but soon you realize that the path you are on is an endless circle. You never know when someone will get off and appear at your doorstep or if the conductor will tell them to get back on the train. Sometimes the train doors open and you're at a place like Freedom House or somewhere in Canada and you say, this is it, I am free, I can finally begin living my life. But, soon, you have to get back on the train. By the third or fourth time around, you finally get the picture; at least I did."

There was no bitterness or rancor in Abraham's voice, simply wisdom that belied his young face. Indeed, he had brilliantly described the immigration experience of the late 20th Century as it unfolded for refugees: people with national origins but not countries, and those without papers or legal standing to ease the migration process. These refugees, especially those with little chance of being granted political asylum, an extremely difficult achievement even under the most extenuating circumstances of physical horror and danger, represent some of the saddest immigrant stories I have heard.

Shortly after talking with Abraham, he introduced me to his little brother Todel, a 12-year-old boy who wore baggy jeans three sizes too big for him and other accoutrements of the hip-hop generation. Todel approached me suspiciously and asked me if I was a lawyer. "No," I replied. "Are you an INS inspector?" Again, I responded negatively and added that I was a doctor. Somewhat puzzled, Todel retorted, "They boot you out too?" All three of us laughed loudly at his wisecrack, even as I explained I was a United States citizen merely visiting Freedom House. Nevertheless, Todel's observations of the refugee's world were almost as apt as those of his older brother.

Another refugee I became quite close to was a 19-year-old African man named Yves. Unlike many of the other African refugees we saw at Freedom House, Yves was the son of a successful businessman based in a small town on the border between Rwanda and what is today the Democratic Republic of the Congo. In May of 1994, Yves' father was brutally executed and the family home was burnt to the ground. Yves heard about this while he was attending school in

Spain, although he never learned whether these horrific crimes were perpetrated by the Hutu warriors or by Congolese rebels. Yves left Spain for Portugal that fall and lost his papers in his hasty flight from Madrid. He quickly realized that circumstances being what they were, it would not be wise to return home to his village.

While in Lisbon, Yves hooked up with the immigration underground. This is a group of nefarious businessmen who are around in many countries, selling everything a refugee might require to make a permanent trip to America: clothes, baggage, English lessons, plane tickets and most important, doctored passports. For $5,000, one dealer booked a coach ticket from Lisbon to John F. Kennedy Airport in New York. The package included the rental of a Portuguese passport that had been professionally altered to feature Yves' photo on the identification page.

Once the two men made it through customs at JFK, Yves had to hand back the forged passport to the dealer, who promptly boarded a return flight to Lisbon to begin the process anew with another aspiring immigrant. This is not an isolated story; it is a common situation. However, the arrangement left Yves in a financially precarious situation, since it had taken him 3 years to earn the $5,000. It also deposited him in the middle of a busy international airport, literally feet away from United States customs officers, without a shred of identification or legitimate legal status.

With the story getting better by the minute, I asked Yves what he did next. He confidently smiled and replied, "It was a long trip. I walked through the airport and saw a giant food court. There was a wonderful pizza place there, so I went over and ordered a large one with everything and a beer. It was delicious." Charming might well have been Yves' middle name. At the pizzeria, he sat next to two young women who were returning to New York from a year of studying abroad. After 30 minutes of pizza, beer, and a complete recounting of his life story, the young women decided to help him. "Do you know anyone in the United States?" they asked. "Do you have anywhere to go?" Yves recalled some of his friends in Lisbon talking about Canada and that it would be a good place to go. But, if they could not get to Canada, they often went to Detroit, so Yves told his newfound friends that he would like to go to Detroit.

The young women pooled together a few hundred dollars and instructed Yves on how to reach the Port Authority bus terminal in Manhattan. Once there, he purchased a ticket and boarded a bus for Detroit. However, one problem that Yves did not consider is that if one wants to enter Canada via Detroit, one needs a passport or some official form of identification.

Yves was nothing if not a successful immigrant. In the annals of the American Immigration experience, replete with such souls who make the best of every possible situation and rely upon their wits, personality and charm to wriggle out of tight situations that would bring most of us to our knees. Yves explained that he simply did not have time to wallow in dejection or self-pity. He wandered the streets of Detroit for 3 days and ate his meals at a soup kitchen. He spent a few nights at a shelter before heading to the West side of the city where he could see the Ambassador Bridge.

Once he arrived there, he looked longingly across the span, thinking that if he could only get to Canada, he might be safe and his long nightmare might finally end. That night, he slept outside in a small park near the bridge. It was bitter cold, and the following morning when he came across a local police precinct, he decided to go inside. Seated inside the battered old precinct house was a 45-year-old African American police sergeant who had a son about Yves' age. The obviously distressed refugee explained his story of tragedy and flight. During Yves' monologue, the police officer was calculating in his mind the various permutations of how to handle the situation: call the INS or the federal prison, put Yves in the precinct's holding cell?

After locating the forms required when encountering illegal aliens, the police officer began asking the standard questions that typically lead to a refugee being whisked off to a jail until a hearing decides his ultimate fate. "What is your name? What is your place of birth? What is your date of birth?" Mundane questions to be sure, but it was this last question that turned out to be Yves' open sesame to America. "July 4th, 1979," said Yves. The policeman's pen and jaw

dropped simultaneously and he replied, "Friend, this is your lucky day." He tore up the INS forms, put on his coat, and drove Yves to Freedom House, where he was accepted at once. When Yves and I met, this experience was less than 48 hours old and he was clearly euphoric over his good fortune. After hearing this remarkable tale, I reached out to shake his hand and exclaimed, "Welcome to America, Yves!"

When Yves learned about the murders of his mother and two younger brothers a few weeks later, he was heartbroken and devastated. He refused to eat, rarely left the tiny bedroom he shared with three other boys, and spent most of his days crying. The rest of us who fervently wanted to help him had absolutely no idea of how to go about it. What do you say to a young man whose entire family has been slaughtered?

One spring morning, a few weeks after the arrival of several Rwandan families, I received an urgent call from one of the Freedom House workers, whose voice almost vibrated with panic as she explained there was a serious outbreak of something in the house. "Outbreak? Outbreak of what?" I asked. The staff worker explained how the night before, one of the Rwandan children had developed a severe case of diarrhea that would not abate. By morning, his little brother, Yves, and another teenager were all experiencing the same problem. They all shared the same room and the night before they had shared a carry-out pizza as a reward for cleaning up the kitchen.

At this point, she asked if I thought there was some kind of medical connection. "Well, I do not know, but there have been cases of cholera in the Rwanda refugee camps. When was the most recent arrival to Freedom House of a Rwandan from one of the camps?" Unfortunately, she provided the answer I most dreaded. "Only a few days ago. But, you do not seriously think it is cholera?"

In retrospect, I am not entirely sure I believed it myself, but the period between possibly contracting the infection in an African refugee camp to the appearance of diarrhea made for a compelling clinical scenario. Indeed, the incubation period for cholera can be anywhere from hours to 5 days after exposure. I ended the telephone conversation by telling her to try to get the children to drink as much as possible and that I would be at Freedom House in one hour.

Cholera is a disease I am well acquainted with as a historian, but one I have never seen in my medical practice. Still, it was high on my list of differential diagnoses as I drove into Detroit, for far more than quaint historical reasons. Most important were the reams of the epidemiological reports between 1994 and 1998 describing numerous outbreaks of cholera in the Rwandan refugee camps and other points of their migration pathway. In fact, cholera appears with great regularity in the world today, particularly after acute crises resulting in the destruction of water lines and sewage facilities, either by natural disasters or human means, most typically war. A recent World Health Organization report identified cholera as one of the world's top ten infectious killers. In fact, the hottest zone for cholera today and during that time was Africa, where 70% of all the world's cases are occurring.

I was nervous that afternoon when I finally pulled up in front of Freedom House. I had very little in my doctor's bag, save my stethoscope, never used bandage scissors (but no bandages), some tongue depressors, a few specimen cups, and a prescription pad. When I walked into the house, the same group of immigrants I saw only a week earlier greeted me. There were no smiles, no hellos, only eyes opened wide and a clear communication of fear despite the silence. Mothers held their children close to them as if a maternal hug might protect their charges from contracting whatever had entered their home. Others simply averted their eyes, perhaps in the hope that avoiding a doctor's gaze might help them escape the mysterious disease. I must confess that as I ascended the staircase, clutching the handle of my African American doctor's bag as tightly as the mothers held their children, I worried that I might contract whatever was going around that day.

At Freedom House, I was far closer to being a physician of the late 19th-century than one that was practicing in the 1990s. I had neither x-rays nor laboratory tests to confirm or deny a

potential diagnosis. I had no prepared IV fluids, let alone the needles, tape, tubing, and such that are required to set up such a procedure. Even though I had spent the better part of my internship inserting IV needles into the tiny veins of infants and children, I had not started a line in about 8 years. Even with the right equipment, my success in treating the patients I was about to greet was doubtful.

The four boys were lying on cots in the same tiny room. I went first to the youngest boys, because they were in greatest risk of dehydration due to their size. While they had dry chapped lips, their physical examinations were not compatible with any other signs of severe dehydration. The same could also be said for the 20-year-old young man with diarrhea. The most obvious ill person in the room was my good friend Yves. On further examination, even he did not appear to be dehydrated to the point of needing an immediate transfer to the hospital.

I asked one of the aides to get me some of the soda pop they had stored in the refrigerator. I poured out four large cups for them and a smaller one for myself, and I asked the boys to begin taking small sips every few minutes and I stayed to make sure they were able to hold it down.

Without access to a microscope to look at the diarrheal stools the boys were producing, I had no objective evidence that febrile cholera, the idiopathic agent of cholera, was in fact the culprit. But, this no longer mattered. Despite a clinical scenario that was not entirely consistent with the science and symptoms of cholera, I had already formed a conclusion. The propensity for germs to travel and the fact that the other Rwandans had just arrived from refugee camps where there were reports of cholera outbreaks—along with many historical episodes swimming in my head—all led to one answer. Yves and the boys must be suffering from cholera.

I asked each boy for a stool sample in the little plastic cups I had in the bottom of my bag. After instructing one of the aides to make sure that the boys continued to slowly drink as much as they could hold, I decided to drive the specimens myself to a local hospital to get a better sense of what was causing the outbreak. The hospital was only a mile away, and I went directly into the emergency room where I introduced myself and explained what I was after. The chart nurse asked me to wait in the visitor's area while one of the physicians sent a specimen to the hospital laboratory for analysis. Although I complied, I instantly hated this woman, unknown to me before and since this brief encounter, for so quickly relegating me to the civilian status of visitor.

Like countless civilians forced to sit out in the doctor's waiting room, I picked up an old magazine to waste time and calm my nerves. After what seemed like hours, a senior resident came out to the waiting room to speak to me. He looked about 18 years old, even though he was at least 30. In what I perceived to be a dismissive tone, he asked, "Doc, who said these guys have cholera?" "Well," I stammered, knowing exactly where this dialogue was headed, "No one made a definitive diagnosis, per se, it is just that given the combination of symptoms and that some of the patients lived in Rwanda, it was a concern . . . " as I trailed off in volume and conviction. The younger doctor smiled at me in a way that I have done as well with physicians who referred a patient to me with a grossly incorrect diagnosis.

He somewhat sarcastically uttered the word "rota" as he turned on his heels and walked back into the treatment area. By "rota" he means rotavirus, one of the most common causes of diarrhea in the world. No minor footnote to a medical textbook, rotavirus is responsible for more than 140 million episodes of diarrhea per year and one million deaths worldwide. In the United States alone, there are more than 5 million cases annually, and 50,000 of these cases are severe enough to warrant hospitalization. Each winter and spring, almost every American pediatrician sees dozens, if not hundreds, of miserable children with "the runs" and their exhausted parents searching for an end to the foul-smelling diarrheal river they have tried desperately to dam.

The two-syllable diagnosis, rota, demonstrated far more than the fact that my initial call of cholera was incorrect. The word screamed, if only I could hear the shouting, "You fool. You made the assumption that these immigrants imported cholera when they were suffering from a form of diarrhea that is as American, if markedly less palpable, as apple pie."

When I was in medical school, a professor was fond of a peculiar axiom: When you hear the sound of hoof beats, it is more likely to be horses than zebras. Like many native-born Americans treating foreign patients, I chose to track down a zebra rather than a local horse. That afternoon, I could envision the real epidemics of cholera that had been reported in Africa over the past few years. From my viewpoint, I was convinced, or at least I convinced myself, that the threat of imported infection is imminent. This was an excellent lesson. It was only at Freedom House that I began to appreciate how difficult it is to protect the public's health against the ingress of so-called foreign germs, without overlooking the health threats that often exist in our own backyards.

Although they could easily have occurred, not a single cholera germ traveled across the ocean. Not this time. These patients contracted their malady in my hometown of Detroit, Michigan.

Donald J. Hernandez: I will focus on the current demographic transformation that is dramatically increasing the range of ethnic diversity of our children, while in the process of creating a new American majority. Historically racial and ethnic minorities, including Latinos, African Americans, Asians, and American Indians, have constituted substantially less than half of the American population. Taken as a whole, these racial and ethnic groups are growing much more rapidly than the non-Latino White population, with the result that these groups are destined to become a numerical majority within the next few decades.

The emergence of racial and ethnic minorities as a majority population is rapidly occurring and will become a reality first among children. Consequently, as we think about the future of education, health care, labor force, and culture in the U.S., we must increasingly focus on today's racial and ethnic minorities. I will focus on children in immigrant families, because this is the fastest growing population of children, and because immigration and births to immigrants and their descendents is driving the historic transformation of the U.S. population.

I will especially draw on my work done a few years ago as a study director of the Committee on the Health and Adjustment of Immigrant Children and Families, which was convened by the Board on Children, Youth, and Families, under the auspices of the Institute of Medicine and National Academy of Sciences. If you are interested in more in-depth issues, you can find the information on the National Academy press website at www.nap.edu.

In conducting our work, we adopted a generational framework in order to understand the process of assimilation and adaptation of children in immigrant families, both through time and across generations. We distinguished and studied three generations of children under 18 years of age. First-generation children were born in a foreign country. Second-generation children were born in the U.S., but with one or both parents foreign-born. Taken together, the first- and second-generation constitutes children who live in immigrant families. In contrast, third and later-generation children are born in the U.S. to parents who were both born in the U.S. These are children in U.S.-born or native-born families.

Using this framework, we found that 20% of children less than 18 years of age and living in the U.S. in 1997 were children of immigrants with one or both parents foreign-born. That means 14 million children were living in immigrant families, or 1 of every 5 children in the U.S. Between 1990 and 1997, the number of children in immigrant families grew by 47% compared to 7% for children in U.S.-born families.

Consequently, the number of children and youth in immigrant families expanded seven times faster than the number in native-born families. By 1990, about one half of children in immigrant families were of Latino origin, and about one fourth were Asian. This greatly contributes to the diversity of the U.S. child and youth population. As of the year 2000, the proportion of Asians had declined slightly to 22%, but the proportion with origins in Latin America had jumped to 62%. In 2000, the combined total of Latino and Asian children was 84% of all children form immigrant families.

We look to the future driven by third-world population growth and economic opportunities in the U.S. According to U.S. Census Bureau projections, most future population growth will

occur through immigration and birthed immigrants and their descendents. Because most children in immigrant families belong to Latino or non-White racial and ethnic minorities, Census Bureau projections indicate that the proportion of children under age 18 who are African American, Latino, Asian, or some other racial and ethnic minority will rise to about 50% of the child population between 2035 and 2040, up from only 31% in 1990.

In the year 2030, the baby boom generation born between 1946 and 1964 will be in the retirement ages of 66 to 84 years old. The Census Bureau's projections indicate that by 2030, 74% of the elderly will be non-Latino White, compared to only 59% of working-age adults and 52% of children. As a result, as the growing elderly population of the predominately White baby boom generation reaches the retirement ages, it will increasingly depend on the productive activities and civic participation, which is to say voting, of working-age adults who are members of racial and ethnic minorities for its economic support. Many of these workers will have grown up in immigrant families. Consequently, as we look to the future of education, health care, and the labor force in the U.S., we must increasingly attend to the circumstances of children and racial and ethnic minorities in immigrant families. These groups have culture orientations that may differ from the current non-Latino White majority, and they have often experienced limited social and economic opportunities in the past.

However, immigrant children are not spread evenly across the U.S. Instead, children in immigrant families are concentrated in a handful of states and in less than a dozen major metropolitan areas. In each of six states, including the largest states of California, New York, Texas, and Florida, children in immigrant families account for at least 20% of all children. In an additional ten states they accounted for at least 10% of children. These numbers will no doubt be larger when we get results from the 2000 U.S. Census.

The Committee looked at a variety of childhood risk factors in conducting its work. In general, children living in a one-parent family have shown negative consequences for educational attainments and occupational success later during adulthood. The proportion living in one-parent families is substantially smaller for children in immigrant families than for children in U.S.-born families, at 17% versus 26% in 1990. Thus, children in immigrant families are substantially more likely than those in U.S.-born families to have both parents in the home. In fact, both first-generation and second-generation children are less likely than third- and later-generation children to live in one-parent families. These results indicate that children in immigrant families are more likely to benefit from strong, stable two-parent families than are children in U.S.-born families. For children generally, negative educational and employment outcomes have also been found to result from instability and parental employment and low parental educational attainments that lead to poverty level family incomes.

The overwhelming majority of children in immigrant families, like those in U.S.-born families, have fathers who are in the labor force, at 88% compared to 95%. We also found that children in immigrant and native-born families are equally likely to have mothers in the labor force. These results indicate that the children in immigrant and native-born families live with families who have equally strong work ethics. There is little difference in children in immigrant families from those in U.S.-born families in the proportion with parents who are highly educated. As of 1990, a nearly identical 24 to 26% of children, both in immigrant and U.S.-born families, had fathers with 4 or more years of college education. Similarly, a nearly identical 16 to 18% had mothers who were college graduates.

However, children in immigrant families are much more likely to have a father or a mother who has completed 8 years of schooling or less. The proportion of children in immigrant families who have a father or a mother with no more than eight years of schooling is 25% compared to only 3% for children in native-born families. Therefore, about one fourth of children in immigrant families have parents with extremely limited educational attainments, with potentially important implications for the educational and employment projections of these children during the coming years.

Focusing on poverty, we found that children in immigrant families are somewhat more likely than those in U.S.-born families to live in official poverty; 22% versus 17% in the 1990 Census. The first generation was especially likely to live in poverty, at 33%. However, reflecting the enormous diversity and the circumstances of children in immigrant families with various countries of origin, poverty rates for children in immigrant families ranged from a low of 4% for children with origins in Ireland to a high of 51% for children with origins in Laos. Thus, at one extreme, children with origins in about two dozen countries had poverty rates that were equal to or substantially less than the rate of 11% for non-Latino White children in native-born families. These two dozen countries are spread across Latin America, the Caribbean, Asia, Europe, the Middle East, and Africa. At the other extreme, most of the poverty among children in immigrant families was concentrated among children with origins in 12 countries who experienced poverty rates in the range of 26 to 51%, depending on the country of origin.

Many officially recognized refugees come from five of these countries: the former Soviet Union, Cambodia, Laos, Thailand, and Vietnam. Immigrants from El Salvador, Guatemala, Nigeria, and Haiti have fled countries experiencing war or political instability. Many migrants who seek unskilled work are from Honduras and the Dominican Republic. The 12th country is Mexico, which currently sends the largest number of both legal and illegal immigrants and which has been an important source of unskilled labor for the U.S. economy throughout the 20th Century. The overall poverty rate for children in immigrant families from these 12 countries was 35% in the 1990 Census.

In view of the negative risks associated with poverty, the situation of children from these 12 countries may be particularly serious. Mexico alone accounted for 31% of all children in immigrant families, but they accounted for 50% of all children in immigrant families who lived in poverty. Taken together, children with origins in these 12 countries accounted for about 46% of all children in immigrant families, but they accounted for about 80% of all children in immigrant families who lived in poverty. This is where the largest concentration of poverty is among immigrant children.

Although the overwhelming majority of children in immigrant families are from these 12 countries, 90% had fathers in the labor force, 40% had fathers who did not work full-time year round, 46% had fathers with only 8 years of schooling, and 40% lived in linguistically isolated households where no one in the home aged 14 years or older speaks English exclusively or well. Thus, the high poverty rate for children from these 12 countries is not strongly related to a lack of labor force participation among fathers or mothers. Instead, it is strongly associated with a lack of full-time year round work among fathers, with extremely lower educational attainments among mothers and fathers, and with linguistic isolation from English-speaking society.

Turning to language use and language ability of children, one fourth of children in immigrant families live in linguistically isolated households, and about two thirds speak a language other than English at home. Nearly three fourths of children in immigrant families speak English exclusively or well. The proportion of children in immigrant families who speak English exclusively or well jumped sharply from 55% for the first generation to 81% for the second generation. Thus, language assimilation occurs rapidly across immigrant generations.

Finally, because lack of U.S. citizenship has, with Welfare Reform, become a potential risk factor for children and parents and immigrant families, it is important to note that about one fifth of children in immigrant families were not U.S. citizens in 1990. About two thirds were either not citizens themselves or lived with at least one parent who was not a citizen. This is important because parents who are not citizens may be unaware of their children's eligibility for important services or may fear contact with government authorities on behalf of their children. A substantial portion of children in immigrant families may be at risk of not receiving the important public benefits or services for which they are eligible as children born in the U.S., as American citizens.

This may especially be the case among children with origins in the 12 countries with high poverty rates. Not only do high proportions of children live in poverty, but many of them are

not citizens, or have parents who are not citizens. Noncitizen immigrants experience the largest and most immediate reductions in benefit eligibility under Welfare Reform. As a result, it is essential to study the effect of Welfare Reform in order to understand the circumstances of children in immigrant families. It is also essential that immigrants provide a major focus for our research so that we may understand the overall effects of Welfare Reform.

To provide a baseline for such studies, our Committee commissioned new research regarding the extent to which children in immigrant and U.S.-born families, prior to Welfare Reform, were living in families that received AFDC, SSI, or other public assistance, such as food stamps, Medicaid, housing or heating assistance. We commissioned new research specifically on health insurance coverage and access to health services and have reviewed and commissioned research assessing the health and well-being of children in immigrant families.

Available evidence suggests that prior to Welfare Reform, compared to third- and later-generation children and adolescents, those in immigrant families were, on average, exposed to greater socioeconomic risks. They also had less access to health insurance and health care. Those at greatest socioeconomic risk were less likely to be in families receiving a range of welfare benefits and services. Surprisingly then, children in immigrant families were doing at least as well or better than third- or later-generation children for a wide variety of indicators measuring physical health, mental health, and school adjustment.

This broad conclusion must be tempered, however, for four reasons. First, the evidence pieced together and generated by the Committee regarding the health and well-being of children in immigrant families is consistent across a wide variety of domains, but it is limited both in its quality and in the number of domains for which research is available. Second, available evidence suggests that there is enormous variability across children with various countries of origin for many indicators. Third, the health and well-being of children in immigrant families appear to deteriorate over time and across generations. This suggests that the protective benefits of immigrant culture may become more diluted the longer they live in the U.S. Fourth, the recent Welfare Reform places many children in immigrant families at risk of losing potentially important economic and health resources. To be effective, policies and programs designed to foster the adjustment of children in immigrant families to American society must be founded on rigorous scientific knowledge about their needs, the processes that generate these needs, and approaches to addressing them.

Unfortunately, few major data collection efforts provide a scientifically sound basis for monitoring or studying the health status and resources available to children in immigrant families. To expand knowledge needed to improve public and private programs and policies, the Committee developed five recommendations for new research studies, new data collection, and new information dissemination. They are aas follows:

1. The federal government should fund a large longitudinal study of children and youth in immigrant families. This study should measure physical development, psychological development, and the range of contextual factors influencing the development of these children. It is essential that this study include, for comparative purposes, large subsamples of children in U.S.-born families belonging to diverse racial and ethnic groups.
2. There should be a series of ethnographic studies on the physical and mental health of children and youth in diverse immigrant families. They vary enormously in their culture and circumstances.
3. Both quantitative and qualitative research should be conducted on the effects of Welfare Reform and health-care reform for children and youth in immigrant families. Access to, and the effectiveness of, health care services and other services are affected by the provision of culturally competent care. None of the major evaluations of reforms in welfare and health care focuses on the consequences for children in immigrant families. At a minimum, such studies should include substantial subsamples of children in immigrant families. They should also pay attention to factors uniquely relevant to outcomes for

these children, such as their circumstances of migration, the duration of child and parental residence in the U.S., and immigrant status of siblings and parents.

4. The federal government should collect and code information on country of birth, citizenship status, and parents' country of birth in key national data collection systems.
5. In the future, as the federal government develops new surveys or draws new samples to supplement or extend existing surveys, it should select and include subsamples that are large enough to reliably monitor the circumstances of children and youth in immigrant families as a whole, and where feasible, for specific countries of origin.

The point of these recommendations is to increase our knowledge about the nature and determinants of health and well-being among children in immigrant families compared to those in U.S.-born families, including the role that Welfare Reform may play during the coming years. The implementation of these recommendations would enormously expand our knowledge about the development and well-being of all children. However, several issues must be addressed to accomplish this.

First, attention must be paid to the role of racial and ethnic discrimination and intergroup relations as they affect children in immigrant and native-born families, either similarly or differently. Second, particular attention should be paid to neighborhood and national social networks, to family traditions and expectations, and to connections to ethnic communities and resources within the U.S. Third, these issues should be addressed in the context of the great diversity of children in immigrant and native-born families, regarding their socioeconomic status, economic opportunities, race and ethnicity, family circumstances, and the social context in which they live. The nature and causes of different childhood trajectories, and whether they involve assimilation and access to "middle class" opportunities, are extremely truncated. Access to social and economic opportunities must be monitored and understood by comparing longitudinal changes over time and across generations, as experienced by children who compose important subgroups of the new American majority.

As the growing elderly population of the predominately White baby boom generation reaches retirement ages, it will increasingly depend on the productive activities and voting of working-aged adults who are members of racial and ethnic minorities, many of whom lived in immigrant families as children. Consequently, as we look to the future, we must increasingly attend to the circumstances of racial and ethnic minorities, including immigrants. The future of our economy and political organizations depends on improved understanding, public and private policies, and programs to assure healthy development, high educational attainments and labor for success of these children.

Patricia Horne McGee: How are immigrants affected by Welfare Reform? How does that compare to their eligibility pre-Welfare Reform?

Hernandez: There is a great deal of variability to address. The new immigrants are not eligible for some programs but they are eligible for others. Immigrants, as you know, often come as young adults, and they have children when they are here. Their children are not immigrants; they are citizens and they are eligible—theoretically at least—for a variety of programs. It is important to continue to look at the incoming immigrants and their children, as well as the previous ones, to understand how Welfare Reform may have differential effects. Over time, especially if immigrants become citizens, they will become eligible. It is important to understand what these processes are, especially for children.

It is also important to look at resources generally on welfare. Resources from public programs are just one set of resources. The reauthorization of Welfare Reform is going to occur over the next 6 months or so, and one of the issues is whether food stamp benefits should be increased. President Bush, for example, has argued that at least some of the immigrants who are excluded should be brought back into the food stamp program. Unfortunately, there is not much men-

tioned about immigrants, or children for that matter, in their discussions. Work and marriage—those are the two big words—have little to do with children at all. Looking at the population of children receiving TANF, we find that the recipients are mainly children, and then mothers and some fathers.

I would argue that we need to focus on children generally, and immigrant children in particular, as it pertains to policy now. However, this policy is potentially subject to change over time, and may well be changed during the coming months. We will see if it is for better or for worse.

Gloria Johnson-Powell: We have trouble identifying which countries in Africa people come from. We have not been able to obtain much data, beyond 1996. Could you tell us where we could get some information about the migration to various states after 1996?

Hernandez: There are two main sources of data, including the U.S. Immigration and Naturalization Service (INS), which indicate where people say they are planning to live when they enter the country. They may not have gone there at all, for that matter. Your question is well timed, because the 2000 U.S. Census data are expected next week, and will begin coming out over the next four or five months on a state-by-state basis. I think they are starting with Vermont because it is small and easy. The data will have information on country of birth, and local levels of geography, so you can get a sense of where people of different countries of origin within Africa, and elsewhere, were physically located as of 2000.

The U.S. Census Bureau is also planning an American Community Survey, which is a huge survey of 3 million households a year. The plan is that the survey will provide local area data to states and metropolitan areas every year. It will track on a 5-year moving average basis, starting in 2003. We will not get the track level until 2008. Thus, starting in 2003, there will be large survey data that will offer at least some information about metropolitan areas and states.

Sroufe: Will the children that Markel described be in this count at all?

Hernandez: They will be in it, but it is a problem because refugees are not identified in the U.S. Census, so their whereabouts are not known. It also depends on where those refugees are in their own asylum process.

Johnson-Powell: We are now using a network that we have acquired over several years among African immigrants, to determine where the refugee populations are. We hear from newspaper reports, for instance, that there is a large settlement of African refugees in Fargo, North Dakota.

Betty Ansin Smallwood: Yes, I work in North Dakota, and some of Sudan's "Lost Boys" were resettled in Fargo.

Hernandez: Especially for those countries that send a lot of refugees, you can at least use the U.S. Census data and local inquiries as a screen to see if children are refugees or not. It makes a big difference what reasons people come with, whether they are educational, humanitarian, financial capital, or other reasons. Do they end up going to awful schools in the center of New York City, or do they end up with better opportunities?

Nicole Fedoravicius: Is there a standard undercount we should know about regarding the census data?

Hernandez: It has not been estimated separately as far as I know. One can look at the number for Latinos, but most of the Latinos now in the U.S. are immigrants. Whatever underadjustment

applies to Latinos probably applies more so for Latino immigrants. The U.S. Census Bureau estimates that half of the illegal immigrants are missed and about half are in the Census. Like the refugees, they cannot be specifically identified because that immigrant status information is not collected.

Smallwood: I have been asked to respond to the excellent presentations that were made, in terms of how they may affect education. I was an English as a Second Language (ESL) classroom teacher for over 16 years, and I had the opportunity to go on, through government funding, and become a teacher of teachers. When my children ask what I do, I reply that I teach the teachers to teach the children. Most of my time was spent in elementary schools and preschools.

I think that this session has been a wonderful learning opportunity, and I want to offer some responses. From an educator's point of view, it is wonderful to have the opportunity to hear people from professional fields, because in education we do not always get this kind of respect or this level of information. Markel's stories make it clear why working with immigrants takes so much time in schools. It is important for teachers to hear the stories and know what these immigrants go through. This builds compassion for the students. It builds an awareness of what these children face when they enter schools, and why our task involves so much more than just teaching them English.

My second comment is that preschool teachers and immigrant families have different approaches to education. Among many immigrants, the place for young children is in the home with their parents. Because they are in a new environment, and it is difficult for them to separate, it is oftentimes a struggle to enroll them in programs, even when the children qualify for Head Start and preschool programs. We know that, educationally and linguistically, it is important for them because they need the extra time. Attending Head Start or preschool, and having opportunities to play with language, gives them that time. But there can be a cultural clash.

The other reality, as Hernandez pointed out, is that many of these children are born in the United States, so they come into the schools as citizens. The children are entitled by law to schooling and yet the parents are afraid. They are afraid to send their children to school, and this is especially true at the preschool age with Head Start.

Another comment I want to make is that, as Hernandez and Markel mentioned, education should focus upon immigrant services, just like the fields of medicine and sociology. Yet, the amount of time in education that is devoted to understanding the linguistic issues and cultural issues related to these services, including ESL, is little. The amount of time devoted to this issue in preservice courses is minimal. We are talking about course work in multicultural and crosscultural understanding, as well as second language acquisition. The teachers do not come in with sufficient training, and there are many statistics that show this; in fact, only 5 or 10% have had relevant training. With these numbers, it becomes everyone's job to educate these children. It is not just the ESL teachers; it is all teachers. California is one of the few states that have special training in that way.

Another issue that came up was the importance of cultural differences and discrimination. One of the lesssons that I have learned in training Head Start teachers is that the dialogue needs to be intercultural and crosscultural, so that the understanding goes both ways. There is misunderstanding by Head Start teachers, and there is misunderstanding by immigrant families.

At one of our training sessions, we put together a panel of families. One of the African women on the panel was from Ghana, an educated woman with university training. She attended, discussed her background, and answered all the questions, but her life was not at all similar to the immigrant parents that faced the Head Start teachers. We need to do more than invite the parents in to talk about their experiences; the process must be sensitive.

In a Head Start program where I was involved, there was considerable disrespect by the immigrant families toward the Head Start teachers. This situation created a racial issue, since the disrespect was channeled from African immigrants towards African American teachers. They

brought me in, and I said, "I am just a little White lady, what do you want me to do?" They wanted me to mediate between these two groups. As a Quaker, I have some background in crosscultural communication and conflict resolution, and we made some progress. It is a sensitive situation that requires two-way communication. Because the Head Start teachers are working hard for these children, they need to have the respect of the parents as well.

One last issue worth mentioning is that in our field, we talk about the difference between social language and academic language. It is a misnomer to think that just because children begin to speak English, that they are at a level of being able to do academic work. It is true when you see children at the secondary level. They can go out and order food at McDonald's, but they cannot function in physics class. This is also true in Head Start and at the preschool level. Do they have the academic language? Are they able to use directional words?

Another comment I would like to make addresses literacy. The traditional thinking in our field is that it is important to develop literacy in home language, because from first-language literacy you can make the transfer to English. However, a grave problem quickly presents itself if the parents are not literate in their home language. Our research says that if one speaks English to immigrant children they are denied that base language; this idea becomes complicated in regard to literacy. It is important to bring parents into the school to have those two-way dialogues, and to give the preschool teachers time to understand the linguistic background in order to build upon proper practices.

Mary Ann Matta: Can you talk more about immigrants from the Middle East?

Markel: Middle Eastern immigration is quite fascinating, and one of the largest communities is right outside Detroit in Dearborn, Michigan. It began after World War II with the Chaldean, or the Christian, Iraqi migration. In the succeeding years, people have immigrated from Egypt, Lebanon, Pakistan, Syria, and so forth. The Detroit metropolitan area is a living social laboratory of Middle Eastern immigration that has not been tapped. I work at the University of Michigan, and we have talked about doing something to study it, but we have not taken great advantage of it. One problem is that the community is not at all monolithic. It is quite complicated because someone who is Lebanese may not talk to someone who is Egyptian, Palestinian, or what have you.

It is also interesting that there are social support groups, which are far more rudimentary than some of the older immigration groups. For example, Russian Jews relied on German Jews, who were already settled here, and had developed social services, educational services, and so forth. Support is far more rudimentary for the Middle Easterners, and is incredibly rudimentary for the Africans, because a lot of them are fleeing situations in their home countries. They are not immigrating; they are escaping with their lives.

Some of the community members are also wary of university researchers coming into the community. That said, it is a fascinating topic to study, and it is particularly fascinating since September 11th. I must receive a dozen questions a week from parents on issues relating to September 11th. I have colleagues who work in New York, and there are children who saw the events occur before their eyes. There are children who go to Stuyvesant High School, for example, right next to the World Trade Center.

Think about the fact that if you are of Arabic heritage, you wear your ethnicity on your face, especially if you are a Muslim women wearing a burka, hood, or veil. These are the kind of physiological issues that I would like to see studied, among many others. The economic issues in Michigan, including various foods and businesses developed by the Middle Eastern populations, are also fascinating.

Smallwood: There is a book called *The Day of Ahmed's Secret* that some of you may know. It is a lovely, respectful story of an Egyptian boy and his secret. The secret is that he learns to write his name. It is good for preschool, because there is a lot of language in it. There are not that many

books about the Arab culture available in the multicultural schools. It is important to bring in many books to reflect the cultures of all the children.

Children are not monolithic. Teachers sometimes make mistakes of grouping children together. One year, I had just returned from living in Nigeria, and I had children from Israel, Palestine, Peru, and Chile in a cooperative learning group. Grouping the children was an important consideration, because they were not getting along in the classroom. They carried many issues from their families, and the Israeli boys said, "I am not sitting with him, I am not talking with him, I am not working with him. You can put us in any group you want but that group." The problems of the homes do not all disappear when children enter the classroom. It takes a lot of sensitivity. The same occurs with Latino children. There is the assumption that since they all speak Spanish, they should be put together, and that they will get along. It is more complicated than that, and we need sensitivity to understand those issues.

Mary Ann Walker: Could you please discuss tension between teachers of different ethnicities and cultures?

Smallwood: Some of the recent immigrants arrive well-educated, with teacher training from their own country. But because their training is not from the U.S., they come into Head Start programs or preschool programs as aides. Some of the tension between teachers stems from the fact that some immigrants qualify only as aides, but they are better educated and better trained than the teachers they are supposed to assist. I encourage them to follow the system, get additional training, and become a teacher.

Sroufe: Do we have any information about other international experiences? We often think of the United States as the only country that is receiving immigrants; in fact, many countries, including Germany and those in Scandinavia, are receiving immigrants. How are they accommodating them?

Markel: The European situation is interesting, because they are far more homogeneous in their population. Britain had a tough time grappling with this issue in the 1960s, 1970s, and 1980s when Africans and Middle Easterners moved there. Germany is having the most critical problems right now in Europe.

Smallwood: With their population from Turkey.

Hernandez: It is interesting that many of these other countries are mirroring what has occurred in the U.S. Using Walt Whitman's term, we are a "nation of nations," and that is our unique role in world history. But many of the same issues of displacement persist, and one generation with power often cedes their power to a new up-and-coming group. Think of the Yankees, who had to give up their power to Irish politicians a century and a half ago, and Germans, and East European Jews, and so on. This is now playing itself out across the Atlantic Ocean. It brings up a much broader issue that goes beyond the American immigration experience. What it comes down to is the common propensity for a society to label some people as outsiders, or "others." It is a frightening situation.

One of the reasons I study immigrants and contagion is that it demonstrates a scenario of wanting to avoid somebody. If somebody walked in here with bubonic plaque, we would all want to get out of the room. No one would say we were being culturally insensitive. But when one combines a serious, contagious disease with a socially undesirable or "other" group, there are interesting dynamics worth studying. This is not particularly scholarly to say, but it comes down to a turf issue: "I was here first. You look different than I do. This is not the face of my country." This is happening all across the world.

Recently, I spent a week in Paris visiting their early-education programs, corresponding to Head Start. We were looking specifically at how they address immigrant issues. They take an assimilationist point of view, which in France they call their republican model: Everyone should become French. They put a lot more resources into early-education centers that have a high proportion of immigrants than they do into the others. They are making an effort to support their point of view, by providing resources to make it happen.

We were surprised that they have not done any research. They have been doing this for about 20 years, but there is no research on what effect anything they are doing has on the immigrants; whether it makes a difference, whether it is good, whether it is bad. They have not considered alternative approaches. In about 6 months, we are going to put together a report to offer the perspectives on how this could or could not be a model for the American situation.

Hernandez: We had the same policies here in the 1920s and 1930s. It is called "Americanization."

Smallwood: If one scratches immigration beyond the surface, one realizes that it is complex. Let me mention another children's book, called *Grandfather's Journey*, by Allen Say. It is his immigration story and family history. The last line of the book says, "Whenever I am in one country, I am longing for the other." When I share that in literature circles with ESL and mainstream teachers, it reminds people that immigration is not a one-way situation. When one comes to America, there is an experience between the countries and it is ongoing and worth exploring.

The United States inherits many of the other immigration sagas. For example, the Germans said that the Gypsy Romas could stay for 5 years. Where did they go after the 5 years? They have now come to the United States, to North Dakota. However, North Dakota has out-migration, which means that people are leaving the state. It is difficult to understand why they have out-migration when they are so welcoming to immigrants. The other information I can share about immigration is based on one of my summer projects, helping the St. Louis Public School system develop an ESL curriculum. When we discussed the topic of immigration, we realized that they were also studying migration, including westward expansion and emigration. I always encourage people not to be monolithic and think that everyone is coming to America. There are many reasons for people to leave the country. There are books about this topic, especially about American Jews going to Israel.

Hernandez: I have some thoughts on the importance of crosscultural communication. One story I heard was about an Arab child in Detroit who was probably third generation. In third grade, the children were telling him to go back to his own country. This behavior lacks the sensitivity and understanding of how we were all immigrants once. This child's father was a second-generation immigrant, a middle-aged adult who probably came to the U.S. in the 1940s. He seemed to be well integrated, but after the events of September 11th, he asked his American friend, "Can we still be friends?" He felt that "otherness."

After September 11th, we realized how bereft we are in the intellectual capacity of addressing Arabic language and culture, which constitutes at least one fifth of the world's population. These stories, from the micro-level of children and second-generation adults to global terrorist threats, demonstrate the importance of communicating and understanding each other.

Sroufe: Robert Coles did a lot of work in similar fields and has a book that looks naively optimistic. It is about children in places of conflict. As I recall, he concluded that children knew their parents' prejudice but did not share them. The Israeli and Palestinian children could play together, but when they went back to their homes they would begin with the epithets again because it was expected behavior. This seems more optimistic than our current situation, and we have a challenge before us.

Effective and Strategic Communication of Research to the Media

CHAIR: Ruby Takanishi
MODERATOR: Cathy Trost
PRESENTERS: Carol Guensburg, Rachel Jones, Kristin Moore

Ruby Takanishi: We will begin with brief preliminary remarks, and then we will engage with the audience on the subject of how researchers can better communicate their work, their findings, and the significance of their findings to the various media. Cathy Trost will moderate the session. Trost is the founding director of the Casey Journalism Center on Children and Families at the University of Maryland. She is a former *Wall Street Journal* reporter, and she has recently completed a book that compiles an oral history of journalists who covered the events of September 11th.

Rachel Jones is a science editor for *National Public Radio* (NPR). Jones is from southern Illinois, and she was enrolled in the first summer of Head Start.

Carol Guensburg is a journalist who serves as Director of the Journalism Fellowship Program in Child and Family Policy at the University of Maryland. She was the former Associate Editor of the *American Journalism Review,* and she is also a former reporter.

Kristin Moore is President and Senior Scholar at Child Trends, a nonpartisan, nonprofit, research organization in Washington, DC. We wanted to have a researcher on the panel who has a lot of experience with the media, and who is often quoted in the media. Moore's particular expertise is teenage pregnancy.

Cathy Trost: What I want to talk about today is the notion that we are two different cultures—journalists and researchers. We have different customs, habits, expectations, and timeframes for our work. We hope this panel will help bridge the gap between those two cultures, help you better understand journalism, as well as understand through the eyes of a researcher who has incredible mastery of communicating to the media. We are trying to figure out how to translate our work to one another, which is critical if the world is going to be a better place for children and families.

We will discuss issues that you may not understand about journalism. This is a perfect opportunity to get the story behind the secret society, and to find out what goes on in newsrooms. It is also an opportunity to think about what issues are not covered by reporters and what you think is not on our radar screens.

One fascinating question arose: What is a typical day like for a journalist? It is revelatory to find out what a journalist faces when he or she walks into the office each morning. I will ask Guensburg and Jones to describe what they confront when they walk into the newsroom in the morning and what that means in terms of the work, getting it on the air, and getting it into print.

Rachel Jones: This is a good time for me to talk along those lines, because for the past month and a half, I have been working on a profile of a program on racial disparity of the Urban Health Institute at the Johns Hopkins University in Baltimore. I have been developing this profile and talking with people in the Institute and the community about their perceptions of Johns Hopkins. I had just completed a first edit and was thrilled about it. It was almost like giving birth. It was an intense process to get this story together, have it edited, and be close to having it on the air.

I came into the office on Wednesday morning. At NPR, there is a 9:30 am meeting every morning when all the editors of the different desks and shows sit around a huge conference

table and decide how to make the lives of reporters miserable. Actually, they decide the major topics of the day, the stories that need to be covered, and which pieces should go to which shows.

I arrived at the office at about 9:45 am that morning, and apparently that day's meeting had been short. When I walked over to my editor's desk, I told her I was ready for the next edit on the Johns Hopkins story and that, hopefully, it would make it on one of the upcoming weekend shows. She replied that a story in the *Washington Post* had described a study of spanking that recently appeared in the *American Psychological Association Journal*. She asked if I was available to probe a bit deeper into the debate on spanking children.

I could say, "No, I really want to stick to and finish this Johns Hopkins piece," or I could continue to work at NPR, so I agreed. I was also curious about the spanking study, because as somebody who grew up in a family of ten children, spanking was the only way that my parents could have any kind of sanity. I was curious what the research and conclusions were based on.

I spent the past few days on the telephone, and interestingly enough, most of the people to whom I wanted to talk were here in Washington for this conference. I arranged an interview yesterday with the woman who did the meta-analysis, involving 88 major studies on spanking over the years. This is the first time anybody looked at them all and tried to measure them on a variety of indicators. It is a 45-page study, and I had 2 days to weed through all the charts, along with the three accompanying commentaries by doctors and psychologists who refuted the results.

When I finally set up an interview with Elizabeth Gershoff of Columbia University, I felt as though I had to go into it by saying, "I know I am doing you an injustice here. You have spent the past 7 years looking at these studies. You have thought about it from every possible angle, and I need to get to the heart of it with a 3-minute story for this week's *All Issues Considered*." She was receptive and understanding, and she boiled it down to the major points and the "take home message" for listeners.

Today I will interview one of the commentators who wrote the other piece, and ask him about the counterpoint argument. But then, I still have to find a third person to mediate it and help me put this in context. As a listener, reader, and consumer of news, I often get frustrated when there is back and forth head-butting, as opposed to giving some insight into what a piece means.

The point I want to convey is that sometimes, from day to day, a journalist does not know what they will cover. They do not know what they will need to wear. They do not know what perspective they will have to take or how deep they will have to delve. I am doing a story on a *New England Journal of Medicine* study that is fairly straightforward, which I can whip out in 3½ minutes without a problem. However, a topic as politicized as the spanking debate —an issue based on a wide analysis that has people deeply entrenched on one side or the other—can pose a challenge, even to the most dedicated journalist who wants to do more than just skim the surface.

From our perspective, it can be enormously challenging to come in on a daily basis and attempt to get our arms around the work of researchers. It has to be a give and take process. We must create more empathy, which is why I enjoy and appreciate engaging in conferences such as this one.

Carol Guensburg: Two days of preparation is 1½ days more than most reporters get. I want to add that Jones comes to social science issues with some specialized training.

Jones: You are absolutely right, it does make a huge difference. I try to transmit to researchers that I have spent the past 8 years with a primary focus on issues affecting children and families in the United States. First my focus was on policy and now it is more on research.

However, the average journalist may not have similar insight or knowledge. Journalists are thrown into fields everyday where their expertise may be extremely limited or nonexistent. One

has to pick up the phone and talk to these knowledgeable people, who spend all their time on their studies, and ask them to explain issues in a way that can be fed back to readers and listeners. This is an enormous challenge for us, and we face it on a daily basis.

Guensburg: These days, I run a program called Journalism Fellowships in Child and Family Policies. I am not in a newsroom, and that allows me some perspective and time to reflect on what happens in a newsroom. I can be the first set of eyes on copy produced by our fellows. Some ask me to take a look at their work, but for the most part, any editing takes place in the newsrooms of our fellows. I have spent 20 years in newsrooms myself, working most often as writing editor, so my experiences are different from Jones' and more typical of what is seen at smaller papers or at other media. The largest paper that I worked for was the *Milwaukee Journal* and then the *Journal Sentinel*, where I eventually became the Sunday Magazine editor. I had also been the food editor, features editor, and had similar positions at other papers around the country.

Jones explained that many journalists come to their jobs as generalists. We have liberal arts backgrounds, often with minimal exposure to statistics and other fields. Sometimes, we are confronted with studies that require us to weigh evidence or produce something cogent out of a study summary that someone tossed across the desk. There is little time to grapple with it as a reporter or as an editor.

A smaller paper or broadcast station has additional threats to address. Typically, there is a small staff. It is challenging to get expert commentary, because people may not call you back. The former Bureau Chief of the *Milwaukee Journal* confessed to me that when he would place calls to Washington, he would mumble "blank, blank, blank from the blank Journal" into the phone. If one tried hard enough, it might sound like the *Wall Street Journal*. Later in the conversation after the channels of communication had clearly been opened and he was getting the needed information, he would point out that he represented the *Milwaukee Journal*.

Again, one is grappling with a lot of information. I was editing a story for the *Wisconsin Magazine* on the challenges faced by incarcerated mothers in maintaining relationships with their children. I encouraged the reporter to go back and give us more than that superficial read, to nurture the stories and help our readers see the challenges to the child's development. I sent my reporter back to speak to social scientists about the potential impact on the child and programs to address these problems. This approach provides the anecdotal story with substantive context.

Takanishi: What are some of the revelations that you could share with us about the culture of journalists from your years of working with them?

Kristin Moore: I have found that journalists are always in a hurry because they are on a deadline. I do not think academia gives points for being in the newspaper; similarly, one does not get tenure for being a good newspaper reporter. I have also learned to be brief. Scientists always want caveats, complexity, and subgroups, which means they will not be quoted. I learned this from Doug Besharov in Washington; he was a model for how to make statements. He would be the one who got quoted, not me. Afterward, I would think about how to shorten the message. I remember talking about programs for teenage parents and deciding in advance to say that the programs are too late, too short, and too cheap; it got quoted. I found a way to say what I wanted, and then I worked on it.

One of my colleagues also taught us to plan ahead. If one is not ready to talk to the press, ask to call them back in 5 minutes, not the next day. One should plan out what to say and the words to be used, so that one does not say, "um, well, and then on the other hand." One needs to be brief, succinct, and choose colorful adjectives. Many researchers are also fairly quantitative and introverted, and that makes this task difficult. Journalists are verbal, and they are often extro-

verted. One has to think about what will sell, and what will interest a person of a different personality who has no interest in research.

Trost: Research culture is enormously filled with time, study, and reflection; journalism is not. It is the first draft of history, for better or for worse. Research and development in journalism is literally a lunchtime conversation with the person who is handing off their beat to you, with a couple of days to get up to speed. Unless one chooses to be a foreign correspondent, who typically receives language lessons and cultural training about their country, reporters usually get no briefing in the complicated issues they cover. Reporters are informationally under siege. I left the field before email, but I cannot imagine how many emails reporters receive per day. What number of calls, emails, and faxes do you receive?

Jones: I primarily receive email because I think it is much easier to handle, and I encourage people to do the same. I can print out attachments and take my time to review them. On the opposite end, if someone calls me and I am on deadline or have to make another call in 15 minutes, I may be watching my watch and not listening carefully to what is being said. I appreciate a call to say that an email will be sent with some attachments about the latest study, research, or whatever it may be.

On average I may get 10 or 15 emails a day from groups like the National Institute for Child Health and Human Development. I also get about 10 emails per day from the Kaisernetwork.org listserv, on customized topics such as child development, HIV/AIDS, women's health issues, and other issues. I do not understand people who get frustrated by so many emails, because a look at the headers can help one decide whether or not to be bothered. There are some journals and publications that the Science Desk has decided we will not work with, so I can hit the delete key and move on to the next email. But again, it does pay to call the reporter; tell him or her what you would like to send and do not just send it cold because the message might wind up deleted.

As for calls, I have done a fairly good job over the past few years at NPR of letting people know that I will talk to them and hear what they have to say, but I simply do not have the time to go into a long telephone pitch. That has been kept to a minimum, and I receive maybe a dozen calls a week. It depends on what is happening.

Question: I am a researcher at the University of North Texas, where generally, our procedure of releasing information to the press is to go through our university press officer. We often find ourselves involved in that process. How does one go about this process?

Jones: I primarily work with those press office types, because I often work with the major journals such as the *Journal of the American Medical Association* and the *New England Journal of Medicine*. If I pick up the phone and directly call someone with a study in such a publication, they probably would not be able to speak to me unless it was cleared through the public information office.

On the other hand, if one's work is not attached to a brand new study coming out in a major journal, it is a good idea to identify a reporter that covers that kind of research, and give them a heads up. One might say, "I have been doing some research on a study that will be coming out in a few weeks, and I really admire your work. You have done a few stories on this, and I would really like to let you know more about it. Maybe we can have lunch or you can come by to talk about it."

For the spanking story that I am working on, I spoke with one of the auxiliary editorial writers on one of the pieces, and he helped me wade through the issues on both sides of the debate. He mentioned that he is currently doing research to measure the effects of spanking, or what goes on in a child's mind at the time that he or she is spanked. The argument that nobody can seem to answer is whether that spank on the thigh makes the child view the mother and

father as scary predators, and if that is the seed of neurosis that will follow them for the rest of their lives. He is measuring heart rate, blood pressure, and levels of fear, so that we can begin the research-based discussion on what impact that has on the child. I told him to give me a call when he reached a point of having something ready to submit to a journal, because I would love to follow up with it. I would encourage you to do issues like that. You will also do a service to journalists, because it will help the reporting of the person you contact and inform along those lines.

Comment: We are constantly jockeying for attention within the university. If the scientists release information on their nitrogen car, or the economists release a report, we get bumped down. It is like a competition of who has offered the biggest story first.

Guensburg: You are also talking about establishing a relationship, and that is critical. You have every opportunity and every right to pick up the phone and acknowledge that you see what the reporter's beat coverage is. Another good way for a journalist to handle this, to keep the lines of communication open with a communication staff member, is to say, "I have had an informal conversation with X." Another approach we advocate is having a "rabbi relationship" with some sources who can provide contextual background or sourcing. You could be that person.

Moore: Researchers often play the roles of background contacts. Newspapers are about news, and scientists are rarely the owners of breaking news. We may have a result, but that typically happens only several times in a lifetime. We have a lot of trend and background data. One has to think about how one's research fits into what people are thinking about. If people are thinking about school violence, does your work carry a message that should be raised, that will be relevant to the person writing a story?

Another important quality about researchers is that many of them know more than they think they know, and the narrow study that they are working on now is not the sum total of what they know. If a researcher can figure out how to briefly describe a literature review, he or she can provide that context for a "moment of the day" story.

Takanishi: Can you give an example of how you have integrated your work into a current social issue?

Moore: Welfare reform is currently a huge issue in Washington, DC, and Child Trends has done a lot of work in this area. I have also done a lot of work on adolescent childbearing. The rate of adolescent childbearing has been decreasing for 10 years, so the journalists are not interested in that trend anymore. However, in the context of welfare reform, we said that adolescent childbearing was decreasing even before welfare reform, and we linked it to the reauthorization debate.

Takanishi: Back to the journalists for a moment. What do you expect from research? What do you expect from a researcher in terms of what is needed to get a story in the paper or on the air? How can someone best prepare?

Jones: Moore already hit on the major issue of brevity, which can be frustrating for researchers. I ask people to give me the thesis statement. If there were only 5 minutes to convey the most important outcome, aspect, or trend associated with your work, what would it be? That is always a good starting point, because that helps me frame it in my mind and think of the kinds of questions I need to ask. It also helps me to think of the listeners for whom I am writing.

I have to keep those kinds of parameters on the conversation, because a researcher may have spent years working on an issue, and will have numerous caveats and contextual subcurrents in

mind. To do my job effectively and to do a service to listeners, I must think in discrete sections that help me connect one step to the next.

I want a researcher to challenge me. I want him or her to say "you are not getting this," or "let me make sure that you are getting it right." If I throw a question back at him or her and it is not relevant to the research, I am not offended. There is a lot at stake for me to put a story on a national network and have it be wrong. I want to make sure that I have accurately interpreted the research. Thankfully, I hear more often than not that I have understood what was described. Nonetheless, a researcher does me a huge favor of steering me if I am not quite on point.

I also want to speak with a researcher who will say, where appropriate, "I am not the best person to talk with about this, but here are five other people for you to contact." Researchers must understand that we are in the business of adding context that broadens the scope of an issue, so we will not do a one-source story. We will want to find somebody who perhaps has a diverging point of view, or who has done a different kind of research. People can make themselves look good by offering a couple of other names of people that have research or perspectives to share. Those are some of the basics that I appreciate in working with researchers.

Guensburg: I would build on what Jones said; they are all great suggestions. I would also appreciate it if a researcher could point me to a concise piece of background material that can help me get a better understanding of a weighty topic. As Jones also said, it helps to have an idea. I probably would ask, "Is there a thoughtful critic or someone else who can add another perspective regarding your work or on this subject?" Finally, what also needs to be recognized is that multiple conversations are involved in most cases. I may need to get back to the researcher to verify information, make sure that I understood everything, or check back later if I receive confounding information.

Moore: We had a story in the *Wall Street Journal* yesterday on welfare reform and children. It began at a breakfast with Al Hunt about a week and a half ago and was followed up by a phone call. He asked for specific information, and somebody stayed late at work to produce materials for him. There was an interview the following day and then an urgent final interview. Out of four contacts, three of them were urgent. One has to commit to being available.

I want to address something from the point of view of the researcher because we all face the issue of being misquoted. We want to do rigorous science and also share the results, and these two goals can be in conflict. We have (hopefully) solved this problem at Child Trends by creating different versions. We produced a synthesis of 10 experimental studies of welfare reform that included children, and we have a full report with tables. We then wrote a chapter, which appeared in *The Future of Children* journal. We also created a single version of it that is 15 pages long for people who want this information. We wrote a 2-page version specifically for the press, and they can get other versions of the report upon request. These 2-page versions provide credibility; someone like Jones might read them, but most journalists will not. We also have a 1-page press release. When the information appears, it will likely only be a couple of columns. If one can get comfortable with that process, the science is there; we have done it carefully because there is no point in getting it out if it is not good. I am sure we are all committed to that principle. But, it must be short.

Takanishi: Do you ever go down to the level of talking points?

Guensburg: Absolutely. We had an interesting experience, where staff members met with a public relations firm on the topic of welfare reform because we wanted children to be an important component of the welfare reform discussion. We did not want to be bested, so our entire staff working on welfare reform issues went to the offices of a public relations firm in Washington, DC. We spent an afternoon free associating and talking about what we had found

in sharing these materials, and then they sent back to us what they believed we were saying. After some clarifications, we ended up with a series of points. I passed around the handout "Children and Welfare Reform Authorization: A Golden Opportunity or Missed Opportunity?" The language used attracts people's attention to the issue. We have received quite a bit of coverage. I do not know if children are still the central focus of welfare reform, but we were more effective with that strategy than we would have been otherwise.

Trost: One of the hardest issues to do is to think like a journalist, but it is essential to put yourself through the exercise of looking at a story and seeing its infrastructure. Typically, there is a headline, followed by an anecdotal lead. By the third paragraph or so, one sees what journalists call the nut paragraph, which is the thesis statement Guensburg described. Try to put your work into a nut paragraph. Try to be rigorous and boil down your work into the thesis paragraph or the nut paragraph. It is difficult. One sees the difficulty for reporters who have that type of rigorous boilerplate to follow and also why stories get written about as they do. There are ways to break through those formulas, but many journalists still follow them. Journalists often ask me if I know somebody in that area of research that they can talk to. I can lead them to someone, but often not to the whole truth.

Jones: If it is a reporter from NPR, please provide it! In fact, in talking with the researcher yesterday, I was trying to be cheeky, and I asked if she had been spanked. She said that she had been spanked as a child, but it was rare and done only as a last resort. I will be able to use that somewhere in the story, but my point is, even if a reporter does not use it, it helps them to think about the issue in a way that is more anecdotal and conversational than a description about the odds ratio for the meta-analysis. The researcher does not need to write the anecdote, but it can be conveyed to us.

For example, I did a story on Downs Syndrome. Researchers have found that the rates of Downs Syndrome, or deaths of Downs Syndrome children, among African Americans was much higher than other racial or ethnic groups. I talked with the researcher for 15 minutes before he told me of his own daughter with Downs Syndrome and the struggles he had with her and with finding information. That story helped to humanize the research, it helped humanize him, and it helped the flow of conversation. This is a personal decision. I would not ask everybody to dig into his or her psyche and come up with some personal anecdote to help me understand my story. But, if it comes naturally, it can be helpful.

Trost: It is good if one can describe what led to the research. If one offers a wonderful source, that is helpful too. If someone tries to dictate the source, as a journalist I pull back fast. If one tries to force feed information or come across as having a pronounced point of view or agenda, it makes me skittish as a journalist.

Guensburg: One of the difficult parts for researchers is that the media often wants counterpoint, and a researcher is often in the middle. A researcher often wants to give them the facts or the more complex version, which is not on either extreme. It is a difficult place to be, and is often not interesting, so that is why we are sometimes in the background.

Question: I wanted to know what news is and when the process turns from an idea into a story. Who makes that decision? How much influence does the reporter have in determining the story? As a researcher, one has ideas about the importance of one's own work and how to get those visions across to a wider audience.

Jones: It is an excellent question, and I will use this spanking story again as an example. There are many studies on corporal punishment and the spanking of children. This particular story

became newsworthy because it was the first time someone had looked at all the major studies. Size can be important if there are two studies and one of these is a study of 12 children in a day-care center in Poughkeepsie and the other looks at 20,000 children in centers across the country. Unless the first study was resoundingly different, an editor will typically choose one that has more weight or statistical significance. If it is the first time this kind of research or study has been done, or if the results are completely different than anything that has ever been found before about this topic, it becomes newsworthy. The undercurrent here is that it has to be something different or new.

The joke is that news occurs when man bites dog. There is some truth to that when it comes to thinking about what one is doing in research. The research may be important and mean a lot to the researcher, but in our newsrooms, we fight for 2 minutes of time to do a topic, while the national desk may want 5 minutes on a Supreme Court ruling. We have to think about those kinds of concerns as we look at the pool of research, story ideas, and pictures that come across. An issue has to rise above a basic measure of why people should care about the topic.

Guensburg: My editor often used to ask, "How does this move the ball forward?" We do not want to go backwards. We are talking about the ball of the story, the ball of the research, the ball of the trend. We may have written on this topic of child care forever. How does this move the ball forward? It is often a tough hurdle to overcome.

Takanishi: There is another aspect that you have raised, which is perhaps a poor reflection on our craft. Sometimes these stories will develop because news happens when it happens to the editor's child.

Jones: Or to the editor.

Guensburg: Now that more women are becoming editors, concerns in the newsroom are likely broadened. Obviously, there are men who have the same concerns. But for a long time, newsrooms were dominated by one gender and certain issues were not as important.

Trost: I have another comment for researchers on how to think in a strategic fashion. If one is doing a story on school readiness, one might want to think about releasing it when school starts, not when everybody is leaving on vacation. Think about what you want to accomplish.

Question: Is there any possible relationship between the trade media and the general media in terms of supplying sources for anecdotes, or anything like that? Do you think there is potential for cooperation, or can the trade be used in one's work?

Guensburg: The trade media are often our sources; they are springboards for stories, and we sometimes borrow from them quite liberally. Any smart reporter will find the trades that cover the field and read them religiously.

Trost: There are perfectly legitimate outlets that those trade publications and newsletters reach, especially for the people in America who are involved in children's issues. Where I come from, we think they have high status.

Takanishi: Do you find the media does not pick up the stories covered in your magazine?

Comment: It does not.

Takanishi: Are the stories readable?

Comment: Yes. One of the joys of working for the family support field is working for people who want to read about their approaches in partnering and parenting. They want to understand the information and share it with everybody in their community. A few years ago, we made a strategic shift in how we present our information. We even have a color photograph on the front and back covers of the publication. Despite our great potential, I ultimately have not found much opportunity to get these stories out into the wider audience.

Trost: I am curious about how your magazine is distributed at this point, and if you target select publications, broadcast outlets, or others. If you are not sending to those, should you be?

Comment: That is an excellent suggestion. I am trying to develop this.

Trost: It is a matter of exposure for you, and if people are not aware of your magazine, they will not look for it. There is such an abundance of literature and media information right now. I would assemble a mailing list.

Jones: NPR offers reporters more leeway than my other reporting experiences have. If a reporter comes across an interesting study, he or she can approach an editor and say, "Hey, there is this new, obscure, yet intriguing study in a journal that is done well, so we should do a story on it." I have done that on numerous occasions myself. In my reading, I might have come across a study in a journal or read a news brief about it in another magazine, and approached my editor to suggest writing a story. However, the other, more truthful, answer is that in many situations, we are driven by what is in the *New York Times* and the *Washington Post*. If we have not already seen it ourselves, but it is in one of those publications, then we know it has been vetted to a certain degree, and maybe we should look into it. We will not do the story just because they run it, because they may have gotten something wrong. However, if we understand why they chose to do the story, we might look at it more closely.

It depends on what the research is. On the science desk, we look at how rigorously the study was conducted, whether it is valid, and as Guensburg was saying, whether it moves the discussion forward. If it is an interesting study, but it does not say anything that has not been said 100 times before, we typically will not run a story on it.

If I am talking to researchers, I am not just looking for somebody who has a great sounding, mellow, smooth voice. I am looking for somebody who can articulate and get to the point. The irony is this: Hypothetically, I may talk to two researchers. One researcher may be okay—she does not get at the depth of the issue but she is well spoken—while the other researcher is brilliant and I know that if I had 2 hours to sit and listen to her, I would thoroughly understand the issue. This second researcher's voice, however, is flat and sounds like a buzz saw. Engineers mixing the story will choose not to run it. In a 5-minute story, if there is a 2-minute dead zone of a person's droning voice, it will not work. I spent 12 years as a print reporter before coming to NPR, so these are a different set of concerns that I must now think about.

Takanishi: As Moore mentioned, sound bytes also count in print media. It matters who is presenting the information. The responsibility also falls to the reporter and to the news organization to ensure that the final story is reflective or contextual. As Guensburg says, offering what research has shown to date should advance the ball. How does this new information fit into the greater scheme? We are not always good at that. Sometimes, the more prevalent voice heard is the one that is most strident.

Question: Is it a point well taken that brilliance is often left out of journalism because listeners do not have the patience or because speakers are unable, or unwilling to communicate in a way that is easily understood.

Jones: I would not say that this happens often, but it definitely happens. The flip side of that is the glib person who just goes on and on and sounds good, even if we have determined that the research is not sound, or they are affiliated with an institution or organization of questionable repute. We will not put them on the air only because they sound good. For my reporting, I rely on organizations like the National Institutes of Health (NIH), National Institute of Child Health and Human Development (NICHD), and the major teaching and research institutions. If I put a story on NPR that is flawed, or with the wrong research, I will hear it from 100 people moments after it runs. I have to make sure that I am talking to smart people.

During my fellowship at the Centers for Disease Control and Prevention (CDC) a couple of years ago, I learned that they offer their scientists and researchers training in how to speak with the media. There was supposedly an uproar against it; some researchers felt insulted that the CDC had dared to bring in a media consultant to tell them how to converse and offer sound bytes. The director for media at CDC listened to all the complaints and essentially told them to get over it because this is a new millennium. This is a new way of getting information across, and a training session can begin to help people thinking about these issues.

Question: How important is training?

Moore: From a researcher's point of view, we have gone through this same process of wanting a media presence, because we are nonpartisan and we are in Washington, DC, which is filled with partisanship. We thought there should be a voice for nonpartisan work on children. It is extremely uncomfortable for researchers who feel that they did not go to graduate school to learn how to communicate in short sentences. That is not what caused us to choose our profession. But, if one wants to get the message out, one has to do that.

We have solved the issue in a variety of ways. We have undergone training, we practice, and we never give a talk at a conference without rehearsing it. We practice bullet points before calling back a press person, and we write out quotes in our press releases. That is a comfortable approach, because I can read and rewrite until I am saying what I want to say. On a telephone interview, even with a lot of experience, one can worry that one has not provided the right nuance, so that has been a helpful strategy for me. Give them the quote, not just paragraph after paragraph.

Question: Like the good politicians, do you also have strategies for capturing back territory? Do you have a strategy to steer the conversation to what you think is important?

Moore: Yes. Right before this conference, I did an interview with Black Entertainment Television (BET) on nonmarital childbearing in the African American community. We have some points on the issue about what is unexpected, and about the stereotypes around nonmarital childbearing. Most people think these numbers are due to first births, high school girls, and minority communities. In fact, 70% of nonmarital childbearing occurs among women 20 years of age and older; half of these nonmarital births are second, third, or fourth births; and they occur mostly in the White community. The rate is going up among Whites and down among African Americans. Put all those trends in the context of stereotypes. What people think is not always correct. That is effective for journalists, right? That is an effective transmission device.

Question: Does NPR's usual liberal stance affect what you report on?

Jones: Particularly on the science desk, it should not. A good example of that was a story I did a while ago on same-sex parenting. I got two emails, one that said we NPR liberals should not even be talking about this issue, and one from somebody who was equally angry that we had not said enough or delved deeply into the issue. The story was about the fact that the American

Academy of Pediatrics was condoning it or had issued a support statement saying that the nonbiological parent in same-sex unions should be supported.

One anticipates the fact that some people will have liberal views about an issue, or other views that vary along the spectrum. I do not think we spend much time worrying about that; we do try to make sure that the stories are balanced, and we try to cover as many of the bases or arguments as possible.

Takanishi: Would you have spent as much time doing a study that found spanking was good for children?

Jones: If it was the first time that research had ever been done, if it was done by a reputable research organization, and if it was thorough in its analysis, then it is possible. What was interesting about the conversation with this particular researcher is that she said she did not go into this study with any preconceived notions or personal opinions about spanking, she just wanted to gather the research. She said that if she had found that the major studies showed a positive benefit to spanking, she would have been just as willing to publish that finding. We would have probably been just as willing to do the story as we are now, because it was something new and different.

Question: How do you decide whether a story is news or a feature?

Jones: That is a good question, and I will again refer to the same-sex parenting story. We thought it was a historic decision for the Academy to stick its neck out by issuing a controversial statement of support on this topic. If I had had 6 or 7 minutes, it probably would have been a feature story where I would have found a couple, and spent time with them. Given the fact that I ultimately wanted to put 3½ minutes on it, I had to stick with the news that the American Academy of Pediatrics today issued this statement, and what it means, and so forth.

When it comes to doing features, one looks for the texture of the story, for whether or not the research or the study even lends itself to finding a real person who could be the way into the story. Generally speaking, if it is something that just happened today and is the breaking news, one is more concerned with getting out the basic news information. The next day, or three days later, one may try to think about a feature story. What is the long-term implication of this, how will this change the trend, how will this make America look different 10 years from now, and so on. One tries to find that person who typifies a change in the trend.

Guensburg: That is the missed opportunity for many people in the field. They think the story is over after the initial, breaking news story. The most expansive, contextual stories are often the follow-ups, the weekend stories, and the feature stories that take longer to do. For example, people are working on stories right now about the effectiveness or noneffectiveness of charter education while the Supreme Court makes a decision on the issue. Those are the kind of issues that Moore described, about looking at the trend, the story in the news, and figuring out a way to get to the deeper stories.

Trost: Whether a story plays as a news piece or as a feature is decided, in part, at editorial meetings. If news then decides that it wants to take the story to run, maybe it is going to hold. One never knows how many ads will come in, but ads arrive at the last minute and the story gets cut on the board. The reporter will have no say. The editor who handled the story and knows what has to be inserted to make it a good story is not the same person deciding what three graphs are trimmed out at the last minute. Stories that move on the news side are far more vulnerable than anything in the features section.

Comment: I have been with the Society for Research in Child Development for many years. We have looked at ways to facilitate communication about our research and ideas, but it seems that in recent years, there is a new technology involving the use of websites and electronic communication. In many ways, it seems to be more effective, and we are more satisfied with it than dealing with newspapers, television, or radio. We have our own website, and we also work with a service that reviews different websites that have information about or for children, parents, teachers, and so forth. The service provides a useful resource in looking at whether the issue or report is credible. It gives us some guidance and information on what is available.

Our website has many links, and we provide information, including our social policy reports. In addition, another website we are putting some money into helps to screen all the different websites that address children and their education, health, and other needs. It is a way that people can get a credible opinion from professionals. There is a big problem with the proliferation of websites; I also teach at a university, and students now turn in papers with 7 credible sources and 10 that are gibberish, from unfamiliar electronic sources. But, electronic communication has provided another way for people to access information.

Guensburg: I am somewhat familiar with the Family Web Guide from Tufts University and with their evaluation sources. That is one good source for journalists to know about, because again, it provides vetted information, if you will. That is also why we turn to Child Trends, because those are good background sites.

Question: Do you do any background checks to orient your thinking before you start the story?

Jones: I do. If it is something I am completely unfamiliar with, obviously I do not want to talk to the researcher without knowing anything or having any perspective on it. Background knowledge always helps one to communicate better.

Question: How would you determine which website to go to?

Jones: Clearly, one looks at who is funding this organization, and who is on the board of directors. It is great if one can find this information on the website. If the website does not have it, then one almost has to go with a gut instinct. If it is an unfamiliar person's website on child development, then one should stay away from it. But, if it can be determined that it is affiliated with a recognizable organization, university, or research institution with a board of directors or people that you know, that offers more confidence in the quality of information. One must be careful, because anybody can set up his or her own webpage.

Comment: Another good, nonpartisan, background source for information on child education and development is the ERIC System. Both our websites and our information services are available through an 800 number and are heavily used by media sources. They can provide reliable and quick background information.

Question: I am with a city office of policies and communication. I receive calls from reporters asking me to find a researcher for them to interview. I will frantically seek out a researcher who is qualified to speak with them. More often than not, when I give the researcher the reporter's name and subject of the story, I hear, "I think I better not." What is the best way to work with researchers? How does one explain the position of the journalist?

Jones: We have thought about that, and as I mentioned, I work on the sensitive issue of adolescent childbearing. We have asked ourselves if we want every researcher in the country interfacing with the press. What I have seen people do is to identify and develop the capacity of spokesper-

sons. They do not turn the journalist completely off. They go with the advocates and are also credible. That is where we have come down on it, but it may depend on the issue.

We also do referrals for people who I know will speak to the press. One must think about who will do a good interview and who will return a phone call. For many researchers, this is stressful; they are afraid of being misquoted. There has to be a combination of ability and desire to engage. We could talk about developing a list of people like that.

Comment: Over the last two weeks, someone in Washington was talking about all the usual suspects being quoted. The critique from NPR was the reporter's need to expand his or her rolodex.

Guensburg: Absolutely. Are there any suggestions about not turning to the same people over and over?

Jones: It is the kind of proposal that is difficult to impose, particularly for somebody who is on deadline every day. National Desk reporters have it so tough, particularly in these times with so many different emerging issues. Every day, it is something new. If one is going to be on *All Issues Considered* at 4:00 in the afternoon, one may take information from whomever answers the call. A reporter may be interested in diversity and want to get different opinions, but he or she has to be in the studio and have the story mixed, produced, and ready to go on the air. Still, there have been attempts to get people to realize that the net should be widened.

Question: Who determines the headline?

Guensburg: Editors decide the headlines. Unfortunately, reporters generally have no say about the headline appearing over their name. Having been an editor, it is rare for me to ever turn in a story without a suggested headline. I say "suggested" because sometimes editors are busy and they do not have time to think of a headline on their own, or maybe there is not enough space. I want you to know that I did not write the headline "Bully Factories" on the handout; in fact, it was one of the toughest battles I have ever had and lost.

Takanishi: What is the story about?

Guensburg: The story is about coverage of the NICHD's early child-care study. There were different camps, and certain statements were taken out of context. The coverage developed over several days, different media handled it, researchers presented the news, and there was a whole range of comments. This was not the suggested headline. This gets back to Moore's message to be punchy and alliterative.

However, it is often a distillation process, and what I often say to people is to split the difference. It is good if most of what you wanted to get in the story is put in without grave misrepresentation. Too often, people let themselves get refereed out of the debate over minor issues like a headline. Obviously, one should complain if it misrepresents the story; but otherwise, people are too quick to parachute out of social discourse because they feel offended by a headline or small change that was made.

Comment: It is better to be interviewed than not to be interviewed, no matter what.

Takanishi: Absolutely. What are the worst issues reporters have done to you? What are the real issues that you see as difficult to get past?

Comment: Spending time on the telephone and never seeing the story.

Trost: Do you spend much time talking to reporters?

Comment: I have to tell a reporter what I want the reporter to know. Depending on the topic, it will be encompassed within my university's official position. But, then I will say, "Well, if it makes the news or it hits the paper or a magazine, let me know, and please send me a copy."

Trost: Your issue is less that you are not sure it gets in, but rather that you never see it? Do you have a clip service or something?

Comment: Our cutting service does not go nationwide. It is only local.

Jones: It is incredibly difficult to keep track of seven interviews and to mail out stories to each person. It rarely happens. To be honest with you, I do depend on a source to call and remind me for a copy of the story. I am off to the next story after I have finished producing this story. Hopefully, I am forgiven if I do not remember to run downstairs and get engineering to make a copy to put in the mail. Sadly, I have moved on to the next topic. People who are diligent about it will remind me, and I will post a note to remind myself, but it is difficult. Make it a habit of getting the reporter's email address, then make a mental note to send them an email the following week asking for a copy of the story.

Takanishi: Are there other challenges?

Comment: This rarely happens with big-time media outlets but oftentimes with smaller voices, they expect to be speedily answered via email. I always feel that I am writing their story for them, and I do not appreciate it. The process of writing an answer to a question is different than the process of being quoted as an expert. That frustrates me, and I make sure not to do that to anybody when overseeing journalists in the writing of the stories.

Takanishi: Is email a tactic that either of you use?

Jones: I use email on rare occasions, but by the same token I am suspect of email. I do not know who is responding.

Comment: We always send a respondee, since our emails are public record. They are university property and one does not know who will be reading one's email.

Jones: The only time I have ever done it was when I knew somebody was far away, and I needed some basic information, and they had offered that option.

Comment: I will propose the option of answering in writing, because then I have better control. In my experience, when reporters send tapes based on the interview, I am surprised to hear what is said. Sometimes, major points are missed, while minor points are amplified. I think it is wonderful to be able to put it all in writing.

Moore: That is an interesting point about the cultures. In the research culture, we often critique each other's work, and we constantly edit. Rarely can a journalist send a source what they have written for a critique prior to publication. How does that occur in terms of your own work?

Jones: I have never been in a situation where that was seen as acceptable practice by the journalism organization I was with. I do not want to say or give the impression that I do not want the researcher's input, but particularly if I am on a deadline, one might read something on a fine

level and open a whole new can of worms. Journalists want to get it right, and they want people to work with them to help them get it right. But, from a timeframe perspective, it is not practical for me to send a script, wait for additional comments, and so on.

Trost: I am intrigued by the reluctance of the academic community, which is stronger than I would have anticipated, to be part of the journalistic enterprise. What is it that is offensive about writing text? Could you say more about why people do not want to participate?

Comment: Sometimes it is the name of the publication that they do not want to be associated with because it is not big enough or they feel that they may not be fairly represented. For the most part, I just give them the fax from the reporter as it is received. More often than not, they are hesitant and do not want to speak with anyone. I do not know what their fear is, and I cannot relay the journalist's intention.

Jones: As a reporter dealing with complex issues, I do not have any hesitation about calling and reading back select passages to make sure that I understood what was going on. I would be fired if I ever submitted text to somebody for review without being sure of the content. I would rather receive comments.

Comment: You asked a question about reluctance from the academia; I thought you must work in a university. Sometimes the issue is time. Also, interface with the media does not count toward promotion and tenure. Finally, the worry of being misquoted, the perceptions and reactions from one's colleagues, as well as one's own professional integrity are some reasons why academics may hesitate to respond.

Comment: The topic or the question presented may not be a good match to other knowledge that is available. For example, last week I got a call from a reporter from the *Detroit News*. Some movie theaters in Detroit had recently said teenagers could not come to the movies without their parents or an adult. This caused uproar, so this reporter called and wanted to know our take as professionals. Should teenagers go to the movies or not? We turned it into a good conversation, looking at parenting styles, and so forth. I also gave her the name of another person to call.

Trost: I also think reporters are eager to be challenged about their questions.

Comment: I find that eventually, if one takes time with them, common ground is found. I had another call about the development of play in young children. We were able to offer information, and the story did end up on NPR.

Jones: One of the ideas that I try to transmit when talking to researchers is that if one views oneself in this exchange as the vulnerable lamb waiting to be preyed upon by the vicious journalist, one will always be suspicious and fearful of being misquoted. It is a natural response for that kind of mindset. I try to encourage researchers to walk into the interview as an equal partner, or perhaps even having the upper hand, and to feel empowered in the interaction. There are simple ways to do that. Feel free to tell a reporter that they are off track, or do not understand the research. Feel free to tell them they should talk to somebody else and you are not the right person.

A perfect example of this was with one of the researchers I called for the spanking story at a time when I was desperately trying to reach someone and could not find anyone to respond. The public affairs person called me back and asked if this story would be on *All Issues Considered*, if it would just be 4 minutes long, or just a news brief. At first, I wanted to say, "Get over it, lady,

can you do the interview or not?" I had to step back and remember that she had a right to know this information. If she wants to participate and she wants to know the story format, she has as much right to ask those questions as I have to ask her to be part of the story. These kinds of tools can help a researcher feel like they are not at the mercy of a journalist.

Takanishi: The most important point is that we are all trying to figure out ways to bridge the gap so that there can be better understanding about the complicated problems facing children and families. What is the best advice you can give to help us come together?

Jones: One word: empathy. Journalists have to better understand the lives of researchers, what they have to go through, the effort that they put into their work, and their desire to get that work out to the public. Meanwhile, researchers have to understand what it is like for us in the newsroom atmosphere. Like it or not, we have to boil information down and bring it to people in a basic format. We need your help to do that. There has to be mutual understanding.

Guensburg: Building on empathy, I would say that respect is also important. Respect the job that someone else has to do. Demand respect for yourself as well, and remember that the people you pass off today might be with a different publication or a different media outlet later on.

Jones: Especially if you have a study that you want publicized.

Moore: The research community needs to give this more time and priority, and it takes preparation and effort on their part if we want to affect the public dialogue. Many of us do, but we have to be willing to give it the time and energy required to translate good science into a language and timeframe that matches the needs of the journalist.

Takanishi: Empathy, respect, and time. That is the take home message.

Posters

Head Start Graduate Student Research Grantees

Identifying the Relationship Between Language Delays and Behavior Problems in Head Start Children

Cathy Huaqing Qi, Ann Kaiser

PRESENTERS: Cathy Huaqing Qi, Ann Kaiser

Young children with language delays are at increased risk for later behavioral problems (Kaiser, Hancock, Cai, Foster, & Hester, 2000) and social problems (Fujiki, Brinton, Isaacson, & Summers, 2001); conversely, early social and problem behaviors may influence the development of language skills. Children in Head Start programs exhibit relatively higher levels of language delays and behavior problems than the general population (Harden et al., 2000), but the relationship between the two problems in these children has not been studied extensively. The purpose of the study was to examine (a) the relationship between language delays and problem behaviors in Head Start children, (b) the social/behavioral characteristics of preschool children observed in the classrooms, and (c) the relationship between observations and teacher reports of problem behavior.

Sixty participants were recruited from 256 three-and four-year-old children who were screened in the course of a larger project in six Head Start centers in Nashville, Tennessee. Children were predominantly African American (84%); 53% were boys. Two subgroups were selected to participate in the study based on language test data: 32 children with language delays and 28 children with normal language. Children's language development was assessed using the Preschool Language Scale-3 (PLS-3; Zimmerman, Steiner, & Pond, 1992), and the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997). Children's behavior and social skills were evaluated using teacher reports of the Child Behavior Checklist/2-5 (C-TRF; Achenbach, 1997) and the Social Skills Rating System (SSRS; Gresham & Elliot, 1990). A total of 120 minutes of classroom behavior was observed for each child. The observation protocol (Qi & Kaiser, 2001) was a modification of Webster-Stratton's Observation System (1999). This MOOSES (Tapp, Wehby, & Ellis, 1995) format coding protocol permitted data to be collected using handheld computers.

The results of the study indicated:

1. Children's observed physical aggression, verbal aggression, disruptive behavior, and noncompliant behavior were significantly negatively correlated with their receptive language abilities. Children's observed physical aggression and disruptive behavior showed negative correlations with expressive language abilities.
2. Children with language delays exhibited significantly more physical aggression, disruptive behavior, noncompliance, and negative responses than did children with normal language. Children with language delays had fewer initiations and shorter duration of engagement than did children with normal language.
3. Teacher reports of problem behaviors correlated with some of children's observed behaviors, but not all.

The study has two implications. First, Head Start children with language delays exhibit more problem behavior and fewer prosocial behaviors than children with normal language, although teacher reports of behavior problems alone do not always indicate that this is the case. Thus, it is important to observe children in the classrooms, especially children with language delays, to determine if they are at risk for behavior problems, rather than depending only on teacher reported problem behaviors. Second, the data suggest that children with delays in either language comprehension or language production may be at risk for problems in physical aggression and disruptive behaviors. Thus, it may be important to provide both language and behavior interventions to children with language delays.

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Including Children With Disabilities in Early Head Start: Four Case Studies

Jennifer Tschantz

PRESENTER: Jennifer Tschantz

Early Head Start (EHS) is required to enroll and serve at least 10% children with disabilities. Part C of the Individuals with Disabilities Education Act (IDEA; U.S. Department of Education, 1997) stipulates that services for eligible children are to be provided in "natural environments," and collaboration across various service providers and programs is crucial. This poster presentation focuses on a qualitative research project exploring collaboration and service integration across EHS and Part C. The following research questions were the focus of this study: (a) Who are the young children with disabilities enrolled in EHS? (b) What specific strategies do different EHS communities (and their Part C counterparts) use to integrate services and collaborate to meet the needs of young children with disabilities and their families? (c) Do services across EHS and Part C meet the needs of individual families and their children? (d) What local contextual factors impact services and collaborative efforts?

A multiple case studies design was used across four different EHS communities. Individual participants included professionals working for or with the EHS programs and families receiving services from both EHS and Part C. A total of 33 professionals and 10 families participated. Data collection involved interviews with participants, review of general documents and individual children's records, and observations. Case and family descriptions were utilized to organize initial data analysis; then, a cross-site analysis was conducted.

Three of the four EHS programs in this study were serving at least 10% children with disabilities. Children with a wide range of disabilities, including significant disabilities, were enrolled in all four EHS programs. Across the four communities, collaboration in cross-program referrals and service delivery was strong. There was limited EHS involvement in Part C evaluations and goal development. Families were overwhelmingly satisfied with services and generally pleased with Part C-EHS coordination. EHS was described as a "saving grace" for families needing child care.

In all four programs facilitators to collaboration emerged. EHS direct service and administrative staff were positive and committed to working with young children with disabilities, and the EHS direct service staff generally felt supported. In the two rural communities, cross program collaboration was facilitated by EHS agencies being relatively independent, smaller numbers of families and staff, stable leadership, and a sense of community. High EHS staff turnover was a problem and a barrier to service integration in all four sites. In the two urban programs several other barriers to cross program collaboration emerged, including complexity and large size of both EHS and Part C, high turnover in key leadership positions, and struggles with family involvement.

Findings from this study point to several implications:

1. High EHS staff turnover needs to be examined and addressed.
2. EHS involvement in the Part C process should be increased.
3. More resources are needed for EHS programs serving high numbers of young children with disabilities, especially for programs serving children with significant disabilities.
4. Strong EHS leadership within communities needs to be fostered.
5. Ongoing technical assistance and support should be provided for EHS and Part C programs struggling with family involvement.

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The Cross-Language Transfer of Phonological Awareness in Latino Head Start Children

Lisa M. López, Daryl B. Greenfield

PRESENTER: Lisa M. López

Both oral language skills and phonological ability are major precursors to reading in English. Research has confirmed that these skills are present in preschool-aged children, with low-income children performing at a lower level than middle-to upper-income children (Lonigan, Burgess, Anthony, & Barker, 1998; Maclean, Bryant, & Bradley, 1987). The cross-language transfer theory (Durgunoglu, Nagy, & Hancin-Bhatt, 1993) suggests that once metalinguistic skills have been mastered in one language (L1) they can be performed in a second language (L2), given both languages contain an alphabetic script.

The present study addresses the literacy needs of Latino Head Start children. This study focuses on the oral language proficiency and phonological awareness of this population, in both English and Spanish. The major objectives of this study were to explore the relationship between oral language proficiency and phonological awareness skills in English and Spanish, independently, and test the cross-language transfer theory of phonological awareness with this population.

This study consists of 100 Latino, 4-and 5-year-old preschool children. All children were in Head Start and were first language Spanish speakers. They were individually assessed for oral language proficiency and phonological awareness in both English and Spanish. Oral language proficiency was measured using the preLAS2000 (Duncan & DeAvila, 1998). Phonological awareness was measured with the Phonological Sensitivity Test for Preschoolers developed for use in this study. It consists of three subtests: (a) rhyme matching, (b) alliteration matching, and (c) sentence segmenting.

In order to determine the relationship between oral language proficiency and phonological awareness within language, a series of correlations were calculated. This analysis indicated that oral language proficiency and phonological awareness are significantly correlated within language. There were no significant differences between language correlations related to oral language proficiency.

In determining the existence of a cross-language transfer of phonological awareness skills it was necessary to look at the unique effect of phonological awareness in Spanish on phonological awareness in English using a hierarchical multiple regression. Performance on the English phonological awareness measure was entered as a dependent variable, with English oral proficiency, Spanish oral proficiency, and Spanish phonological awareness entered as independent variables in a stepwise multiple regression format. Spanish phonological awareness uniquely and significantly accounted for 6% of the variance associated with English phonological awareness, accounting for proficiency in both English and Spanish.

English oral language proficiency, as measured by the preLAS2000 was related to English phonological awareness, as measured by the Phonological Sensitivity Test for Preschoolers. A similar relationship was found in Spanish between oral language proficiency and phonological awareness. This implies that there are overlapping mechanisms between these two measures of language development that transcend language barriers. The children's phonological awareness in Spanish was also found to have an effect on their phonological awareness in English beyond the influence of proficiency. This finding justifies the past research pioneered by Durgunoglu et al. (1993) in which phonological awareness skills in one language have an effect on phonological skills in a second language. In the present study phonological awareness in English was directly related to phonological awareness in Spanish beyond language proficiency.

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Early Math Interest and Emergent Math Skills: An Understudied Relationship

Paige Helaine Fisher, David H. Arnold

PRESENTER: Paige Helaine Fisher

Mathematical skills are an important component to economic success in this society, acting as a "critical filter" to many scientific and technological careers (Betz & Hackett, 1983). However, in the last several decades, U. S. students have routinely performed below international standards of mathematics achievement (Geary, 1996). Despite this consensus that early math experiences are critical, not enough is known about the emergent stages of math development.

Studies suggest that school attitude is related to the math skills of young, disadvantaged children (Reynolds, 1989; Stipek & Ryan, 1997), and researchers have called for increased attention to motivational factors in models of achievement (Reynolds; Wigfield et al., 1997). Hidi, Renninger, & Krapp (1991) suggest that interest, with interest being defined as topic-specific enjoyment, has "a profound effect on cognitive functioning and the facilitation of learning" (p. 565).

With preschool children, there is no research to date on the specific relationship between math interest and achievement. Reading research with this population demonstrates that early reading interest can be an important predictor of later literacy skills (Lonigan, Anthony, Arnold, & Whitehurst, 1994; Van Kraayenoord & Schneider, 1999). Such findings, when combined with the math interest research with older children, suggest that math interest in young children likely influences the development of math ability and that ability might influence interest.

This study uses a longitudinal correlational design to investigate the relationships between early math interest and mathematical skills. Participants in this project were 112 children, ages 3 to 5 years, from eight Head Start classrooms. Children's math interest and math ability were assessed in early winter and again in late spring. Mathematics ability was assessed using the Test of Early Math Ability (TEMA-2; Ginsburg & Baroody, 1990). To assess interest, children were asked how much they liked mathematics activities using an adaptation of the Feelings About School Measure (Stipek, Feiler, Daniels, & Milburn, 1995). Teachers also completed two brief math interest scales for each child.

Preliminary results of children's self-reported data indicate that math interest is marginally related to concurrent math ability ($r = .26$, $p < .00$), interest at Time 1 is moderately related to interest at Time 2 ($r = .29$, $p < .06$), and math ability at Time 1 predicts interest at Time 2 when controlling for interest at Time 1($r = .23$, $p < .02$).

Results of teacher reported child interest suggest similar findings: Child math ability is strongly related to concurrent math interest ($r = .48$, $p < .00$), interest at Time 1 is moderately related to interest at Time 2 ($r = .49$, $p < .00$), and math ability at Time 1 modestly predicts child

interest at Time 2 when controlling for child interest at Time 1 ($r = .22$, $p < .02$). Additionally, there is a trend for math interest at Time 1 to minimally predict math ability at Time 2 ($r = .11$, $p < .08$).

This study suggests that there are already relationships between interest and ability in children who have not yet begun formal schooling. Future studies are necessary to identify at what age this relationship begins to emerge, both to provide information about young children's development and to suggest the optimal time for intervention.

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Go-to-Work, Go-to-School: The Impact of Recent Social Policy Mandates on Parent Involvement and School Readiness Outcomes for Urban Head Start Children

Marlo A. Perry, John Fantuzzo

PRESENTER: Marlo A. Perry

The first of the National Education Goals states that by the year 2000, all American children will start school ready to learn (U.S. Department of Education, 1992). Unfortunately, the life experiences of vast numbers of economically disadvantaged preschool-aged children seriously endanger the attainment of this goal. Children living in poverty have more health problems, are more likely to fall behind in school, and are less likely to obtain a well-paying job as adults (Children's Defense Fund, 1998). Head Start is the largest federally funded program established

to promote school readiness among low-income children, by providing comprehensive services to these children and their families that are designed to help combat these risk factors.

From its inception, Head Start was designed to be a two-generational early childhood intervention that emphasizes the importance of parent involvement in education. In fact, the Head Start Performance Standards (U.S. Dept. of Health and Human Services, 1996) mandate parental involvement as a condition for participation in the program. Juxtaposed to this mandate are recent state welfare-to-work statutes requiring parents to go to work. Single parents are especially vulnerable to the tension between these two seemingly disparate yet well-intentioned mandates. They are forced to figure out how to balance being the primary wage earner and primary caregiver for their children.

The overarching objectives of this study are two-fold:

1. First, to explore the relationship between demographic variables, including employment and welfare status, on children's school readiness outcomes.
2. Second, to explore the role of contextual variables, such as level of poverty, within these relationships. For example, do single mothers who are employed full time live in different concentrations of poverty than single mothers who are not employed outside the home? Additionally, this objective also seeks to determine if such contextual variables are related to children's school readiness outcomes. For example, are children who live in communities with higher levels of social disorganization less likely to gain the necessary school readiness skills?

In order to meet these objectives, and in order to benefit the city's Head Start program as a whole, it was necessary to build capacity within the system to collect these kinds of information. The focus of this presentation was on the primary activities that comprised this "building capacity" stage of this student research grant. These activities included the following: (a) the development of a comprehensive, relational database that will house pertinent information for the city's Head Start program (which serves approximately 5,000 children and families), including developmental assessments, emotional and behavioral screenings, registration and demographic information, and health data; (b) the collection of neighborhood and community contextual variables, including block level information on blight and poverty and data on social disorganization; (c) the collection of school readiness variables collected program-wide in both the fall and the spring, including a developmental assessment [Child Observation Record (COR); High/Scope Educational Research Foundation, 1992] and an emotional behavioral screener [Adjustment Scales for Preschool Intervention (ASPI); Lutz, Fantuzzo, & McDermott, 2002]. Future activities, data analytic strategies, and implications were also discussed.

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The Effects of Responsive Caregiver Communication on the Language Development of At-Risk Preschoolers

Carol D. Stock

PRESENTER: Carol D. Stock

Research in the last 2 decades has consistently demonstrated the strong relationship between early language skill and both literacy and social skills (Catts, Fey, Zhang, & Tomblin, 1999; Robertson & Weismer, 1999). These findings have critical implications for children living in poverty as they more often demonstrate low language skills in preschool and experience higher rates of reading failure and social-emotional difficulties in the elementary grades (Duncan, Brooks-Gunn, & Klebanov, 1994).

Research by Hart and Risley (1995) indicates that caregivers' amount and diversity of language, valence of feedback, guidance style, and responsiveness to child behavior is highly related to linguistic competency in the preschool and elementary years (Walker, Greenwood, Hart, & Carta, 1994). Furthermore, caregivers living in restricted economic circumstances are less likely to demonstrate high levels of these behaviors. Despite these findings, few interventions have been aimed at improving the language skills of this population or have included caregivers as active participants.

The responsive interaction (RI) model of language intervention focuses on enhancing caregiver–child communicative interactions by supporting caregivers in their use of contingent feedback, balanced turn taking, and extension of their child's topic (Weiss, 1981). Studies utilizing this approach have found that children demonstrated significant gains in social communication skills (Kaiser et al., 1996; Tannock, Girolametto, & Siegel, 1992). The majority of studies, however, have targeted children with severe language delays and included caregivers who were well educated, middle class, and highly motivated.

This study examined the effectiveness of a responsive interaction language intervention in increasing caregiver use of verbal interaction strategies and child language skills. It sought to expand the external validity of previous studies through its inclusion of families from low-income backgrounds and children with mild language delays.

Subjects were three caregivers and their preschool-aged children who attended Head Start. Participating children scored between .5 and 1.5 standard deviations below the norm on the Developmental Indicators for the Assessment of Learning-Revised (DIAL-R; Mardell-Czudnowski, & Goldenberg, 1990) and the Expressive One-Word Picture Vocabulary Test-Revised (EOWPVT-R; Gardner, 1990). Caregivers exhibited low levels of targeted verbal interaction strategies prior to implementation of the intervention.

This study employed a multiple baseline across subjects, single case design to determine whether there was a functional relation between implementation of the intervention and increases in caregiver skill use, and between increases in caregiver skill use and increases in child language skills. Families received nine weekly visits that focused on three verbal interaction strategies: (a) balanced turn taking, (b) following their child's lead, and (c) contingent feedback strategies. Observational measures of caregiver–child verbal interactions, created by the investigator, were used to assess caregiver use of (a) descriptive talk, (b) expansions, (c) affirmations, and (d) questions, as well as child use of (a) one, (b) two to three, and (c) four or more word utterances within observations of caregiver–child free play. Results of this study indicated that the intervention was successful in increasing caregiver use of contingent feedback strategies within the training sessions. The effects of the intervention on children's language skills were more modest.

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Strengthening Families in Head Start: The Impact of a Parent Involvement Program on the Emotional Well-Being of Latino Families

Helena Duch, Diane Darwish

PRESENTERS: Helena Duch, Carmen Rodriguez

Changes in welfare laws have significantly shifted the structure of states' support for low-income families. The Temporary Assistance to Needy Families (TANF) requires recipients to accept a work assignment or community service work as a condition to receiving benefits within the first 6 months of receipt (Tweedie & Reichert, 1997). This legislation has redefined the ability of Head Start parents to maintain their level of involvement in Head Start and has challenged practitioners and policy makers to develop a parent involvement component in such a way that it meets the self-sufficiency needs of families (Lamb-Parker, Piotrkowski, Horn, & Green, 1995).

Integration of time and training requirements in Head Start may be a strategy to reduce psychological stress for parents who are engaged in self-sufficiency activities and highly involved in Head Start. Two-generation programs, because of their ecological approach, may have greater potential for reducing a range of known risk factors in the lives of disadvantaged children (Smith, 1995). Program *Fortalecerse* (Spanish for "Strengthen Yourself") was developed in 1996 within a Head Start program in upper Manhattan in an attempt to integrate education and vocational training services for parents in the structure of the Head Start services offered to families.

This study evaluates the impact of program *Fortalecerse* in four outcome variables for the 54 Latino preschool children and their parents participating in the study—measures of social competence and behavior problems for the children and self-development and depression for the parents.

Families in the intervention group participated in *Fortalecerse*, a program designed to provide comprehensive training and education to parents in areas related to ESL, Computers, Child Development Associate, and Literacy. Classroom teachers completed social and behavioral ratings for children pre and postintervention. Parents completed behavioral ratings for their children and self-report measures of depression and ego development at similar intervals. Preliminary results indicate significant individual differences over time: Children's externalizing behavior problems (teacher report) decreased and they showed more prosocial behaviors in the classroom. Parents' self-reported depression decreased and their ego development level increased. Between-group differences were also present: Children in the intervention group were rated significantly lower by parents and teachers on externalizing behavior problems and significantly higher on social skills. Further analyses are being undertaken to account for the effect of other variables.

Although there may be many other factors impacting depression and self-development (such as isolation, parenting, and environmental stress), integration of education and training programs within Head Start has a positive impact in the self-development perception of mothers participating in this study. More systematic data need to be collected to guide the implementation of programs that assist families in the difficult task of integrating parenting responsibilities while responding to legislative mandates and fulfilling their self-sufficiency goals. Nonetheless, this study starts to highlight the complex relations among some of these variables and how integration of training and education programs aimed at increasing self-sufficiency in Head Start parents may impact the mental health of Latino mothers and their preschool children.

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Capturing the Nuances of Father Involvement and Its Relation to Head Start Children's School Readiness

Jason Downer, Rebecca Horwitz

PRESENTERS: Jason Downer, Rebecca Horwitz

The recent emergence of research on father involvement has enhanced awareness of the uniquely positive and significant role that fathers can play in young children's development (Mackey, 1998). Studies suggest that both residential and nonresidential fathers assume a variety

of family roles and exhibit extensive influence on the competencies related to children's school readiness (Booth & Crouter, 1998; Marsiglio, Amato, Day, & Lamb, 2000). However, a longstanding challenge of fatherhood research, particularly in low-income communities, has been locating and contacting men in order to secure participation (Cabrera, Tamis-LeMonda, Lamb, & Boller, 1999). We have partnered with preschool programs to document the process of recruiting men to participate in a project that examines the relationship between father involvement, familial factors, and preschoolers' school readiness.

One purpose of this study was to document successes and challenges during the recruitment process of fathers in order to inform future research efforts on how to better locate men and have them participate in Head Start–university partnership endeavors. Due to multisystemic influences on an individual's behavior, a second goal was to explore the relationships between self-reported fathering activities and a variety of individual and familial factors. Finally, we hypothesized that self-reported father involvement would be positively correlated with comprehensive measures of children's school readiness.

Participants were 70 African American fathers and their children who attended Head Start programs. For this project, the term "father" was inclusive of the following categories: (a) birth father in the child's home, (b) birth father out of the home whom the child has seen in the past year, or (c) "father figure" reported by the child's primary caregiver. Fathers completed surveys about their involvement with the preschool child and teachers provided school readiness information.

Qualitative data indicated that the most extensive barriers to recruitment were phone contact problems. Bivariate correlations indicated that father–child activities were significantly and positively related to the number of children in the father's home and the parenting alliance. Fathers' home-based educational involvement had significant relations with reported parenting efficacy and the parenting alliance, while fathers' school-based educational involvement was positively related to their level of education. Additional bivariate correlations revealed that no father involvement variables were significantly related to any of the school readiness variables.

The current project addressed several limitations of past father involvement literature by utilizing a multifaceted recruitment strategy, broadening the definition of "father," and expanding the conceptualization of involvement. Qualitative recruitment information indicated a need to diversify and intensify father contact methods, perhaps placing greater emphasis on face-to-face contact and community networking. In addition, father involvement was significantly related to individual and family system factors, suggesting potential strategies for promotion of father–child interactions (i.e., strengthening the parenting alliance). Finally, father involvement was not significantly related to children's school readiness; however, recent literature emphasizes the importance of defining father involvement in terms of both quantity and quality. Coupled with the high reported rates of father–child play in the current project, this information suggests that father–child interaction quality may be more related to child competence than self-reported, quantifiable involvement.

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Head Start Children's Scaffolding of a Novice Adult's Problem-Solving Behaviors

Jason T. Hustedt

PRESENTER: Jason T. Hustedt

Broadly defined, scaffolding is an interactive process by which a more-skilled tutor and less-skilled learner work together to reach a goal that would have been difficult for the learner to reach independently (Wood, Bruner, & Ross, 1976). Although research suggests that responsive parent–child interactions may be a buffer against risks associated with poverty (Chase-Lansdale & Brooks-Gunn, 1995), only recently have investigations of scaffolding begun to focus on low-income families (e.g., Hustedt & Raver, 2002; Kermani & Janes, 1999; Rogoff, Mistry, Goncu, & Mosier, 1993). This study further extends scaffolding research to low-income families by focusing on the extent to which Head Start children transfer what they have learned during previous mother–child scaffolding interactions to later social interactions.

Four-year-old Head Start participants played with a series of toys during two scaffolding episodes at their schools. At Time 1, children played with the toys while their mothers were present. Four weeks later at Time 2, the children assisted a female adult, trained to act as a novice with the toys. By including this trained confederate, it was possible to create a uniform task for 4-year-old tutors that provided a clear test of their teaching skills.

Fifty-one 4-year-olds participated in this study; 51% of these children were female, and 78% were White. Thirty-two experimental group children interacted with both their mothers and the confederate; 19 additional control group children played alone while their mothers were present and then interacted with the confederate. Both verbal (e.g., instructive speech and recruitment to the task) and nonverbal (e.g., manual assistance and demonstration) scaffolding behaviors were microanalytically coded from videotapes of problem-solving interactions for both easy and difficult tasks. Cohen's kappa values were high: $K = 0.82$ for verbal codes and $K = 0.91$ for nonverbal codes.

Pearson correlations were used to test the hypothesis that experimental group children would exhibit tutoring behaviors similar to those used previously by their mothers. Results provide moderate support for the hypothesized relationship, but only for tutoring of the easy task. The strongest relationships were found for two similar speech categories: recruitment and attention-maintaining speech. Specifically, mothers who used recruitment and attention-maintaining speech had children who were significantly ($p < .01$ and $p < .05$, respectively) more likely to also use those strategies.

Consistent with my hypothesis, the problem-solving behaviors of 4-year-old tutors while interacting with novice learners do reflect those previously used by their mothers. Although mothers typically used recruitment and attention-maintaining speech less frequently than instructions overall, when these speech types had been used at Time 1, children tended also to use them during later teaching interactions. This pattern of results is suggestive of a relatively complex relationship between mothers' teaching behaviors and those of their children. There does not seem to be direct correspondence between mothers' and children's tutoring behaviors. Rather, distinctive types of behaviors—including encouraging types of speech and, to a lesser extent, "supervisory" behaviors such as onlooking—seem to be transferred from mother to child.

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Parental Awareness and Management of Emotion: Implications for Parenting and Child Outcomes

Rebecca C. Cortes, Mark T. Greenberg

PRESENTER: Rebecca C. Cortes

Meta-emotion theory (Gottman, Katz, & Hooven, 1997) describes the central role played by parents' specific emotion-related cognitions, such as awareness and management of their own emotions, in the socialization process and the development of children's social–emotional competence (SEC). Awareness and management of emotion reflects the degree to which parents are able to differentiate their emotions by type and intensity, the value they place on both their own and their children's emotional experiences, and the healthy management of emotions. SEC represents the skills and knowledge (e.g., regulation, perspective taking) children use in negotiating effective peer relationships (Denham, 1998). Parents' awareness and management of emotion may be associated with children's SEC through emotion-related parenting practices that combine support and teaching about emotions in emotion-eliciting situations (Eisenberg, Cumberland, & Spinrad, 1998). The present study examined the relations among these constructs.

The participants (n = 101) in this cross-sectional study were recruited from two central Pennsylvania Head Start programs that were the target of a larger, randomized clinical trial funded by the Head Start–University Partnership program. Participating parents were mostly biological mothers (94%) with a high school degree or GED (73%), and about 50% of the children (aged 48 to 60 months) were females. The Thoughts and Feelings About Emotions Scales (Cortes, Greenberg, & Gottman, unpublished) assessed parental awareness and management of their feelings of anger and sadness separately. Emotion-related parenting practices were assessed with the Coping with Children' s Negative Emotions Scale (CCNES; Fabes, Eisenberg, & Bernzwieg, 1990). Emotion coaching items that assessed the extent to which parents defined and taught their children about emotions were added to the CCNES. Teachers completed the Head Start Competence Scale (Domitrovich & Cortes, unpublished) and the Preschool and Kindergarten Behavior Scales (Merrell, 1996) to assess children's SEC and externalizing behavior (EB). Parent reports were obtained from home interviews and teacher reports were obtained from the larger study. All analyses controlled for child age and parental social desirability.

The findings provide support for meta-emotion theory. Children of parents who reported having a high awareness of anger were rated by teachers as having greater SEC and exhibiting fewer EBs. Parents who reported positive anger management also reported using more emotion-related parenting practices, and their children received more favorable ratings by teachers on measures of SEC. Parents who reported having a high awareness of sadness reported using more emotion-related parenting practices; however, no relations were found between parents' awareness and management of sadness and teacher reports of children's SEC or EB. Unexpectedly, parental discomfort with anger was positively related to teacher reports of children's SEC and negatively related to EB. Also, parental emotion-related practices were positively related to EB.

These findings have implications for interventions that (a) focus on reducing the detrimental effects of parental anger on child outcomes, and (b) aim to link school-based intervention goals (e.g., promoting social skills) to parenting practices. Future research should focus on identifying the mechanisms through which parental awareness and management of emotion influences child outcomes.

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Maternal Mental Health Characteristics and Attachment Security Among Early Head Start Children: Relations With Self-Efficacy and Depression Within the Context of Family Risk

Abbie Raikes

PRESENTER: Abbie Raikes

Existing research demonstrates that adverse maternal mental health increases likelihood of adverse child outcomes. In particular, depression has been linked to adverse child outcomes such as internalizing and externalizing behavior problems. Yet maternal self-efficacy may be a protective factor for positive child outcomes for families facing high risk levels, because self-efficacy appears to enhance maternal responsiveness in times of stress. Maternal mental health may be more important when families are already facing economic hardship. This poster, describing preliminary research findings, addressed maternal mental health characteristics, particularly self-efficacy and depression, and the attachment security of toddlers enrolled in Early Head Start (EHS). Using preliminary results from a small sample, the following hypotheses were addressed: (a) Mothers with higher levels of self-efficacy and lower levels of depression will have more securely attached children, (b) Statistical relationships between mental health and attachment security will be more pronounced among families with higher levels of contextual risk, and (c) efficacy and depression will be stronger predictors of attachment security among the highest risk families.

Using a preliminary sample of 25 children aged 24 to 36 months, observer sorts of the Attachment Q-Sort (Waters, 1995), the Pearlin Mastery Scale (Pearlin & Schooler, 1978), and the CES-D measure of depression (CES-D; Radloff, 1977), the relation between maternal self-efficacy and attachment security among 24- to 36-month-old EHS children whose families face various risks was examined. Contextual risk is defined by (a) low levels of maternal education;

(b) lack of adequate transportation, housing, or food; (c) a family member or child with a substantial disability; (d) divorce or separation in the past year; and (e) homelessness, or an adult in the family who does not speak English. Emotional risks include family members with alcohol or drug abuse issues, presence of sexual abuse, domestic violence, or anger control problems, problems with parenting or an open case with Child Protective Services. For this poster, high, medium, and low levels of risk were defined according to one third and median splits; when possible, given the variation in the middle-risk group, the sample was divided into 3 groups. However, for some analyses, it was necessary to use a median split given the small sample size.

Results indicate that this Early Head Start sample is characterized by high depression, low efficacy, and low levels of attachment security on average ($M = 0.22$, compared with middle-class means of 0.48). Overall, attachment security seems to be strongly influenced by total level of risk the family is experiencing, with higher risk levels associated with lower levels of attachment security. High efficacy and low depression are also associated with higher attachment security scores. While relationships between depression, self-efficacy, and attachment security are powerful, the relationships among these variables seem to change when considering risk levels. In particular, efficacy and depression are stronger predictors of attachment security among families with the highest risk levels (defined by median split). Type of risk also influences relationships between variables, as efficacy may be more strongly influenced by contextual risk factors, while attachment security is more sensitive to emotional risks.

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Children's Aggressive Behavior in a Head Start Sample: Its Relation to Caregiver Factors and Children's Attachment Representations

Ann M. Stacks, Brandon Silverthorn

PRESENTER: Ann M. Stacks

This study investigated caregiver factors that contribute to children's attachment representations and subsequent child behavior at home and at school. Specifically, this study addressed two broad questions: (a) Are caregiver factors associated with children's attachment representations? and (b) Do children's mean aggression scores, mean internalizing scores, and mean externalizing scores at home and at school vary as a function of attachment representations?

Families from 7 full-day and 15 part-day Head Start classrooms in Ingham and Eaton Counties in Michigan were sampled. Sixty-three families met study criteria. Primary caregivers completed self-report measures about themselves. These measures included (a) The Social Support Questionnaire (SSQ; Sarason, Levine, Basham, & Sarason, 1983), (b) The Brief Symp-

tom Inventory (BSI; Derogatis, 1993), (c) The Schedule of Recent Events (SRE; Daly, 1984), and (d) a demographic questionnaire.

Child characteristics were a major outcome of the study. Caregivers completed the Child Behavior Checklist (CBCL; Achenbach, 1991). Teachers completed the Teacher Rating Scales (TRS; Reynolds & Kamphaus, 1992). Children's attachment representations were measured using the Six-Year Attachment Doll Play Classification System (George & Solomon, 1990, 1996, 2000).

Cross tabulation was used to determine the association between caregiver factors and children's attachment representations. The contingency coefficient was used to gauge the strength of the association. Due to the small number of children in this sample classified as secure ($N = 4$), the expected cell size was less than 5. As a result, secure children were not included in the analysis. Stressful life events were not associated with attachment representations, and the strength of the association was small ($C = .283$), $\chi^2(4, N = 50) = 4.37$; $p = .359$. The availability of support and satisfaction with support were not associated with children's attachment representations, and the strength of the association was moderate ($C = .35$), $\chi^2(4, N = 49) = 6.75$; $p = .150$; ($C = .361$), $\chi^2(4, N = 50) = 7.51$; $p = .111$, respectively. Caregiver psychological well-being was associated with children's attachment representations, and the strength of the association was moderate ($C = .329$), $\chi^2(2, N = 50) = 6.08$; $p = .048$.

Six separate ANOVAs were run to determine if aggression, externalizing behavior, and internalizing behavior at home or at school varied as a function of children's attachment representations. Aggression at home $F(3, 50) = 4.73$, $p = .006$ and externalizing behavior at home $F(3, 50) = 4.60$, $p = .006$ varied as a function of children's attachment representations. Internalizing behavior at home $F(3, 50) = 1.08$, $p = .368$; aggression at school $F(3, 50) = 1.39$, $p = .255$; externalizing behavior at school $F(3, 50) = 1.42$, $p = 1.42$; and internalizing behavior at school $F(3, 50) = 1.10$, $p = .360$ did not vary as a function of children's attachment representations.

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Assessment of Curriculum Practices in Head Start

Stacey A. Storch

PRESENTER: Stacey A. Storch

School readiness is a complex phenomenon including a spectrum of skills in health, social, emotional, motor, and intellectual development. The most recent federal reauthorization of Head Start places special emphasis on children's emergent literacy skills, with a focus on preparedness for learning to read, a skill influencing virtually all areas of academic performance. Recent reports of data from the Head Start Family and Child Experiences Survey (FACES; U.S. Department of Health and Human Services, 2000) indicate that while children in Head Start attend classrooms that are generally of good quality, these children are behind in the area of emergent literacy.

As a result of the new legislative focus on enhancing Head Start program quality in ways that promote school readiness, local Head Start agencies are under pressure to introduce a curriculum into their programs that teaches emergent literacy skills. However, though scientific research on reading and emergent literacy provides very clear indications of what children need to know to learn to read, the same research provides much less guidance on how children should be taught that knowledge. Head Start teachers and the organizations that employ them exhibit a wide range of commitment to instruction in emergent literacy and a wide range of approaches to such instruction when it is part of the curriculum. We have little knowledge regarding the approach individual teachers take to teaching school readiness skills, yet the emphasis and approach of individual teachers is likely to be of considerable importance in advancing children's skills.

This study, supported by a Head Start Research Scholars Grant, proposes to develop a Preschool Curriculum Q-sort measure to be used in assessing the degree to which engagement in particular classroom activities by teachers promotes language and literacy development in Head Start children. Specific objectives of the study include (a) developing a Q-sort measure to assess preschool curriculum practices that is practical to use and comprehensive in measuring literacy and language activities, (b) instructing teachers in the use of the Q-sort and having them complete it at specific points during the school year, (c) validating the measure using independent observers, and (d) assessing the degree to which teachers' responses to Q-sort items relate to student growth in school readiness skills, particularly emergent literacy.

This poster reports on Year 1 of the 2-year project. In the fall of the 1st year, we collaborated with a pilot group of preschool teachers in the development, testing, and revision of the curriculum measure. In the spring of the 1st year, a sample of 42 Head Start teachers and aides from 23 classrooms completed the Q-sort. Children from these classrooms were tested on an extensive battery of language and literacy measures upon their entrance to and exit from Head Start.

Development work from Year 1 will be presented including the final Q-set item list, teacher instructions, and Q-sort materials. In addition, preliminary results of data gathered from the 42 Head Start teachers including mean response rankings of each item, cluster analysis of the Q-set items, and correlations between teachers' cluster scores and child outcomes will be presented.

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The Relationship Between Emotional and Behavioral Adjustment in Head Start and Social Adjustment and Academic Achievement in Primary Grades

Rebecca J. Bulotsky, John W. Fantuzzo

PRESENTER: Rebecca J. Bulotsky

The Surgeon General's National Action Agenda on Children's Mental Health calls for a renewed national commitment to the mental health needs of young children and families. The Agenda underscores the need for early identification and intervention for vulnerable populations who are chronically underserved (U.S. Department of Health and Human Services, 2001). Early interventions guided by quality information provide hope that children's early needs will be addressed so that future problems can be mitigated. Early intervention efforts, however, must be guided by an empirical understanding of the emotional and behavioral development of vulnerable children.

Head Start's capacity as a comprehensive early intervention program to adequately target the educational needs of preschool children is dependent upon an empirical understanding of their trajectories. In order to inform appropriate and effective interventions, more empirical research concerning preschool emotional problems and their impact on children's developmental trajectories is necessary. Several scholars in the field have called attention to the lack of adequate information in regard to preschool emotional problems in Head Start (Lopez, Tarullo, Forness, & Boyce, 2000; Yoshikawa & Zigler, 2000).

In response to this need, this project aimed to conduct a longitudinal follow-up study of a cohort of 938 Head Start children who are now currently in primary school grades within a large urban school district. The overarching goal was to investigate the relationship between children's preschool emotional and behavioral adjustment and their primary grade social adjustment and academic achievement. The project aimed to examine multiple dimensions of preschool adjustment problems using a multidimensional measure, the Adjustment Scales for Preschool Intervention (ASPI; Lutz, Fantuzzo, & McDermott, in press) and its relationship to multiple academic and social outcomes in primary grades.

This presentation outlined the major activities accomplished over the past 10 months of the 1st year of this grant. They were the further validation of the ASPI, which included the development and implementation of a direct observational coding system and the collection of interrater reliability data from teacher assistants, and the partnering with school district personnel to track the longitudinal study sample and to identify key outcome variables within the district computer database that could be collected for those students located within the school system. These data included primary school outcome variables such as children's report card grades, attendance information, achievement scores, contextual and demographic information, and special needs status. In addition, a measure of children's social adjustment, the Adjustment Scales for Children and Adolescents (McDermott, Marston, & Stott, 1993), was sent out to primary grade school teachers of the children in the longitudinal study sample to complete.

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Multimethod Assessment of Head Start Children's Inhibitory Control Abilities: Reliability and Concurrent Validity of Behavioral, Parent-, and Teacher-Report Data

Beth Phillips

Presenter: Beth Phillips

(Summary not available)

Head Start Children at Risk for Emotional Behavioral Disorders: An Examination of Personal and Programmatic Characteristics

Kevin P. Quinn, Dana Abbott

Presenters: Kevin P. Quinn, Dana Abbott

(Summary not available)

Action Research

The ACCESS Study of Child Care and Family Service Hubs in Rural and Disadvantaged Communities

Collette Tayler, Ann Farrell, Lee Tennent

PRESENTER: Carla Patterson

Accumulating evidence from around the world confirms the importance of children's participation in effective early care and education services (McCain & Mustard, 1999; Pascal et al., 1999; Schweinhart & Weikert, 1997). Furthermore, initiatives such as the Head Start Programs in the U.S. and Early Excellence Centers in the U.K. suggest that access to, and awareness and responsiveness of, community services are enhanced when services are integrated (Johnson, 1993; Bertram & Pascal, 2001). It is also possible that service integration has the potential to build community social capital. In Australia, there is now widespread interest in the potential of service integration for all families. This interest is embedded in notions of enhancing family and community capacity through the building of social capital—defined as the networks of social relations characterized by norms of trust and reciprocity (Stone & Hughes, 2000). In Queensland, government funding has been allocated to the development of integrated child care and family support hubs—community driven initiatives designed to improve access to a range of child and family services (Department of Families, 1999). To date, there is no published Australian research to guide and support the integration of services for communities, particularly in the context of building social capital.

Phase one of our pilot study examined community perceptions and anticipated usage of two developing hubs: in a rural community and in a disadvantaged urban community. Surveys (N = 143) elicited demographic information and insights about existing services along with suggestions and perceived benefits associated with potential hub services. Levels of community social capital were gauged using a 36-item instrument (Onyx & Bullen, 1997) that asked about (a) community participation, (b) friends and family connections, (c) neighborhood connections, (d) value of life, (e) proactivity, (f) tolerance of diversity, (g) trust, and (h) safety. Eight questions reflecting these dimensions were adapted and asked of a sample of children (N = 138) aged 3–9 from each community.

Data analysis indicated distinct gaps in service provision in both communities. For those in the rural community, the hub would provide a venue for much needed health services. In the disadvantaged community, needs centered upon a range of recreational and educational services. Numerous explanations as to how the hub would benefit children, parents, and other community members were given. For many, the hub would simply "bring the community together."

Substantial differences between the communities in terms of demographic characteristics and levels of social capital were found. Compared with the rural community, those in the urban community generally had more children, lower incomes and education levels, and had lived in the community for fewer years. Levels of social capital in this community were also lower,

particularly in relation to the dimensions Feelings of Trust and Safety, Value of Life, and Participation in the Community.

In relation to the child social capital questions, the majority of children agreed that they felt safe living in their area. However, children in the rural community were less likely to be involved in clubs or visit friends, relatives, or neighbors. While most children agreed that they would help friends with schoolwork if needed, and that they trusted most people, agreement was more pronounced in the urban community. Children in the urban community were also significantly more likely to agree that they liked being with people who were different from them.

This study was made possible through funding from the Queensland Department of Families, the Commonwealth Department of Family and Community Services, Education Queensland, Queensland Health, the Commission for Children and Young People, and the Creche and Kindergarten Association of Queensland.

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Pathways to Shared Food Learning for Young Children

Julie Appleton, Carla Patterson, Nadine McCrea

PRESENTERS: Julie Appleton, Carla Patterson

An audit of food and nutrition education resources in Australia (Curriculum Corporation, 1996) and research in early childhood services (Appleton, Patterson, & Giskes, 2002) showed that there is a dearth of suitable resources for young children, particularly for use in early childhood services.

The framework developed by the National Nutrition Education in Schools project (Reynolds & Dommers, 1995; Reynolds, 2000) provides a basis for appropriate methodology for food and nutrition education that it is believed will make healthy food choices easier. Specific teaching and learning strategies should be relevant to students' needs, skills, interests, abilities, and experiences and consider the physical, cognitive, emotional, social, and spiritual dimensions of health.

This learning should be undertaken using an inquiry-based process, which involves gathering, analysing, and evaluating information related to either their own diets, or to societal factors that impact on food beliefs or habits. As a result of the evaluation, decisions can be made regarding whether or not action is necessary. Associated goals are set and barriers/enablers in relation to these goals are identified. Plans and actions to overcome the barriers to achieve the goals reflect upon outcomes.

The development of such skills must include selecting foods, preparing foods, and advocating. These are the focus areas of this inquiry-based process and complimentary to a health promoting approach in early childhood settings.

Broad consultation was undertaken with stakeholders from university, early childhood, and parent groups, and the resource was based on the already developed Food and Nutrition Curriculum Development Framework. It was developed using an action research process and was trialed twice in early childhood settings and redrafted each time on the basis of feedback received. This ensured that the resource is practical and useful for the needs of early childhood services. It insists children learn about food in ways that are appropriate to their age and development and is also a useful reference book for staff.

The trials and consultations raised awareness of the resource in the target population, and this assisted with implementation. The result of this process is the publication of *There's More to Food Than Eating: Food Foundations for Young Children Birth to Eight Years* (Appleton, McCrea, & Patterson, 1999) and *Do Carrots Make You See Better?* (Appleton, McCrea, Patterson, & Ashby, 2001). This book, *Do Carrots Make You See Better?*, takes a holistic approach to food learning, and its major focus has many practical experiences for young children including involvement in decision making and science, math, and food cycle activities. Children are also encouraged to (a) practice motor skills while preparing nutritious foods and (b) use popular children's literature as a starting point for food learning.

Food and nutrition information, guidelines and recommendations for young children, and managing food issues in early childhood services are discussed, including development of policies and ideas for negotiating with families if differences arise.

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Ready, Set, Grow! Passport: Report on Program Development and Evaluation

Jessica V. Barnes, Colleen M. Determan, Hiram E. Fitzgerald, Velma P. Allen

PRESENTERS: Jessica V. Barnes, Hiram E. Fitzgerald

Evaluation of outcomes has been an integral feature of the Passport Initiative from the beginning of the planning process. Evaluation was conceptualized as a key mechanism for determining the effectiveness of Passport as a community networking strategy to enhance connections between families being served, the results of such services for young children, and the features of Passport that most account for positive outcomes.

In the process of evaluation, program evaluators provide feedback to the community about program strengths and concerns. The community then responds to the feedback by making adjustments in program policy. The community and evaluators must address the evaluation plans again, ensuring programmatic changes are reflected in the evaluation model. This dynamic approach to evaluation is utilization-focused (Patton, 1997) in that the evaluation is conducted in order to inform the community. This process allows for greater community empowerment (Bartunek, Foster-Fishman, & Keys, 1996); the community is able to use evaluation feedback to strengthen service delivery and the impact these services have on community members. Local ownership is thus enhanced (Butterfoss, Goodman, & Wandersman, 1993).

Since January 1, 1998, 8,039 children were enrolled in the Passport Initiative. Data concerning the utilization of Passport services point to strengths and concerns about Passport service delivery. The key strengths and concerns identified in the current report involve three areas of Passport service delivery: (a) enrollment, (b) service utilization, and (c) community involvement. For enrollment, the strengths include representation of families with a variety of educational levels and the high representation of minority ethnicity families enrolled in Passport. The concerns identified include the low percentage of families enrolled before the birth of the child and the low percentage of families enrolled with an education level below 9th grade. For service utilization, the strengths include the high frequency of use and satisfaction with the educational manual. Although most families report they have not received the Passport newsletter (a concern), a high frequency of the families who have received the newsletter report being satisfied with it. Another concern identified about service utilization is the low frequency of use of the incentive system. However, of those families who do use the incentive system, most report a high level of satisfaction with the use of the incentives. Another strength identified involves the high frequency of family contacts that have been made within the past year. However, there are still a high number of families Passport has been unable to contact.

No concerns were identified in the area of community involvement. The three strengths identified include the high number of businesses involved in the incentive system, the regular attendance at committee meetings, and the continuance of community funding. The strengths and concerns identified have been and should continue to be addressed by the Passport community in order to strengthen the support provided to families with young children in Genesee County. As the program is modified in response to community and member needs, the evaluation plan will adapt to the programmatic changes.

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Continuous Process Improvements: Primer and Discussion Around the Experiences of Three Programs

Mark S. Innocenti, Lori A. Roggman, Vonda K. Jump, James F. Akers, Patty Walker

PRESENTERS: Mark S. Innocenti, Lori A. Roggman

Continuous program improvement (CPI) is a process focused on improving program quality. It values input from all stakeholders (administrators, staff, families, and university partners), and all ideas have equal value. CPI operates on the philosophy that no matter how effective a program, there is always room for improvement. With increased emphasis on program effectiveness and recent questions raised about the universal effectiveness of any single approach, CPI has become even more important. The CPI process is useful in focusing programs toward a unified goal(s) through a consistently implemented process. CPI includes program defined data collection. The data collection of the CPI process may serve as short-term outcomes working toward longer-term outcomes and are easily implemented with stakeholders. We have worked with three programs that have used the CPI process. We have learned that the CPI process varies based on the goals of the program and the program context. As a result, we have learned several lessons and some of the challenges encountered in implementing CPI.

The reasons for partnerships with the three programs varied, as did the role of the program staff in the partnership. The role of the trainers varied, but consisted of some common aspects. Trainers served more as facilitators than presenters of the "right way to go." Training built on the skills the staff already possessed and on the goals of the program. The staff were active in all training activities. The identification of process/program data by the staff, the collection of these data, and the provision of the results of the data to the staff were key aspects.

A number of important lessons have emerged from our experiences. Programs starting the continuous program improvement process may benefit from the experiences of other programs. These lessons fall under the following headings: (a) system change/getting started, (b) building relationships, (c) identifying process and outcomes, and (d) working together. The lessons have assisted us in bypassing some of the challenges inherent in conducting CPI, but a number of challenges still exist. In reality, there will always be challenges in implementing and improving early childhood programs. We have identified five areas that need to be considered both by programs wishing to become involved in the CPI process and by partners with whom programs work. These challenges include (a) program readiness, (b) philosophy change, (c) initial commitment, (d) facilitate rather than instruct, and (e) each at his/her own pace.

Our experience has shown that the CPI process can be an exciting, empowering process for both programs and partners working with programs to improve outcomes. We hope others can use this information to form more effective and collaborative partnerships.

Assessment/Diagnosis

Assessment as a Mediator of Teacher–Parent Partnerships

Rhonda Douglas Brown, Kurt Kowalski, Kristie Pretti-Frontczak

PRESENTERS: Rhonda Douglas Brown, Kurt Kowalski

Collaborative partnerships between agencies, teachers, and parents are critical components of effective early childhood education (Zigler, Kagan, & Muenchow, 1982). The current study examined the role of assessment in mediating teacher–parent partnerships. Seventy-two parents of children attending 55 publicly funded preschool programs in Ohio participated in structured interviews designed to investigate parents' use, knowledge, and satisfaction with assessment information. Parents cited the following as sources of information about their child's skills and interests: (a) teacher reports (66.7%), (b) assessment information (62.5%), (c) personal observation (37.5%), and (d) other sources (25%). Parents were provided with a list of assessment instruments and asked to indicate whether their child's preschool used each one (responses may not reflect actual use).

Results revealed that 38.9% of parents indicated the Galileo System for the Electronic Management of Learning (Bergan, Bergan, Rattee, & Feld, 2001); 11.1% indicated the BRIGANCE Diagnostic Inventory of Early Development, Revised Edition (BDIED-R; Brigance, 1991) and the Denver Developmental Screening Test-II (Frankenburg et al., 1989); 9.7% indicated "other"; 5.5% indicated the Battelle Developmental Inventory Complete Version (Newborg, Stock, & Wnek, 1998); 4.1% indicated the Developmental Indicators for the Assessment of Learning-Revised (Dial-R; Mardell-Czudnowski & Goldenberg, 1990) and the Peabody Picture Vocabulary Test-Third Edition (PPVT-III; Dunn & Dunn, 1997); and 0% indicated the Portage Guide to Early Education (Doan, Wollenburg, & Wilson, 1994). Forty-two percent of parents indicated that they did not know which assessments were being used or that no assessments were being used, and were forwarded to the end of the interview. Of the remaining 42 participants (58% of total sample), 26 participants (62% of subset; 36% of total sample) indicated that they received assessment reports from specific instruments. Fifty percent of these participants reported receiving them several times a year, 19.2% once a month, 11.5% once a week, 7.6% several times a month, and 11.5% provided other responses. Thirty-eight percent indicated they did not receive reports or did not know. Thus, approximately 35% of parents contacted were aware of specific tools used by preschools to assess their child's skills and abilities and had received assessment reports. This subset of parents provided ratings of information in assessment reports using a likert scale, ranging from strongly disagree to strongly agree.

Results also indicated that parents agreed that assessment reports are (a) useful and easy to understand, (b) include important developmental skills for preschoolers, (c) accurately describe their child's skills and abilities, (d) provide frequent and current feedback about their child's skills and progress, (e) help them set goals and plan activities for their child, and (f) facilitate communication between themselves and their child's teacher. Parents somewhat agreed that report information helps them determine their child's developmental level and were neutral

concerning whether the skills are difficult to observe. When asked what they would change about the reports, parents reported wanting to receive reports more frequently. Recommended practice advocates allowing families to determine their involvement in the assessment process (Winton & Bailey, 1997).

Our results indicate that parents use assessments as a source of information about their children's skills and abilities, but do not necessarily know about instruments used with their children. Parents that acknowledged receiving reports were satisfied with the information provided and expressed interest in receiving reports more frequently.

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The Testability of Preschoolers on Stereotests Used to Detect Vision Disorders

Paulette P. Schmidt

PRESENTER: Paulette P. Schmidt

Questions have been raised about the testability of young preschool children on stereotests. Our purpose was to compare the percentage of children aged 3 to 3.5 years who could complete each of three stereotests: (a) the Preschool Randot (Birch & The Retina Foundation of the Southwest, 1996), (b) the Random Dot E (RDE; Stereo Optical Company, Inc., 1974), and (c) the Stereo Smile (Ciner, 1997). These tests have the best theoretical characteristics among all tests available for screening young children.

Participating were 118 preschoolers from five centers involved in Vision In Preschoolers, a multicenter research study supported by the National Eye Institute. Subjects were between 3 and 3.5 years of age, able to complete cover testing at near and far distance, and not strabismic (based on cover test results). Each child was tested on the three stereotests in a variable, balanced order. Prior to stereotesting, the testability for each test was determined by the child's

ability to identify nonstereo images and large disparity stereo images of the targets for each test. Testing followed the manufacturer's instructions.

After pretesting a child with two-dimensional targets, the tester showed each child the stereo plates in Book #3 at 40 cm (800 arc seconds of disparity) and asked the child to identify/match the shapes. If the child identified at least two of three shapes, the result was scored as testable. The same procedure was followed using Book #1 at 54 cm (150 arc seconds of disparity). If the child identified at least two of three shapes, the result was scored as "pass." After pretesting the child with the model E, the tester presented the stereo E versus the blank card five times at a distance of 150 cm (168 arc seconds of disparity), with the position (left, right, up, down) of the E varied from trial to trial. If the child correctly identified the position of the stereo E at least four times, the result was scored as "pass." After pretesting the child with the nonstereo smile face, the tester presented the stereo smile card at a distance of 44 cm (150 arc seconds of disparity) for five trials, with the left-right position of the stereo smile varied from trial to trial. If the child correctly identified the position of the smile at least four times, the result was scored as "pass."

The percentage of children able to perform the test was higher for the RDE and Stereo Smile than for the Preschool Randot. Testability was greater for the Stereo Smile than for the Preschool Randot. The difference in testability between the RDE and the Preschool Randot was of borderline statistical significance and the RDE and Stereo Smile were not significantly different. The testability of young preschoolers was greater for the Stereo Smile and RDE tests than for the Preschool Randot test. Among testable children, the proportion passing the test was similar for all three tests. Using stereoacuity in preschool screenings shows great potential since reduced stereoacuity may indicate the presence of amblyopia, strabismus, and refractive error.

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Relationship of Parent and Teacher Temperament Ratings to Child Social and Cognitive Outcomes

Susan L. Churchill, Jeanne Stolzer, Zolinda Stoneman

PRESENTER: Susan L. Churchill

The current study examined the relationships between teacher and parent ratings of temperament to both social and cognitive outcomes. In addition to individual temperament ratings, the study utilized three different agreement measures: (a) absolute difference score, (b) mean score, and (c) intraclass correlation (ICC). The sample consisted of 120 Head Start children, their teachers, and mothers. Individually, mothers' and teachers' ratings showed differential correlational patterns for girls and boys. Mothers' ratings were more strongly related to girls' outcomes, while teachers' ratings were more closely associated with boys' outcomes. The three indices calculated to represent agreement between teacher and parents showed various utility. The absolute value difference score showed very few correlations with child outcomes—both the mean score and intraclass correlation (ICC) were more strongly associated with child outcomes. The ICC did show more and stronger correlations overall for boys than girls. For cognitive

outcomes, the ICC showed higher correlations than the mean score, but the opposite was true for social outcomes.

This study serves to highlight the importance of multiple informants when documenting child characteristics, especially when using rating scales.

Head Start Vision Screening: Identifying and Targeting Population Specific Vision Problems

Irene Adams, Frances Lopez, Candice Clifford, Erin Harvey, Joseph Miller

PRESENTER: Irene Adams

Members of the Tohono O'odham Nation, a Native American Tribe, have a high prevalence of astigmatism (Kershner & Brick, 1984; Dobson, Tyszko, Miller, & Harvey, 1996). When not wearing eyeglasses, people with astigmatism have poor near and distance vision. Correction of astigmatism while children are young is important for healthy visual development: If astigmatism is not corrected with eyeglasses while children are young, it can lead to the development of amblyopia—poor visual acuity even while wearing eyeglasses.

Most preschool vision screening programs focus on detection of poor visual acuity and strabismus, problems that are most prevalent in most populations. These screening programs may not be effective in a population that has a high prevalence of astigmatism. In Study 1, we compared screening effectiveness of four different methods for detecting high astigmatism (Miller, Dobson, Harvey, & Sherrill, 2001), and in study 2 we evaluated a vision screening protocol developed based on the findings of the first study (Dobson, Miller, Harvey, & Sherrill, 2001).

Participants were 379 preschool children enrolled in the Tohono O'odham Head Start program in fall 1997 or fall 1998 (Study 1), and 167 children enrolled in the Tohono O'odham Head Start program in fall 2000 (Study 2). In Study 1, four screening methods were evaluated: (a) Lea Symbols distance visual acuity test (Hyvärinen, 1976), (b) MTI Photoscreener (Medical Technology, Inc., Cedar Falls, IA), (c) Nidek KM-500 autokeratometer (Marco Ophthalmic, Inc., Jacksonville, FL), and (d) Retinomax K-plus autorefractor (Nikon Instruments, Inc., Melville, NY). The screening results were compared to the results of an eye examination, which determined if astigmatism was present. Analyses provided an estimate of screening effectiveness (ability to "fail" children who have astigmatism and "pass" children who do not). Based on screening effectiveness and cost effectiveness, a screening protocol recommendation was made to the Head Start program. In Study 2, the vision screening protocol was implemented by Head Start staff, and the results were evaluated.

Study 1 indicated that the autorefractor was most effective, followed by the keratometer, the photoscreener, and Lea Acuity screening. Since the keratometer was almost as effective as the autorefractor and the cost of the keratometer was significantly less than that of the autorefractor, the keratometer was recommended for use in screening. Acuity screening was also recommended since keratometry cannot detect some serious eye problems such as cataract. The recommended screening protocol was (a) screen using keratometer, referring all children who "fail," (b) screen children who pass keratometry screening with Lea Symbols test, and (c) rescreen children who "fail" acuity screening, referring all children who "fail." Using this protocol, 61/65 (94%) children with astigmatism were correctly identified as having astigmatism, and 75/102 (74%) were correctly identified as not having astigmatism.

These studies resulted in the development of a vision screening protocol that has proven to be effective in a population with high astigmatism. This protocol would not be effective in most populations, but may be useful in other populations that have a high prevalence of astigmatism, for example, some other Native American tribes.

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The Philadelphia Pilot: An In-depth Look at Mental Health Screening in Urban Head Start

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As a comprehensive service delivery program, Head Start serves as one of the earliest mechanisms for identification and intervention with low-income children and their families (Yoshikawa & Knitzer, 1997; Lopez, Tarullo, Forness, & Boyce, 2000). Specifically, the Head Start Performance Standards call for programs to "provide prevention, early identification, and early intervention in problems that interfere with a child's development" (U.S. Department of Health and Human Services, 1996). Logically, early intervention efforts are dependent upon the systematic identification of children's needs. More research is needed in partnership with Head Start programs to construct a screening process utilizing quality information that systematically identifies high priority children. The study addresses this need by implementing a mental health-screening pilot in a large, urban Head Start program. The study's purpose was threefold: (a) identify known risks at school entry in order to create a screening system utilizing normative and contextual data, (b) explore empirical relationships between these risks and children's emotional and behavioral problems at the beginning of the year, and (c) explore empirical relationships between risks and emotional and behavioral problems screened at the beginning of the year and children's outcomes at the end of the year. The participants in this study were 171 children, ranging in age from 38 to 71 months (46% male and 54% female), enrolled in two large centers in a large city for the 2000–01 school year.

Information about hypothesized risk factors was collected at the beginning of the year. These included (a) health risk variables (e.g., asthma, high lead, low birth weight), (b) educational risk variables (e.g., attendance, referrals to disability coordinator), (c) key demographic variables

(e.g., year in Head Start, parental education, and marital status), (d) a multidimensional teacher measure of children's emotional and behavioral adjustment within the classroom, and (e) contextual information reflecting a level of neighborhood risk.

Children's emotional and behavioral adjustment at the beginning of the year was assessed using the Adjustment Scales for Preschool Intervention (Lutz, Fantuzzo, & McDermott, in press). At the end of the year, classroom learning competencies, social competency, emergent numeracy, and learning behaviors were assessed using the Child Observation Record (Schweinhart, McNair, Barnes, & Larner, 1993), Penn Interactive Peer Play Scale (Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998), Test of Early Mathematics Ability, Second Edition (Ginsburg & Baroody, 1990), and the Preschool Learning Behavior Scale (McDermott, Green, Francis, & Stott, 1996).

The study children were more likely to be exposed to higher levels of health, educational, and neighborhood risk variables than children in the entire program. Analyses suggest also that these children were at higher risk of emotional and behavioral problems at the end of the year. Finally, a number of health, educational, and contextual risk variables (such as low attendance rate, year in Head Start, and referral to disability coordinator) significantly increased children's risk of emotional and behavioral problems at the end of the Head Start year.

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The Testability of Preschoolers on Two Visual Acuity Procedures for Detecting Vision Disorders

Bruce D. Moore

PRESENTER: Bruce D. Moore

Vision disorders are a highly prevalent cause of disability in children. They occur in about one quarter of Head Start children and may have a significant adverse effect on a child's ability to function in the classroom. The most important and common disorders affecting children's vision include amblyopia (poor vision not improvable solely by eyeglasses), strabismus (crossed or turned eyes), and significant refractive error (blurred vision correctable with eyeglasses). Comprehensive eye examinations are recommended for preschool children by every major professional organization concerned with the vision of children. However, fewer than 15% of all preschool children receive an eye examination. Screening preschool children has been advocated as a way to identify children most in need of a comprehensive eye examination, and Head Start mandates vision screening early in the school year. However, screening methods and referral criteria vary widely across the country, with little agreement on the best way to implement vision screening.

Testing of visual acuity is the most widely used method of screening children for vision problems. Children with significant refractive error, amblyopia, and many with strabismus will manifest deficits of visual acuity in comparison to age norms. This study compares the ability of children between the ages of 3–3½ to complete two visual acuity tests.

The two tests we evaluated were the Mentor B-VAT crowded HOTV acuity test (Mentor O & O, Norwell, MA) and the Lea Symbols chart (Hyvärinen, 1976). The National Eye Institute (NEI) funded Amblyopia Treatment Study (ATS) has developed and is using a standardized protocol for measuring visual acuity with the B-VAT crowded HOTV test to measure acuity in preschool-aged children. In the present study, the ATS testing protocol was adapted for use with the Lea Symbols chart, which is composed of four symbols—an apple, square, circle, and house—which are repeated on multiple lines of symbols decreasing in size from 10/100 to 10/5.

Subjects were 87 Head Start children between 3–3½ years old. The children participated through four centers involved in the Vision In Preschoolers (VIP) Study, a multicenter research project supported by the NEI. VIP Clinical Centers are located in Berkeley, California; Boston; Columbus, Ohio; Philadelphia; and Tahlequah, Oklahoma.

Pretraining was provided immediately prior to the administration of each of the visual acuity tests. A modified, rapid staircase procedure was used to determine monocular threshold acuity levels. Monocular threshold visual acuity could be measured using the crowded HOTV letters in 68% of the children and using the Lea Symbols in 73%. Ninety-two point one percent of the children achieved monocular visual acuities of 20/50 or better on the HOTV test. However, the HOTV acuity was on average two lines better than the Lea Symbols acuity.

Both of the visual acuity tests were found to result in high testability in children aged 3–3½ years. The HOTV test did result in a higher estimate of visual acuity than the Lea Symbols test.

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An Evaluation of Emergent Numeracy Strategy Understanding: Development of a More Sensitive Measure for Head Start Assessment

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Understanding numeracy at the beginning of school has important implications for later learning in math and science (Entwisle & Alexander, 1990); therefore, promoting early math skills is an essential component of school readiness for urban, low-income children placed at risk for school failure. Previous research indicates children develop a partially ordered sequence of informal counting strategies that are applied in mathematical contexts (Ginsburg, Klein, & Starkey, 1998). As strategy knowledge is closely linked with math understanding (Kuhn, Garcia-Mila, Zohar, & Anderson, 1995; Siegler, 1987; Siegler & Robinson, 1982), a precise assessment of strategy knowledge can facilitate effective instruction. In line with previous studies that have examined the validity and developmental appropriateness of assessment measures for urban Head Start children (Fantuzzo, McDermott, Manz, & Hampton, 1996), this study evaluated the sensitivity of various assessment methods for early math strategies. The research questions addressed in this study included (a) What is the most sensitive methodology for assessing urban Head Start children's strategy knowledge? (b) What information does this methodology provide about how children acquire an understanding of early math?

The strategy knowledge of children in two Head Start centers (N = 54; M = 58 months) was assessed within three categories of emergent numeracy: (a) counting, (b) ordinality, and (c) addition. One assessment procedure adapted from Siegler and Crowley (1994), asked children to evaluate a single strategy using a 3-point scale (very smart, kind of smart, not so smart). Utilizing this procedure, student performance was not significantly above chance in any of the categories measured. To ascertain whether these results signified an absence of strategy knowledge or a lack of sensitivity with the assessment methodology, a different procedure was created. Children were given a forced-choice, paired-comparison assessment format and asked to judge between two strategies presented side-by-side ("Which is the better way?"). Within the addition category, children made a significant distinction between counting all of the items correctly versus an illegitimate addition strategy, with over 75% making the correct choice.

Results from a second study (n = 28) confirmed our previous finding that paired comparisons offer a more sensitive assessment methodology. A different item set targeted other salient features of numeracy within the counting category. Using the single-judgment method, children were able to identify a correct count sequence as a critical feature of counting. However, the paired-comparison method was more informative, demonstrating that a correct count sequence and counting all members of a group were critical features. Furthermore, the paired-comparison methodology demonstrated that children's preferences for different features were hierarchically organized. Participants preferred the strategy for counting all members of a group, even in the presence of an incorrect count sequence and incorrect one-to one-correspondence. Therefore, this study identified a feature of counting with developmental importance that has not been adequately recognized in previous research.

A precise assessment of individual strategy understanding provides the instructional information necessary for targeting critical areas limiting the rate of learning. Furthermore, as an instructional technique, paired-comparison methodology may promote children's learning by facilitating identification of the critical features that distinguish two strategies.

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Multiple Perspectives on Interpersonal Competence: An Ecologically Valid Assessment of Head Start Children's Social and Emotional Competence With Peers and Teachers

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Many measures of preschoolers' social competence were validated with middle income and White families and do not take the needs of poor children, minority children, or the classroom setting into consideration. This poster describes two studies used to develop a brief screening measure of Head Start children's social and emotional competence that takes both culture and context into account (Graham-Bermann, Bermann, & Huesmann, 2002). There were 146 children and 214 children ages 3-4 in each study, respectively. Seventy-nine percent attended schools in urban settings while the rest were rural. Ethnicity was diverse: 52% White, 48% minority. More than 55% had two parents in the home. In order to create an ecologically sensitive and valid measure, focus groups and workshops were held with Head Start teachers, teacher assistants, administrators, Advisory Council members, and university researchers. This community-based, grounded approach is recommended by ecological researchers (Jensen, Hoagwood, & Trickett, 1999). The goals were to ascertain the local perspective on children's behavior in school and to forge a mutual, meaningful vocabulary for evaluating their social and emotional competence. Three independent sources were used to assess children in Jackson (urban) and Hillsdale (rural), Michigan: (a) teachers, (b) teacher assistants, and (c) reliably trained observers. Researchers observed 31 aspects of each child's behavior using the Interpersonal Competence Scales for Children (ICSC; Cairns, Leung, Gest, & Cairns, 1995) in Head Start classrooms during 15 minutes of free play on three separate occasions. Teachers, teacher assistants, and parents evaluated children on these 31 dimensions using rating scales.

Principal Components (PC) analysis of observation data in Study One identified five reliable factors accounting for 63% of the item variance: (a) Child-Peer Competence, (b) Child-Teacher Competence, (c) Interpersonal Aggression, (d) Fearful Withdrawal, and (e) Social Appeal. PC analyses of Teacher ratings highlighted four factors accounting for 57% of item variance: (a) Child-Peer Competence, (b) Interpersonal Aggression, (c) Fearful Withdrawal, and (d) Social

Appeal. A four-factor pattern described Teacher Assistant data. Similar constructs were positively and significantly intercorrelated across different reporters. Evidence of construct validity was obtained by comparing ICSC scores with the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) scores of Social Problems, Aggression, Anxiety/Depression, and Withdrawal, and Howes' (1980) measure of play complexity. In the replication study, factor analyses revealed similar, reliable scales across reporters. Children's social and emotional adjustment did not differ by maternal marital status. Despite a restricted range (> 90% of families below poverty level), income was negatively associated with Interpersonal Conflict in both studies. Boys were higher than girls in Interpersonal Conflict, and girls were higher than boys in Competence with the Teacher. Teacher ethnicity and classroom setting were salient elements: Minority teachers rated children lower in Competence but higher in Social Appeal, Conflict, and Withdrawal than White teachers. Children from urban classrooms were lower in Child-Peer Competence and higher in Fearful Withdrawal than children from rural settings.

Thus, preliminary evidence is demonstrated for the ICSC as an age-appropriate, brief, reliable, and valid measure for screening and evaluating Head Start children's social and emotional competence. Further, it expands the range of valid and reliable categories to include assessments of social competence with the teacher and social appeal.

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Children's Emergent Numeracy Understanding: A Longitudinal Perspective

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The task of characterizing emergent numeracy understanding to detect a developmental pathway to early math learning is a valuable step in promoting school readiness for Head Start children. Past studies have indicated that young children's acquisition of counting and cardinality principles underlies subsequent learning and is related to their understanding of a sequential count sequence and one-to-one correspondence (Frye, Braisby, Lowe, Maroudas, & Nicholls, 1989). This study examined children's emergent numeracy understanding as a function of a numeracy operation composed of three components: (a) correct count sequence (Count Sequence), (b) correct one-to-one correspondence (One-to-One), and (c) counting the total members of a set (Count Total-Group). The study investigated whether the developmental

trajectory of children's emergent numeracy understanding could be characterized by changes in the hierarchical organization of components of a numeracy operation.

The Head Start participants ($N = 56$; $M = 62$ months) were given a forced-choice, paired-comparison assessment that allowed for an evaluation of the relative strength of children's preferences for the different components. Results from binomial analysis indicated that children were able to identify the three components of the numeracy operation: (a) Count Sequence ($p < .001$), (b) One-to-One ($p < .01$), and (c) Count Total-Group ($p < .001$). Log-linear analysis indicated that participants' approach to the numeracy operation was characterized by a preference for Count Total-Group over Count Sequence and One-to-One.

The longitudinal sample ($N = 29$; $M = 71$ months) was given an identical forced-choice, paired-comparison assessment in kindergarten. Although the sample size was reduced, analysis indicated that the longitudinal sample was comparable to the original sample. Whereas earlier understanding of the numeracy operation in preschool was governed by a forced-choice preference for the Count Total-Group component, children in kindergarten displayed a forced-choice preference for the One-to One component.

This significant change in the organizational hierarchy of the numeracy operation components establishes a previously unidentified link between counting and cardinality in the developmental trajectory of young children's emergent numeracy learning and understanding. Furthermore, this pattern in the organizational hierarchy and the relations between the components have important implications for classroom practice. Instruction directed toward the acquisition of one-to-one correspondence may facilitate an important shift in emergent numeracy understanding and be useful in promoting school readiness.

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Behavioral Issues of Early Childhood

Early Identification and Intervention With Latino Preschool Children Who Present With Internalizing and Externalizing Behavior Problems

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PRESENTER: Robert D. Wells

A collaborative project was initiated to determine the feasibility of identifying and intervening with high-risk children in Head Start and early elementary school settings. This project combined the resources of a county school district, a local university, a children's hospital, and several Head Start programs serving Latino children from migrant farm-working families. Using the Early Screening Project (ESP) Child Find Process, teachers in two Head Start programs and one public elementary school were asked to rate children in their class who posed the most significant risks for internalizing and externalizing behavior disorders. One hundred forty-five children were identified by their teachers as being "at risk" and were subsequently screened for emotional and behavioral problems. Using cut-off scores, 46 (32%) of the 145 children met criteria for having a significant internalizing or externalizing disorder and were enrolled in weekly social skills training. Children who were enrolled in the project tended to be slightly older ($p < .01$) and were initially more aggressive ($p < .0001$), less socially adaptive ($p < .0001$), and demonstrated more inappropriate behaviors ($p < .0001$) than children who did not meet the enrollment criteria. Fifty six percent were male and forty four percent were female. The mean age was 6.5 with a range from 4.5 to 8.5. Classroom teachers completed ESP questionnaires at the beginning of the school year and again at the completion of the project 9 months later. This project offered weekly group-training sessions aimed at improving social skills, classroom, and emotional functioning.

For those who completed the 9 months of group intervention, teachers noted significant improvements when comparing pre and post intervention questionnaire data. Using within subject repeated measures analysis of variance, children who completed the intervention were significantly less aggressive ($p < .0001$), more socially adaptive ($p < .0001$), and demonstrated fewer inappropriate behaviors ($p < .0001$) after the intervention than they did at baseline. When compared to the normative data provided by ESP, the sample was initially rated at the top 99th percentile (3 standard deviations above the mean) on all 3 measures. At the end of the year, these children were rated at the top 93rd percentile (1.5 standard deviations above the mean) for aggressive behavior and at the 84th percentile (1 standard deviation above the mean) for socially adaptive and inappropriate behaviors. The intervention was also able to demonstrate a modest impact on those with internalizing disorders. These children appeared to be more responsive and socially engaged after the intervention than before ($p < .02$). This suggests that this intervention had a reasonably powerful effect in improving children's social behavior and reducing aggressiveness.

As a pilot project, this study did not include a no treatment control group, and thus the data may be influenced by various factors that were not taken into account. We were able to demon-

strate that despite targeting a highly mobile, largely indigent population of young children, the project was able to retain a significant proportion of high-risk children and to engage them in an ongoing social skills intervention program. Teachers were able to adequately identify those at risk, and the data suggests that these teachers noted significant improvements after the intervention when compared with their functioning at the start of the school year. Having documented a positive pilot project, this collaborative effort recently was awarded additional funding to expand the project to a larger sample of similarly at-risk children.

Investigation of the Relationship Between Emotional and Behavioral Adjustment to Preschool and School Readiness for Urban Low-Income Children

John Fantuzzo, Rebecca Bulotsky, Paul McDermott, Samuel Mosca, Megan Noone-Lutz

PRESENTERS: Rebecca Bulotsky, John Fantuzzo

Recently, there has been much national attention paid to the need for more quality research to investigate the impact of preschool children's emotional and behavioral problems on early school experiences (Huffman, Mehlinger, & Kerivan, 2000; USDHHS, 2001; Yoshikawa & Zigler, 2000). This research is particularly critical for low-income children living in urban areas who are disproportionately at risk for evidencing these adjustment problems and for school failure (Garbarino, 1995; USDOE, 1996).

Head Start, the nation's largest most comprehensive response to the mental health needs of vulnerable children and families, recently escalated its efforts to identify and provide intervention for children's mental health needs (Yoshikawa & Knitzer, 1997). In order for Head Start to respond to these needs, quality research is needed using assessment methods constructed in partnership with educators to identify patterns of emotional and behavioral problems that have the most adverse effect on the early learning and school adjustment of vulnerable preschool populations.

The present study addresses this need by using a unique multidimensional measure, the Adjustment Scales for Preschool Intervention (ASPI; Lutz, Fantuzzo, & McDermott, in press), recently developed in partnership with Head Start teachers as a more appropriate alternative to traditional measures of psychopathology in preschool children. The primary purpose of this study was to examine the relationship between multiple dimensions of preschool emotional and behavioral adjustment assessed early in the Head Start year and children's school readiness competencies at the end of the year. Specifically, this study addressed two questions: First, do multiple dimensions of adjustment problems observed at the beginning of the Head Start year relate to emergent literacy, classroom learning, and social competency assessed at the end of the year? Second, is the ASPI a stable measure of preschool children's psychological adjustment?

The participants in this study were 829 children enrolled in a large urban Head Start program in the Northeast during the 1998–99 school year. Children's emotional and behavioral adjustment was assessed in the fall with the ASPI. At the end of the year, the same cohort of children was assessed in the areas of social competency, emergent literacy, and classroom learning competencies.

Results indicated a consistent pattern of stability over time in the ASPI dimensions. As well, canonical variance analyses indicated several significant multivariate relationships between ratings of children's adjustment at the beginning of the year and school readiness at the end of the year. Overactive behavior problems such as aggressive and oppositional behavior at the

beginning of the year predicted disruptive peer play at the end of the year. Underactive behavior problems, however, predicted both difficulties with play as well as classroom learning competencies at the end of the year. Children with such needs at the beginning of the year were significantly more likely to show disconnected peer play, the lowest levels of cognitive, social engagement, movement, and coordination skills, as well as the lowest receptive vocabulary scores at the end of the year.

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Development of Behavior Problems in Poor, Low Birth Weight Children

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Children living in poverty are at risk for a variety of developmental problems, including behavior problems, and children with biological risk factors of low birth weight and prematurity are also believed to be more likely than normal children to develop later behavior problems. More research is needed to examine the processes by which poverty contributes to poor outcomes in children at biological risk.

The present study was guided by two primary goals: (a) to identify patterns of development of behavior problems over the early childhood period in persistently poor, low birth weight children, and (b) to investigate which child, family, neighborhood, and intervention characteristics discriminate among children with different patterns of development. The sample included 196 children who participated in a longitudinal study of the Infant Health and Development Program (IHDP). Children in the IHDP study were randomly assigned to either an intervention or a follow-up only group, and the intervention was comprised of three primary components: home visits, attendance at child development centers, and parent group meetings. The analysis plan for this study included the use of hierarchical cluster analysis to identify groups of children who demonstrate different patterns of development of behavior problems from age 3 to 8 years.

Children's total behavior problem *T* scores on the Child Behavior Checklist (Achenbach, 1991) at ages 3, 5, and 8 years were used as the criterion variables in the cluster analysis.

Next, a discriminative analysis was performed to determine whether clusters of children characterized by similar patterns of changes in behavior scores from ages 3 to 8 could be distinguished on the basis of child (neonatal health, temperament), family (maternal warmth and use of discipline at age 3, harsh discipline at age 8), neighborhood, and intervention characteristics (intervention or follow-up only group). Through cluster analysis, seven different patterns of development were identified. One cluster included children whose scores were consistently good throughout early childhood, and one cluster included children whose scores were consistently poor from ages 3 to 8. Two groups included children whose scores improved throughout childhood, while another two groups included children whose scores worsened. Another group of children had scores that were initially high, dropped to average, and then were quite high again by age 8.

The results from the discriminative analysis show that difficult temperament and harsh parenting combined to discriminate between the seven groups of children. Children whose behavior was either worsening or was consistently problematic tended to have parents whose styles were harsh and who rated their children as temperamentally difficult, while the opposite was true for children whose behavior was consistently good or improving. The findings suggest that the behavioral development of these at-risk children is varied and not always problematic, and that both child and parent characteristics impact the path of development.

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Evaluation Processes for a Behavior Disorder Prevention Program: A Community-Based, Family Focused Preschool Program

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PRESENTER: Mary R. Talen

Mental health prevention programs with preschool children are still in their early stages of development even though there is a significant rise of psychosocial disorders in 3- to 5-year-old children (Conduct Problems Prevention Research Group, 1999a, 1999b; Cowen, Hightower, Pedro-Carroll, & Work, 1996; Lavigne et al., 1998; Miller, 1998; Speltz, DeKlyen, & Greenberg, 1999). Recent research also suggests that early intervention is an important ingredient in preventing or decreasing the high prevalence of aggressive behaviors, depression, and anxiety disorders in young children and adolescents (Conduct Problems Prevention Research Group, 1999a; Lavigne et. al., 1998; Webster-Stratton, 1998).

Few prevention programs specifically target preschool children. The Parent's Early Childhood Education/ Positive Action Choices Training (PECE-PACT) was designed as a culturally responsive and multilevel program to prevent behavior disorders in young children by building a community of cooperation between parents, children, and teachers. This program consists of 10 weeks of (a) intensive classroom training for children, (b) modeling and training for preschool teachers, and (c) a 10-week evening training session for parents. The curriculum incorporated materials from empirically validated prevention and established intervention programs (Eyberg & Boggs, 1998; Shure, 1992; Webster-Stratton, 1998).

This research design was a pre–post comparison group design. The participants in the study were (n = 86) 3-to 5-year-old children enrolled in a full-time Head Start program. There were five classrooms selected at random. The majority of the children were African American, and 47% of the children were boys. The parents (n = 32) in the treatment groups and control group (n = 9) completed pre and post evaluations on the Child Behavior Checklist 4-18 (CBCL; Achenbach, 1991) and the Parenting Stress Index (PSI)—Parent Domain. The teachers completed the CBCL Caregiver form (2-5)—intervention group (n = 72) and control group (N = 14). The parents and children were assessed on the revised Marschak Interaction Method (MIM; Jernberg, 1991) before and after the 10-week program.

Based on the teacher ratings, children in the treatment groups made significant changes on four of the CBCL subscales: (a) anxious-depressed, (b) somatic, (c) immature, and (d) aggressive behaviors. The control group did not show significant differences between the pre and post measures. The parents reported changes in their children's behavior on six of the subscales: withdrawn, anxious-depressed, social problems, attention problems, aggressive behavior, externalizing. There were no significant differences between the treatment and control group. The PSI showed no significant changes in the treatment or control group.

The parent–child interactions were measured with six standard tasks based on attachment and the MIM concepts. A test of marginal homogeneity supported significant differences in parent–child interactions in the areas of structure and challenge. On the postprogram evaluations, parents reported improvement in listening, providing structure, understanding development, and playfulness. They did not report significant changes in nurturing and involvement.

In summary, this program demonstrated promising results in the improvement of preschool children's anxious and aggressive behaviors and the quality of parent–child relationships. Future studies using follow-up measures, evaluation of the MIM-R psychometric properties, and a larger comparison group would improve the evaluation of this program.

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Understanding Parents' and Teachers' Respective Perceptions of Behavioral Problems in Preschool Children

Joshua S. Smith

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Preschool students at risk for emotional and behavioral disorders (EBD) often experience a myriad of problems both in and out of school. Once established, EBD are relatively stable, persisting into adolescence and adulthood (Patterson, DeBaryshe, & Ramsey, 1989; Pierce, Ewing, & Campbell, 1999). In general, interventions at all levels have shown relative short-term success in either home or school, but few have demonstrated long-term positive effects across domains (Kazdin, 1987; Reid, 1993; Webster-Stratton, 1993). One explanation for the lack of sustained intervention effects is that parents and teachers may perceive the problem differently (Loeber, Green, & Lahey, 1990).

The purpose of this research was to examine the nature of the similarities and differences in parents' and teachers' perceptions of preschool children exhibiting behavior problems. Specifically under investigation was the extent to which parents' and teachers' respective perceptions were similar or different in four areas including the (a) causes of the behavior, (b) severity of behavior, (c) best solutions, and (e) quality of communication.

This study was conducted at a Head Start program in a medium-sized city in the Northeast. Five female teachers and five female parents/caregivers were interviewed for the study. Semistructured interviews were held at the Head Start Center. The interview followed a predetermined set of questions, but spontaneous follow-up questions to probe, clarify, and interpret information were utilized throughout. Each interview was transcribed verbatim into a Microsoft Word document in preparation for the thematic analysis (Aronson, 1994; Miles & Huberman, 1994). A within-case analysis provided for a thorough examination of the particularly cogent aspects of each participant's perspectives on the issues in the interview. The cross-case analysis provided for comparisons both by dyad and across all parents and teachers in the study.

Around the issue of causes of behavior, participants presented several unique perceptions, and in only one case were the parent and teacher recorded as being in agreement. Three parents and three teachers cited the child's environment as a major causal factor of their behavioral problems. In terms of the severity of the behavior, more disagreement than agreement was recorded. In only one case were the parent and teacher recorded as being in agreement, and in three of the dyads, disagreement was reported. For the third research question, parents and teachers applied a multitude of strategies or solutions to address behavior problems. Four of the dyads were classified as being equivocal on the issue, and the remaining dyad presented strategies that were clearly in disagreement. The results of the final research question showed that four out of the five dyads were communicating frequently about the child and his development, even though the dyads were not in complete agreement on all aspects of the communication. Three

of the parents felt that much of their communication was about behavior, while teachers described their communication as including behavior, but not as the primary reason.

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Inclusion of Children With Emotional or Behavioral Challenges in Child-Care Settings: An Observational Study

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The observational study reported here is part of a 5-year project funded by the National Institute on Disability and Rehabilitation Research (NIDRR; H133B990025), focused on identifying, describing, and analyzing key features of a selected group of model child care programs. The inclusive programs meet children's needs for a nurturing, developmentally appropriate setting, and family needs for quality child care for children with emotional or behavioral challenges (Child Care Bureau, 1997; Emlen, 1997; Harvey, 1998; Rosenzweig, Brennan, & Ogilvie, in press; Rafferty & Boettcher, 2000; Warfield & Hauser-Cram, 1996).

Observations focused on three research questions: (a) What are the ways in which caregivers work toward inclusion of the child in activities and in social interactions? (b) Do child-to-child interactions give evidence of inclusion? (c) In what ways is the child supported by center staff during transition periods? A total of 25 target children were observed for this study—5 from each of five child care centers selected for their inclusion of children with identified emotional or behavioral challenges. Children observed were of varied ethnicities including African American, Asian American, European American, Native American, and Mexican American, and faced such challenges as ADHD, depression, and attachment disorders.

Each child was observed in natural settings by two researchers in the same 1-hour block. Observational blocks were selected so that each involved times of transition (e.g., lunch periods, going out to or coming in from play, or leaving the care center for school). All activities, behaviors, and conversations involving the child targeted for observation were recorded by hand. Qualitative data were coded for major themes and subthemes by three independent coders.

Analyses of observation narratives revealed comparable inclusion of children with challenges and children with typical development in center activities and social interactions. Environments and routines were set up to encourage cooperation and self-regulation. Staff built upon strong relationships with individual children and anticipated social and emotional challenges. Peers were taught to respond appropriately to challenging behavior and to the special needs of their classmates. Mental health service provision was integrated into classroom activities. Building on opportunities structured by teachers, children accepted differences in their peers with challenges and included them in activities and friendships. Staff used predictable schedules, multiple developmentally appropriate cues, and physical calming techniques to ease children with challenges through transitions. Multiple staff members with well rehearsed roles worked to facilitate transition times.

The study has demonstrated that staff members of child care centers are able to structure environments and social interactions that successfully include children with emotional or behavioral challenges. Using developmentally appropriate practice as a basis, staff employed techniques that addressed individual children's needs, permitting their retention. Specialized resources observed in these centers such as on-site mental health providers (Cohen & Kaufmann, 2000; Donahue, Falk, & Provet, 2000) and therapeutic equipment, coupled with low child-staff ratios may be crucial for successful inclusion (Irwin, Lero, & Brophy, 2000). Funding should be augmented to subsidize the supports that providers require to serve the needs of these children and their families, who frequently have been excluded from child care centers.

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Community Innovation in Family–Teacher Collaboration: A Training Curriculum Addressing the Mental Health Needs of Young Children

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Project SUCCEED in Head Start (Supporting and Understanding Challenging Children's Emotional and Educational Needs) is a 4-year (1998–2002) research and demonstration project funded through the U.S. Department of Education, Office of Special Education Programs. A university-based research center and a countywide Head Start program collaborate on the project.

Project goals include (a) increase family and teachers' skills and confidence in helping children with challenging behaviors; (b) reduce family and teachers' stress; (c) improve the home and classroom environment; (d) reduce problem behaviors of children and increase their social, cognitive, and emotional competence; (e) decrease the incidence of kindergarten failure; and (f) increase families' empowerment and advocacy skills. A key component is the development and implementation of a training curriculum that addresses social and emotional development and strategies for addressing challenging behaviors at home and in the classroom. Family members and Head Start staff are involved with all phases of the project and have central roles serving as curriculum developers, reviewers, and trainers. The curriculum was developed through a joint parent and teacher workgroup, and is implemented by and for groups of parents and teachers.

For the final program year, 100% of participants ($N = 35$) indicated that the training met their needs as a parent or teacher "well" or "very well," while 91% responded "well" or "very well" when asked how well the program helped in dealing with children's challenging behaviors.

For the evaluation, a total of 136 preintervention family interviews were completed (82 intervention and 54 comparison); 65 %were conducted in Spanish. Pre and post intervention data were collected using the following measures: the Early Childhood Environment Rating Scale (ECERS; Harms & Clifford, 1980); the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1998; parents and teachers); the Preschool and Kindergarten Behavior Scales (Merrell, 1994; parents only); the Caregiver-Teacher Report Form (CTRF; Achenbach, 1991; teachers only); and a general measure of teaching stress. Other parent measures included the Family Support Scale (Dunst, Trivette, & Deal, 1998), a component of the Family Empowerment Scale (Koren, DeChillo, & Friesen, 1992), and the Parenting Stress Index (Abidin, 1995).

Analysis of baseline DECA data revealed that many parents rated their children's development and behavior in the clinically significant or "Concern" range (Self-Control = 21.6 %, Attachment = 32.8%, Initiative = 22.4%, Behavior Concerns = 61.2%). Teachers, however, generally reported lower frequency of "Concern" scores (Self-Control = 13.3%, Attachment = 20%, Initiative = 23.0%, Behavior Concerns = 20.0%).

Only teacher data were available for posttest analysis at the time of this presentation. DECA Behavior Concern ratings for children in the intervention classrooms improved (decreased) over the year (*ns*) and increased ($p < .05$) in the comparison classrooms. Teacher stress related to challenging behaviors remained fairly stable from pretest to posttest for the comparison group, while intervention teachers' scores decreased.

This review of Project SUCCEED suggests that the program model can be successfully implemented and that families' and teachers' collaboration in curriculum review and training is both feasible and valuable. Preliminary findings suggest important positive changes associated with the intervention.

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Psychological Correlates of Relational Aggression in Preschool Children

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(Summary not available)

Head Start Children at Risk for Emotional Behavioral Disorders: An Examination of Personal and Programmatic Characteristics

Kevin P. Quinn, Dana Abbott

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(Summary not available)

Providing Intensive Behavioral Support to Young Children in Child Care at Risk for Expulsion

Deborah F. Perry

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(Summary not available)

Child Care

Child-Care Program Directors' Level of Knowledge About Asthma and Factors Associated With Knowledge

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PRESENTERS: Young J. Juhn

The purpose of this study was to assess child-care directors' level of asthma knowledge and factors associated with greater knowledge about asthma. Although parents' knowledge of asthma has been assessed in previous studies, asthmatic children spend a significant amount of time in child-care programs, and little is known about child-care program directors' knowledge about asthma and what factors influence directors' level of knowledge about asthma.

A telephone interview was conducted with directors of a randomly selected sample of all licensed child-care centers and group day-care homes in Connecticut. We evaluated directors' knowledge about asthma using a questionnaire formulated from the Knowledge, Attitude, and Self-Efficacy Asthma Questionnaire (Wigal et al., 1993) and obtained information about characteristics of the directors and their child care programs.

Of the 115 directors contacted, 100 (87%) agreed to be interviewed. Ninety-five percent of directors were willing to admit asthmatic children to their centers, and their mean score on the questionnaire was 75.5 ± 5.7 (*SD*). Based on bivariate analyses, factors associated with directors' higher levels of knowledge about asthma included shorter tenure as a director ($r = -0.25$, $p < 0.02$), and directing a program that received child-care assistance funds from the state (77.6 ± 5.7 vs. 74.9 ± 5.6, $p < 0.03$). The multivariate model indicated that directors' duration of tenure was the only factor associated with a higher level of knowledge about asthma: Directors with shorter tenure were more likely to have higher levels of knowledge about asthma [β(regression coefficient) = -0.23; 95% CI: -0.41 to -0.04; $p < 0.03$].

Results indicate that directors of most child-care programs were willing to admit asthmatic children to their programs, but their knowledge about asthma needs to be improved. Directors who have served for long periods of time may be a target group for additional education about asthma.

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Quality of Child Care: A Comparison Between Subsidized and Unsubsidized Centers

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The purpose of this study was to examine the quality of child care in subsidized and unsubsidized center settings in Lancaster County. Based on financial need, families are eligible for child-care subsidies as long as they are working or attending educational/training courses (Ross, 1998). Child care subsidy is designed to help families become more self-sufficient. However, the quality of subsidized care has yet to be examined (Raikes, 1998).

The sample included 19 subsidized programs and 15 unsubsidized programs, all licensed by the Nebraska State Department of Health and Human Services (DHHS). Program quality was assessed using the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 1998). Descriptive statistics and a chi-square analysis were used to determine whether subsidized care is different from unsubsidized care.

A 13-item follow-up survey was sent to all participating directors with questions regarding profit status, community resources used by the program, subsidy, teacher salary, and teacher education to obtain more information about each center. Descriptive statistics and a one-way ANOVA were used to determine differences between the groups regarding types of care. A Pearson Correlation was used to determine the relationship between teacher salary and quality as it relates to subsidy status.

The overall ECERS-R scores ranged from 1.78 (just above Inadequate) to 6.33 (just below Excellent). The mean overall ECERS-R score for all centers regardless of subsidy status was 3.7 (between Minimal and Good). Results from a one-way ANOVA indicated that the overall ECERS-R score between groups was significant, $F(1,32) = 4.6$, $p < .05$, with the Unsubsidized group rating higher. A comparison between the groups showed that Unsubsidized centers rated higher than Subsidized centers on all seven subscales and significantly higher on Language-Reasoning, Activities, and Interactions. Results of the director's survey showed that Unsubsidized centers had higher educated teachers and were paid more. A chi-square analysis indicated that teacher education was significantly ($\chi^2 = 11.8$, df, 2, $p < .01$) associated with quality and subsidy status. The salary for full-time teachers averaged $8.20 per hour for the Unsubsidized group and $7.57 per hour for the Subsidized group. Results of a Pearson Correlation showed that teacher salary was significantly associated ($p < .05$) with both subsidy status (.36) and overall quality (.47).

The results from this study indicate that children receiving child-care subsidies are not being cared for in settings that could potentially enhance their development, with some centers rating just about a 1 (Inadequate), which on the ECERS-R does not meet basic needs. Theoretically, children in these environments would be unable to develop along a smooth continuum in the self-actualization process (Maslow, 1970).

This research adds support to the argument that more research needs to be done on the quality of the environments in which children from low-income, and in particular, children receiving government subsidies, are being cared for. We hope the results from this study can be beneficial to policy makers, families, and children, in the pursuit of understanding child-care issues within our community.

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Helping Child Care and Head Start Teachers to Implement Mathematics Standards: Evaluation of a Math Enhancement Initiative

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PRESENTERS: Edna Neal Collins, Edith L. Skipper

A mathematics enhancement initiative carried out by UNC Wilmington and New County Smart Start was evaluated. Little previous research has explored effective ways to encourage child-care and Head Start teachers to increase mathematics learning opportunities. This training was designed for teachers who may lack the knowledge to apply mathematics standards (NCTM, 2000) appropriately and may use approaches that are either too haphazard or too teacher-directed to maximize preschool children's learning.

To respond to the needs of teachers at early stages of professional development (Katz, 1977; Vander Ven, 1988), training revolved around on-site demonstration of mathematics activities that are easy to implement, highly engaging, and connected to state and national curriculum standards. Participants were 38 teachers of 3- to 5-year-olds from 18 child-care and Head Start facilities. Teachers in 17 classrooms from 8 child-care and Head Start facilities constituted the comparison group. Comparison classrooms had recently chosen to be assessed with the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 1998) as part of North Carolina's rated licensing system.

Participating classrooms, some of which had also been assessed for rated licenses, received six visits including activity demonstrations from a consultant during 1 academic year. Three related workshops were offered. A box of manipulatives circulated among classrooms, including take-home packs to increase home–school connections (Kokoski & Downing-Leffler, 1995). Smart Start provided $50 for each participating classroom to purchase materials.

To assess mathematics materials before and after the project, observers completed a nine-item checklist based on the Math/number item of the ECERS-R, and teachers completed a 27-item self-assessment indicating how often they offered selected activities related to the NCTM (2000) standards. Mean pretest and posttest scores on the materials checklist were 4.3 and 6.4 for participants ($n = 37$), versus 6.5 and 5.7 for the comparison group ($n = 17$). Mean pretest and posttest scores on the teacher self-assessment (possible range 27–108) were 75.7 and 81.2 for participants ($n = 25$), versus 85.4 and 83.5 for the comparison group ($n = 11$).

Paired samples t-tests indicated significant differences between pre and posttest scores on the materials checklist for both participating, $t = -9.22$, $p < .001$, and comparison, $t = 2.87$, $p < .05$, classrooms. Note that participants' mean score increased, whereas the comparison group mean declined. Differences between pre and posttest scores on the teacher self-assessment approached statistical significance for participants only ($t = -1.88$, $p = .07$). A repeated measures ANOVA indicated that the amount of change made by the two groups on the materials checklist differed significantly, $F(1,52) = 56.82$, $p < .001$, but no such difference was found for activities self-assessment scores.

Results indicate that the project helped teachers to make more appropriate math materials available. The decline in materials scores for comparison classrooms suggests that they did not maintain the improvements they probably made in preparation for rated license assessment.

Although improvements in activities self-assessment scores were not statistically significant, the average amount of improvement made by participants may have been meaningful to children. For example, an increase of 5 points on this measure might mean that a teacher began offering five new mathematics activities occasionally. However, results suggest that improvements in the mathematics materials available in classrooms do not guarantee improvements in the way they are used.

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Parent–Teacher Communication in a Culturally Diverse Early Childhood Setting

So-Young Sung

PRESENTER: So-Young Sung

The purpose of this study was to examine ways teachers and parents communicate during transition times (i.e., during drop-off and pick-up periods) at a culturally diverse preschool. The study explores how this communication affects parent–teacher relationships, and whether it promotes mutual cultural understanding.

Much research has looked at parent–teacher relationships and parental involvement in early childhood, but little research has looked at daily communication in multicultural settings. Parent–teacher communication, an essential component of parent–teacher partnerships, affects the quality of programs in early childhood education (Ghazvini & Readdick, 1994). Across cultural research (e.g., Gable & Cole, 2000; Tudge et al., 1999) shows that parents from various cultural groups have differing notions about their relationship and role with respect to teachers in early childhood settings.

This research was conducted at a parent-cooperative preschool located in a university town in the Midwest where I was working as a teaching assistant. The children at the preschool were all temporary residents representing a range of culturally diverse backgrounds. Fieldwork was conducted over 12 weeks. The main research participants were 2 European American teachers and 9 parents (1 Chinese, 1 Indian, 5 Korean, 1 Taiwanese, and 1 Turkish). I used standard participant observation methods and semistructured interviews for data collection. Parent–teacher communication and interviews were tape-recorded. The interviews were transcribed and translated into English. Analyses focused on how different people make sense of their experience from the perspective of a participant (Erickson, 1986).

At transition times, teachers communicate with parents about child behavior, child development, and school activities. In addition, teachers talk with parents about other subjects such as family's daily life and culture. Through daily communication, teachers understand different cultural practices in childrearing, and parents from other cultures understand how American parents raise their children; parents then try to achieve a balance between their own childrearing and American methods and values. This exchange of information helps parents and teachers form close relationships with each other.

Daily communication is heavily influenced by parents' language ability and personality. One potentially important finding was the difference between parents' expectations of the school, and the school's actual curriculum. This disparity could result in an area of potential conflict between teachers and parents. Teachers' experiences with various cultures, their respect for other cultures, and their sense of humor are important elements for building good relationships with parents. Because of parents' and teachers' differing cultural habits and values, they may unconsciously make mistakes with each other; therefore, such sharing is important. Sometimes such sharing is achieved through a trust relationship and open mindedness.

As facilitators of parent–teacher communication, teachers and directors should create strategies such as adjusting daily schedules for parent–teacher communication and using parents as a resource for understanding different cultures. Understanding and balancing teachers' and parents' perspectives will create ideas about what is best for a child and what are desirable teacher–parent relationships (Powell, in press). Multicultural education should be flexible in its approach and reflect the setting in which it takes place.

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Lessons Learned From 30 Years of Child-Care Policymaking

Sally S. Cohen

PRESENTER: Sally S. Cohen

This multicase comparative study analyzes the politics of child-care policymaking over the past 3 decades (Cohen, 2001). In studying three major episodes in child-care policymaking (1971, 1990, and 1996) and their aftermath, this study identifies the political forces that have shaped current policies. In 1971, President Nixon vetoed comprehensive universal child-care legislation. In 1990, President Bush enacted landmark child-care provisions. In 1996, under President Clinton, important changes in child-care policymaking were enacted as part of welfare reform legislation.

This study answers three research questions: (a) Why did child-care legislation take the course it did at each of the critical junctures and the intervening years? (b) How did institutional structures interact to influence child-care policy outcomes? (c) What do the politics of child-care legislation over the past 30 years suggest for the future?

The research uses Baumgartner and Jones's (1993) model of punctuated equilibrium, which describes how structural shifts within political institutions and changing definitions of the policy problem create periods of a "relative stability" and then periods of a "rapid change." The latter create new structures to guide subsequent policymaking efforts.

The research for this study included 114 semistructured interviews with legislative and executive branch officials, representatives from organized interests, and researchers involved with child-care policymaking since 1971. Purposive and snowball sampling were used. In addition to the interviews, the researcher reviewed all federal government documents on child care since 1971. Archival research was conducted at the Department of Health and Human Services, the National Archives and Records Administration, and the Minnesota Historical Society. All interview transcriptions and other documents were content analyzed for key themes related to the study questions. Validity was ensured by having several key informants review the analysis of the data and by discussing the results with well-informed experts.

The findings from this study show how interactions among American political institutions (Congress and the executive branch) and organized interests have influenced the outcomes of child-care policymaking. The results identify legacies that have influenced current child-care policies. These include a reliance on the Child Care and Development Block Grant, an emphasis on parental choice, and a reluctance to accept federal child-care standards. The findings also debunk common myths about child-care policymaking. For example, significant advances in child-care policies occurred under divided government (different parties in control of the legislative and executive branches of government) and with Republicans in control of Congress or the White House. This is primarily because of child-care advocates' success in framing child care as a solution to other policy problems, thereby facilitating bipartisan consensus. Moreover, this research depicts the minimal or inconsistent involvement of many women's groups in child-care policymaking.

The results of this research can be used to enhance the ability of child-care advocates to develop effective strategies for improving future child-care public policies, especially in terms of defining the problem and widening the array of involved organized interests.

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Parental Views of Children's Longitudinal School Success in Relation to Early Child-Care Experiences

Ellen S. Peisner-Feinberg, Noreen Yazejian

PRESENTER: Ellen S. Peisner-Feinberg

This poster describes findings from a follow-up study of the Cost, Quality, and Child Outcomes in Child Care Centers Study. In the initial 1993 study, 828 children in child-care centers in four states were followed from age 3 through second grade to examine the relations between preschool child-care quality and children's development (Cost, Quality & Outcomes Study Team, 1995; Peisner-Feinberg et al., 1999). The present study examines parent survey data on these children through the end of elementary school to study longer-term indicators of school success.

The sample for this follow-up study included 339 children and families, representing children from most of the original centers (128 of 176) and classrooms (150 of 183) included in the longitudinal outcomes component. At the time of data collection, most children had completed sixth grade, so we were able to gather data about the entire elementary school years.

The present analyses include two aspects of child-care quality from children's 3-year-old year: classroom practices and teacher–child relationships. The quality of classroom practices was measured using three observational measures: (a) the Early Childhood Environment Rating Scale (Harms & Clifford, 1980), (b) the Caregiver Interaction Scale (Arnett, 1989), and (c) the Adult Involvement Scale (Howes & Stewart, 1987). The quality of teacher–child relationships was measured with the closeness factor of the Student–Teacher Relationship Scale (Pianta, 1992).

The surveys asked parents to provide updated demographic information and ratings of children's adjustment to school and school performance. As seen in Table 1, most parents reported their children's school adjustment and performance as generally positive. However, inferential analyses revealed significant relations of child-care quality with parent perceptions of the overall direction children are headed and longitudinal school adjustment, with maternal education serving as a moderator. For example, among children whose mothers had a high school education, the log-odds of having a 'very positive' overall direction was 4.8 times more likely for children in good quality classrooms than children in poor quality classrooms, while there was little difference for children whose mothers had a college education. Similarly, among children whose mothers had a high school education, children's school adjustment scores were substantially lower for children who experienced low-quality preschool child care than children in good quality care, while there was little difference for children with college educated mothers.

Table 1. Parental Report of Children's School Performance

Parent Report Variables	*M*	*SD*	Min	Max
Overall School Adjustment[a]	7.74	1.54	2.63	10.00
Overall Direction Child Headed	Percent		Number	
Very positive	69		234	
Somewhat positive	26		87	
Somewhat negative	5		17	
Very negative	0		1	
Parental Expectations for Child Education				
Less than bachelor's	11		38	
Bachelor's degree	57		193	
Master's or doctorate	32		108	

Table 1 continued

Overall School Performance	Percent	Number
Excellent (As)	44	149
Above average (Bs)	37	126
Average (Cs)	15	52
Below average (Ds)	4	12
Unsatisfactory (Fs)	0	0
Identified as Gifted	35	120
Retained in Grade	5	18
Referred for Special Services: Academic	14	49
Referred for Special Services: Behavioral	6	19
Suspended or Expelled	10	33
Current IEP	13	43

[a]*School adjustment data were also gathered in kindergarten, first, and second grade.*

The findings reported here offer evidence that child-care quality continues to predict children's development and school success throughout elementary school, especially for children at greater risk. These results, combined with findings from previous study phases (Peisner-Feinberg et al., 2001), provide support for the importance of high-quality preschool experiences not only for promoting school readiness, but also for ensuring positive developmental trajectories throughout elementary school, especially for children at greater risk.

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Entry Into Child Care: The Influence of Family Economy, Demographics, and Parenting Beliefs on Timing and Type of Care

Anne Wolf

PRESENTER: Anne Wolf

This project examines how families vary in their decisions about the timing (age at entry) and type (center, relative, family day care) of children's initial child care arrangements. Data were collected as part of the NICHD Study of Early Child Care (NICHD, 1994). The sample includes 1,342 families recruited in 1991 from 24 hospitals in 10 sites around the country at the time of the child's birth. Parent, child, and child care data were collected through surveys and observations as often as every 3 months until children were 3 years old. Although not nationally representative, the sample is ethnically and socioeconomically diverse. Using competing-risks, discrete-time survival analysis (Singer & Willett, 1991), this study examines (a) whether and when children begin nonparental care for the first time, (b) what is the likelihood of entering different types of care when first beginning child care, and (c) how family characteristics (e.g., economy, social class, ethnicity, parenting, and work attitudes) affect the timing and type of children's initial arrangements.

Results from this study indicate that 50% of children enter child care for at least 10 hours/week by 4 months old. By 36 months old, 81% of children have begun child care. Coinciding with the end of maternity leave before the Family and Medical Leave Act, children are most likely to begin child care at 2 months old. Among children not already in child care before 2 months old, 25% begin at this time: 10% begin family day care, 8% begin relative care, 4.4% begin center care, and 2.5% begin sitter/nanny care. After this peak at 2 months, the likelihood of beginning child care for the first time tends to decline over time. By 7 months old, only 3.7% of children not already in care begin child care; this percentage declines to 1.7% by 36 months. This decline after 7 months is not apparent for center care.

The likelihood and timing of entry into child care of different types varies depending on family characteristics. Regardless of type, the effects of economic factors are pronounced. The odds that mothers who worked before birth begin using child care at birth are 4.6 times the odds for mothers who did not work ($p < .001$); this differential declines over time ($p < .001$). Mothers with higher incomes before birth are more likely to use child care and do so earlier than those with lower incomes; however, mothers with the highest prebirth incomes are an exception to this trend and begin using child care later, if at all ($p < .001$). Demographic factors, other than two-parent/single-parent status, tend to have varied effects depending on what type of care children begin. Regardless of type, single parents are more likely to use child care and do so earlier ($p < .001$). However, the effects of race/ethnicity, maternal education, and maternal age at first birth, are only apparent among children entering relative care for the first time. Alternatively, maternal work attitudes affect the likelihood and timing of entry only for children who first begin family day care or center care. Details of these findings and their implications for researchers and policymakers are discussed.

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Self-Care Among Young Children: Variations by Family and Child Characteristics

Kathryn Tout, Sharon Vandivere, Martha Zaslow, Jeffrey Capizzano

PRESENTERS: Kathryn Tout, Sharon Vandivere, Martha Zaslow

The way children spend their time when they are not in school concerns families, communities, and policymakers (Larner, Zippiroli, & Behrman, 1999). Children who spend time alone or unsupervised by adults miss opportunities to participate in organized activities and it may increase their risk of accidents and injuries. Understanding the circumstances surrounding the use of self-care can enhance the development of programs and policies aimed at providing supervised and structured after-school options for children and families. Recent data from a nationally representative household survey was used to examine how various characteristics of families and children—including parental time, family resources, perceptions of risk, and children's maturity—are related to school-aged children's participation in unsupervised self-care. Specifically, we conducted separate logistic regression analyses to investigate the predictors of self-care for young school-aged children (ages 6 to 9) and for children from low-income families (with incomes below 200% of the federal poverty level), as these groups have been identified as more at-risk for potential harmful effects of self-care (Vandell & Shumow, 1999).

Data for the analyses are from the 1999 National Survey of America's Families (NSAF), a survey of approximately 42,000 households. Parents answered questions about 6- to 12-year-olds' care arrangements, including self-care, defined as a child regularly spending time alone each week or with a sibling younger than 13. Parents also provided information about the child's health, school engagement, and behavior problems, as well as their own mental health and perceptions of parenting stress.

Nationally, 15 % of 6- to 12-year-olds regularly spent time in self-care in 1999. Older children were significantly more likely to spend time alone than were younger children (7 % of 6- to 9-year-olds compared to 26 % of 9- to 12-year-olds). Self-care was also more prevalent among families with higher-incomes (17 %) than families with low-incomes (12 %).

The results of the logistic regression analyses indicate that a child's age is the strongest predictor of the use of self-care. Beyond age, we found that characteristics across the domains examined were associated with the propensity to use self-care. Differing patterns of predictors were not obvious among the subgroups of children examined. Some exceptions are that several factors predicted self-care for older children but not for younger children including (a) having a single parent, (b) the absence of additional adults in the household, (c) being the only child under 13, (d) being White (compared to being Latino), and (e) not having any supervised care arrangement. In contrast, younger children who had teenage siblings or who did not have a limiting health condition were more likely to participate in self-care, but this was not true for older children. Comparing the income subgroups, having teenage siblings was associated with self-care for higher-income children, while having a parent who reports symptoms of poor mental health was associated with self-care for younger children.

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An Oasis of Quality: Early Head Start/Head Start Child-Care Partnerships in Region VII

Helen Raikes, Lisa Knoche

PRESENTERS: Helen Raikes, Lisa Knoche

In this poster presentation, provider characteristics and observed quality of Early Head Start (EHS) or Head Start (HS) child-care partners are compared to all other child care in the states. In these partnerships, child-care providers contract to meet the Head Start Performance Standards in exchange for training, guidance, and resources from EHS/HS programs and provision of care for EHS/HS children. The Midwest Child Care Research Consortium surveyed 2,022 child-care providers by telephone following a randomized sampling design, in Region VII (Iowa, Kansas, Missouri, Nebraska). Observations of program quality were also completed in 365 of the providers' programs.

There were many significant differences between these partners and other child-care providers, demonstrating that EHS/HS partnerships seem to be offering an oasis of quality. EHS/HS child-care partners reported about twice as many training hours, were three times as likely to have completed a CDA, and were more likely to have completed a 2-year college degree. If EHS/HS partners had a degree, it was more often in child development. EHS/HS child-care partners completed more training of the following types: Heads Up, Reading, Parents as Teachers, Creative Curriculum, West Ed, High Scope, First Connections, CPR, and First Aid. Partners more often (a) viewed child care as their profession and (b) reported they had the training they needed to do their jobs right, and less often (a) reported they were in child care to help someone out or for the paycheck, and (b) reported that they would do something else if they could.

However, EHS/HS partners in centers had more negative attitudes about the materials they had to work with, about having a best friend at work, and about the recognition they had received. Partners were also more likely to participate in the USDA Food Program and to be members of professional organizations. They did not receive higher earnings; however, partners in centers were more likely to receive employee benefits.

Finally, observed quality was higher in EHS/HS partnerships than in other forms of child care in the states. Infant Toddler Environment Rating Scale (Harms, Cryer, & Clifford, 1990) quality for partners averaged 5.33 compared to 4.34 for quality in all infant–toddler, center-based settings; Early Childhood Environment Ratings Scale (Harms & Clifford, 1980) quality averaged 5.02 for HS partners versus 4.49 for all other preschool center-based programs; Family Day Care Rating Scale (Harms & Clifford, 1989) quality averaged 4.78 for EHS partners versus 4.30 for other care. Differences between EHS/HS partners and other care were significant in three of the four states—the three states that have designated state or federal funds to expand EHS/HS partnerships. Implications for state and federal policies are discussed.

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Child-Care Quality: Research Findings and Policy Recommendations

Kathy R. Thornburg, Jacqueline L. Scott, Wayne Mayfield

PRESENTER: Kathy R. Thornburg

In 2001, university researchers and state program partners in four states (Missouri, Iowa, Kansas, and Nebraska) initiated the Midwest Child Care Consortium (MCCC). The focus of the work was to conduct a large longitudinal study on a range of issues associated with child-care quality and conditions. Across the four states, 2,022 child-care providers participated in the study representing infant–toddler and preschool centers; licensed centers and homes, and licensed-exempt centers; and Head Start/Early Head Start programs. In Missouri, 517 providers participated in telephone interviews. Of those, 110 providers were selected to have a researcher visit her program to conduct an on-site assessment of child-care quality. Each program was observed for 2 to 3 hours using one of the following instruments: Early Childhood Environmental Rating Scale (ECERS; Harms, Clifford, & Cryer, 1998), Family Day Care Rating Scale (FDCRS; Harms & Clifford, 1989), or Infant-Toddler Environmental Rating Scale (ITERS; Harms, Cryer, & Clifford, 1990).

Statistically significant findings in the following areas: (a) correlations between quality and child-care subsidy ratios, (b) workforce characteristics, (c) workforce benefits, (d) and comparisons between Head Start/Early Head Start and Head Start collaboration programs and non-Head Start programs were presented.

Significant negative correlations were found between the ratio of subsidized children in early childhood programs and program quality. Programs with lower ratios of subsidized children tended to have higher quality scores on the ITERS social interaction scale and the program structure scale. No difference in quality was found between subsidy and nonsubsidy preschool classrooms as measured by the ECERS.

Significant negative correlations were identified in the area of workforce characteristics. Early childhood programs with lower ratios of subsidized children tend to employ teachers who have more education, more experience (as measured by years in the field), and higher salaries. Teachers working in programs with a lower ratio of subsidized children also tend to see working in the early childhood field as a personal calling and as a career/profession.

To compare whether there was a relationship between workforce benefits and ratio of subsidized children, programs were assigned to three categories: (a) nonsubsidy programs, (b) programs with a low ratio of subsidized children (20% or fewer), and (c) those with a high ratio (more than 20%). Nonsubsidy programs are more likely to provide health insurance, paid sick leave, and retirement benefits for teachers when compared to programs that accept subsidies. High and low subsidy programs are more likely to provide paid vacation than nonsubsidy programs. High subsidy programs are also more likely to provide reduced/no tuition for teacher's children than nonsubsidy and low subsidy programs.

A comparison of Head Start and Early Head Start teachers (including programs with collaborative relationships with Head Start) and non-Head Start teachers revealed that Head Start teachers (a) have more education, (b) are more likely to have majored in child development, (c) are more likely to be trained in CPR and first aid, and (d) are more likely to pursue professional development membership in NAEYC or NAFCC.

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Tri-County Smart Start Kansas: Enhancing Child Care Quality Through Wage Enhancements

Judith Carta, Tonya Hall

PRESENTER: Judith Carta

The Tri-County Smart Start Kansas Initiative is a Kansas City project that provides increased compensation to skilled early education professionals in child-care centers in an effort to improve child-care provider retention. This initiative is a response to what is commonly referred to as the "trilemma" in achieving quality in child care; that is, (a) child-care centers cannot charge fees to adequately compensate well educated, well qualified teachers, (b) therefore, good teachers cannot be hired or do not stay in child care, and (c) as a result, the quality of child-care programs is diminished. The Tri-County Smart Start Kansas addresses this trilemma by increasing salaries of educators in centers that have received or are working toward accreditation through NAEYC or the Head Start Performance Standards. It is anticipated that as the salaries are increased, turnover will be reduced, quality of child care will improve, and there will be a measurable increase in children's readiness for school. This initiative is funded by Smart Start Kansas, a program developed by the Kansas Children's Cabinet with funds from the Master Tobacco Settlement. Funds are distributed to Kansas communities to develop comprehensive approaches to early childhood education through local partnerships that focus on improving children's school readiness. In the Kansas City area, the Tri-County Smart Start partnership, led by the United Way of Wyandotte County, provides grants and technical assistance to early education programs to enhance salaries, benefits, and the professional development of early educations.

This poster highlights the evaluation design that is comparing quality in centers receiving Smart Start funds against comparison centers in the same community that are matched in size, accreditation status, and neighborhood. Changes in factors that are a specific focus of the Smart Start initiative, such as rate of staff turnover, percentage of teachers with bachelors and associates degrees, and status on accreditation or Head Start Performance Standards will be measured every 6 months in both groups of centers. In addition, other quality indicators about the centers include scores on the Early Childhood Environment Rating Scale (Harms, Clifford, & Cryer, 1998), and the Arnett Scale of Caregiver Behavior (Arnett, 1989). Factors about the teachers/child-care providers expected to change, gathered through a survey every 6 months, include monthly salary, perspectives about child care as a profession, length of time in their current position, number of clock hours of training they receive, perceived obstacles to obtaining child-care training, and job satisfaction.

Finally, outcomes of children randomly selected from three age cohorts of children are also being assessed at 6-month intervals. These include measures of school readiness skills (preliteracy, vocabulary, and general knowledge) for prekindergarten-aged children and teacher ratings of general development and social behaviors for all three cohorts. In addition, parent satisfaction data are being gathered regarding specific features about their child-care centers such as convenience, and attitude and competence of the staff. We expect to see changes in quality of child care and child outcomes to coincide with reduced staff turnover brought about through enhanced wage compensation in Smart Start centers.

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Community Resources

Community, Neighborhood, And 5-Year-Olds' Readiness To Learn At School

Magdalena Janus, Cindy Walsh, Helena Viveiros, David R. Offord

PRESENTERS: Magdalena Janus, Cindy Walsh

Children's readiness to learn at school entry is a well-established predictor of their success in school and later in life. Individual characteristics (e.g., socioeconomic status, health, parental education) contribute to children's readiness to learn (Kagan, 1992). Recently, more attention is being directed toward the qualities of neighborhoods in which children develop. It is widely assumed that community and neighborhood characteristics have important influence on fostering healthy early childhood development in all domains relevant to readiness to learn (Connor & Brink, 1999). This study investigates the connection between the sociodemographic characteristics of neighborhoods and the outcomes of children's early development as measured by their school readiness in one large community.

The Early Development Instrument (EDI; Janus & Offord, 2000) was used to measure school readiness in five domains of development: (a) physical health and well-being, (b) social competence, (c) emotional maturity, (d) language and cognitive development, and (e) communication skills and general knowledge, of all 5-year-old children in the community (1,700 children, mean age 5.7 years). Population characteristics for seventeen geographical neighborhoods were retrieved from the census data. Nine variables were considered: (a) low income, (b) unemployment, (c) welfare payments, (d) mobility, (e) home ownership, (f) immigration, (g) lone parenthood, (h) ability to speak either official language, and (i) education level (Connor, 2001). In addition, information was collected locally on programs and services available to children aged 0 to 5 years and their families.

Two sets of data analyses were carried out. First, data from all three sources (EDI, census, services) were aggregated to the neighborhood level, and comparisons were made between neighborhoods scoring low on school readiness and those scoring high. Second, hierarchical linear model analyses (HLM) were applied to establish the contribution of neighborhood characteristics to school readiness.

Eleven neighborhoods were classified as having problems with school readiness because their mean scores were below the site mean for at least three domains, and/or the percentage of children scoring in the lowest 10th percentile in one or more domains was higher than 20%. These neighborhoods had higher percentages of low-income families, single parent families, and families who moved within the previous year, but tended to have more services. The two variables that showed consistent correlations with the five EDI scales were the percentages of low-income families and those who moved recently—the higher these percentages, the lower the school-readiness scores.

Using individual level data for children, their neighborhood characteristics, and based on beta-coefficients in HLM analysis, the three neighborhood characteristics that significantly

contributed to children's lower school readiness were (a) low ability to speak either official language (all five domains), (b) low percentage of adults with high school education (four domains), and (c) low income (three domains). The service characteristics did not show a significant contribution in the models.

It appears, therefore, that there is a meaningful association between children's school readiness and the sociodemographic aspects of the neighborhoods in which they live. This indicates that addressing needs of whole populations in neighborhoods may be a worthwhile endeavor in improving children's school readiness.

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Working Together to Create an Ecologically Valid Measure of Neighborhood Risks and Resources

Eric A. Bermann, Sandra A. Graham-Bermann, Mary Cunningham DeLuca, Kristen Klug

PRESENTERS: Eric A. Bermann, Mary Cunningham DeLuca

For each of the past 4 years a number of shootings have been reported at or near Head Start schools in Jackson, Michigan—a city of 35,000 persons. Indeed, the safety of neighborhoods has long been a concern of the Community Action Agency's Head Start program (Region II Community Action Agency, 1997). When a university–Head Start community collaboration was developed in 1997 to investigate the role of multiple forms of violence in the lives of preschoolers (Graham-Bermann, Bermann, & Huesmann, 2000–2002) exposure to community-level violence was deemed key. Building on the prior efforts of others (Garbarino & Sherman, 1980; Coulton, Korbin, Su, & Chow, 1995; Coulton, Korbin, & Su, 1996; Richters & Martinez, 1993), we sought to extend their work to our preschool population. Since our collaboration sought not only to enhance the validity of existing measures, but also to create procedures and measures inclusive of the values and concerns of the local community and population with which we were engaged, we wished to achieve these ends with the full cooperation and engagement of our study informants.

We began by conducting a series of focus groups with different sets of research informants. We met separately with sets of parents, Head Start Teachers, Head Start Family Service Workers, and Head Start Bus Drivers, developing with each their conceptions of those factors they believed constituted "neighborhoods" (their own and others). The discussions were open, free form, and far ranging, including talk of racism, stereotyping, redlining, as well as more standard foci such as neighborhood safety, resources, cohesion, disorder, and so forth. Each group then generated a set of questionnaire items designed to tap the latter variables, which we subsequently amalgamated by selecting for inclusion items commonly shared across groups. In this way, informants felt themselves to be full coinvestigators. Each completed essentially parallel forms for the preschool children in the study—the parents, teachers, and family service workers

doing so for specified target children, the bus drivers for each of the self-demarcated neighborhoods through which they drove to pick up and drop off the Head Start children.

In addition to the foregoing, we created a modified version of the Violence Exposure Measure (Shahinfar, Fox, & Leavitt, 1996) designed for preschool-age children. This cartoon format procedure asks children about what kinds of violence they might have witnessed or experienced as victims. Finally, we obtained 1997–1999 crime data for each crime reporting area from the Jackson police–sheriff departments, as well as census data for Jackson by census tract–block group. These data allowed us to cross-validate the measures of neighborhood quality provided by parents, teachers, family service workers, and bus drivers and to compare Head Start children's reports of their exposure to community violence with that of the crime data.

This poster presents an array of tables containing the major results of this study. Included are the relationships between variables of neighborhood quality for each set of informants, as well as between sets of informants, and of the interrelationships between the various indices of neighborhood quality, informant group, census data, and crime statistics.

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Future Directions: Community Integration and Health Promotion in Early Childhood Settings—Measuring Effectiveness

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This poster presents an opportunity to discuss the challenges, attributes, and possibilities for evaluation from two projects in Australia that focus on enhancing social capital and well-being through early childhood services: (a) Child Care and Family Support Hubs and (b) the Health Promotion In Early Childhood Settings project.

The aim of the Health Promotion In Early Childhood Settings project was to determine the applicability and usefulness of the Health Promotion process and the Health Promoting Framework in early childhood settings. This was done by (a) assessing the level and extent of

health promoting activities already being conducted at the setting using a range of tools; (b) supporting centers to implement a process for health promotion; (c) encouraging addressing of health issues through the areas of curriculum, teaching and learning, organization ethos and environment, and partnerships and services; and (d) monitoring progress as case studies.

Qualitative data were collected from 12 child-care centers, and evaluation was ongoing at planned intervals and when opportunities arose. Data were gathered at interviews with staff and through the review of documents such as minutes of related meetings. Health issues addressed include staff stress, provision of food, oral health, communication with parents, parenting programs for parents, and behavior management.

Analysis showed that a modified health-promoting framework for schools is an appropriate model for addressing health issues in child-care centers. Depending on the issues addressed, centers are able to involve children through the curriculum, develop links with outside organizations, and address issues of ethos, organization, and environment, such as policy development.

The aim of the ACCESS study was to evaluate the Department of Families' new integrated service initiative—the Child Care and Family Support Hubs, in terms of (a) perceptions of families and children on provision of local services, (b) identifying pathways to integration, (c) effectiveness at meeting service needs, and (d) implications for community capacity and social capital building.

Instruments have been developed to collect data from parents, children, Hub personnel, and service providers. Survey questionnaires, focus group discussions, and interviews have been piloted and will be used in a larger study in the next 3 years. They include (a) The Hub Community Survey Questionnaire (Tayler, Farrell, & Tennent, 2001) that asks about current service usage, priorities for hub services, anticipated personal benefits, and family demographics, as well as social capital (Onyx & Bullen, 1997); (b) Subjective Sense of Well Being (4-item measure; Davidson & Cotter, 1991); (c) Self-reported Health and Locus of Control (two 1-item measures; Lynch, Smith, Hillmeier, & Shaw, 2001); and (d) Sense of Community (12-item measure; Perkins, Florin, Rich, Wandersman, & Chavis, 1990). (Respondents will also be asked to rate their usage and satisfaction with current hub services and describe any positive outcomes in terms of health, care, and education associated with use of the services.) Information obtained from this study will inform the future direction of Integrated Service provision in Queensland, Australia.

From these two ongoing studies, it is clear that alternatives to health outcomes need to be evaluated when working in health promotion in the early childhood sector. Qualitative data collected will be specific for each setting and each health issue addressed. Quality early childhood services take a holistic view of children, families, and staff, and the environment in which they play, learn, and work.

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The Effects of a Community-Based Intervention to Promote Early Literacy Behaviors for Low-Income Families

Karen Peifer, Linda Perez, Mary Newman

PRESENTERS: Karen Peifer, Linda Perez

(Summary not available)

The Effects of Integrated Behavioral Services on Service Access and Utilization by Head Start Families

Amy B. Lewin, Philip Leaf, Jill G. Joseph, Jocelyn Turner-Musa, Michelle New

PRESENTERS: Amy B. Lewin, Philip Leaf, Jocelyn Turner-Musa

(Summary not available)

Intermediate Effects of Integrated Behavioral Health Services in Early Childhood Settings

Mark Christopher Edwards. Leanne Whiteside-Mansell, Carol Lee, Maggie Freese

PRESENTERS: Mark Christopher Edwards. Leanne Whiteside-Mansell, Carol Lee

(Summary not available)

Disabilities

Early Head Start and The Individuals With Disabilities Education Act, Part C

Raymond R. Arons, Marilyn Arons

PRESENTERS: Raymond R. Arons, Marilyn Arons

From 1975, Head Start and special education have parallel legislative histories, merging in 1986 in P.L. 99-457. This provided incentive grants for handicapped infants and toddlers whose primary programs and service sites were in Head Start. Comparison of Head Start (45 CFR, Parts 1301-1311) and special education services (34 CFR, Parts 303.1-670) finds them to be identical. The U.S. General Accounting Office examined this overlap in 1997 (U.S. GAO, 1997), finding "mission fragmentation" with more than 90 early childhood programs in 11 federal agencies and 20 offices.

Mathematica Policy Research, Inc. completed research for the U.S. government entitled, "Leading the Way: Characteristics and Early Experiences of Selected Early Head Start Programs" (EHSP), heralded by the Bush administration to demonstrate that 3-year-olds completing Early Head Start may need fewer special learning interventions (Mathematica Policy Research, Inc., 2002; U.S. DHHS, 2002). Simultaneously, the Honorable Robert Pasternack, a member of the President's Commission on Excellence in Special Education, addressed the Subcommittee on Education Reform on "Learning Disabilities and Early Intervention Strategies" (House Committee on Education and the Workforce, 2002). The context, therefore, of EHSP is a political climate of doing more with less, government restructuring, and reauthorization of IDEA (Individuals With Disabilities Education Act). Domains studied did not examine how many 0-2 children and families in Early Head Start received Part C services under IDEA in order to isolate the impact of Early Head Start services from those of other funding sources. In 1999-2000 this included 1.8% of the nation's infants and toddlers (Office of Special Education Programs, 2002). Absent such analysis, no conclusions can be made concerning the efficacy of Early Head Start alone.

The revolutionary work of Shonkoff and Phillips (2002) emphasized the country's highly fragmented early childhood policies and practices. Head Start, the largest of all federal early childhood programs, is the logical point of entry for all 0-2 children and families, requiring a restructured governmental agency that does not separate nature from nurture, or education from self-regulation.

A lack of demographic and socioeconomic patient aggregate data describing Early Head Start dramatically contrasts to all other federal programs funded by Health and Human Services (U.S. Department of Education, 2002). Therefore, measurement of success or failure of any program less than 5 years old and lacking publicly accessible variables is highly unlikely.

Part C is a funding stream and not a program (U.S. GAO, 2002). Venn and McCollum (2002) recently demonstrated that Head Start teachers "did not individualize their plans, but instead

focused...on the collective group of students" (p. 220). Part C integration throughout the entire Early Head Start system could remedy that problem.

Since 1975, Head Start has been the least restrictive environment, with Early Head Start offering families of young children with disabilities or developmental delays an inclusive environment (Head Start Information and Publication Center, 2001). Further examination requires analysis of Early Head Start's implementation of Part C's Individualized Family Service Plan, as well as publicly accessible data for independent studies funded by independent agencies.

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The Development and Evaluation of a Web-Based Preschool Intervention Curriculum

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PRESENTER: Heather Ann Mariger

SPIES (Strategies for Preschool Intervention in Everyday Settings) for Parents is a validated Internet-based curriculum designed to inform parents and caregivers of children with disabilities about proven intervention techniques. Because it is completely web-based, parents may access it when and how they wish. Using everyday settings and daily routines as the context for intervention, it introduces strategies adults can use to help (a) promote children's development and (b) master their IEP or IFSP objectives. SPIES was developed at the Center for Persons with Disabilities at Utah State University.

Designing SPIES for Parents for the web presented many challenges. A diverse user population with disparate equipment, computer configurations, and bandwidth made it very difficult to create a "one size fits all" design. Therefore, it was especially important to understand our audience and target their expectations. Because the site is stand-alone, it was essential for users to be able to easily navigate and understand the site in order to find the information that was helpful to them (Graham, 1999). Therefore, we operated from the belief that evaluative feedback from our target users was critical in the development and evaluation of our site (Barnum, 2002; Hager, Kibler, & Zack, 1999).

SPIES for Parents was developed in two stages. In the first stage, a prototype was developed and revised using comments from focus groups consisting of parents of children with disabilities. In the second stage, the formal site was created and on-line evaluation instruments were developed. Both content and technology/web design were evaluated. Parents of children with disabilities were recruited using email and the NEC*TAS listserv.

Evaluation results indicate that SPIES for Parents fostered the parents' ability to help their children in several important areas. Parents also reported an increased awareness of when and how to help their children, an improved sense of control in relationships with professionals, and validation of their ability to help their children. Another significant theme was the importance of the individuality of each user—every user is different and accesses information in different ways.

The evaluators' response to the website design and layout was positive. They found it easy to use, attractive, appropriate for its purpose, and worth spending time on. However, problems in downloading and viewing the imbedded videos were found to be a recurring issue. Because SPIES and SPIES for Parents incorporate video modeling, the inclusion of videos was considered essential to the goals for the website (Norman, Collins, & Schuster, 2001; Reamer, Brady, & Hawkins, 1998). Unfortunately, evaluators' greatest difficulties occurred in their attempts to view the videos.

The results of this study indicate that (a) websites can be successfully developed for a diverse user population with disparate computer equipment; (b) involving the intended audience in the development and evaluation process can greatly enhance the utility of a website; and (c) creating a parent-friendly site that provides substantial procedural information in a format that is usable, accessible, practical, and convenient in terms of time and layout is possible. Such websites, which offer validated, practical guidelines, can benefit parents and caregivers of children with disabilities.

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Characteristics of Children Referred to a Therapeutic Nursery Program

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For the past 30 years, the scope of early childhood education has been expanding to include younger and more severely impaired children (Berlin, O'Neal, & Brooks-Gunn, 1998). Increasingly, educators and mental health professionals assess behavior and mental health of children under 5 in order to provide early intervention programs that simultaneously nurture and protect emotional and cognitive growth. These years are a time to support positive change due to concomitant neurobiological development, attachment with significant adults, and infant learning (Bailey, Aytech, Odom, Symons, & Wolery, 1999). Unfortunately, young children with cognitive and emotional delays in development and potential learning disabilities may remain unnoticed and without intervention due to challenges in assessment (Odom, Jenkins, Speltz, & Deklyen, 1982).

One type of early intervention program, the therapeutic nursery program (TNP), offers an alternative preschool setting that provides a protective environment and supports cognitive, language, and socioemotional development in young children who face cognitive and emotional challenges (Ferber, 1996). The present study intends to provide initial outcome data on the strengths and weaknesses of TNP programs as well as the effects of services on child and family adaptation. As a child progresses through the TNP program, we expect that he or she will progress in language, cognitive, and socioemotional areas—improvements that prepare these children to enter a mainstreamed kindergarten setting and reduce the risk of present and future school failure. Our outcome study is a 2-year pilot project assessing the effects of a TNP program interacting with child and parental characteristics upon children's language, cognitive, and socioemotional outcomes.

The study utilizes a control group of children who are waitlisted for the TNP program. The control group provides comparison data on children's language, cognitive, and socioemotional skills when youngsters with therapeutic needs are left untreated or placed in alternative settings. Our assessment tools include the Weschler Primary and Preschool Scale of Intelligence-Revised (WPPSI-R; Gyurke, Marmor, & Melrose, 2000), Developmental Assessment of Young Children (DAYC; Bryen & Gallagher, 1991), Preschool Language Scale-3 (PLS-3; Zimmermon, Steiner, & Pond, 1992), Preschool and Early Childhood Functional Assessment Scale (PECFAS; Murphy et al., 1999), and the Achenbach Child Behavior Checklist (CBCL; Lengua, Sadowski, Friedrich, & Fisher, 2001).

Initial cognitive results for children attending the TNP, $N = 9$; Mean age = 52.1 months (SD = 8.9) indicate that on the WPPSI-R, Full Scale IQ scores are in the Low Average range, 88.9 (SD = 14.7), with Verbal IQ, 94.2 (SD = 16.8) higher than Performance IQ, 86.2 (SD = 16.4). On the DAYC, TNP children perform at the 21.6 percentile (SD = 18.1) of a normative sample. Results from the PLS-3 indicate that TNP children performed near normal, 49.1 percentile (SD = 27.5) on auditory comprehension, but with a lower level of performance on expressive language, 39.6 percentile (SD = 27.1); scores on both of these scales were highly variable across the sample. On the CBCL, TNP children were more likely to have internalizing, 74.9 percentile (SD = 13.0) and externalizing behaviors than the normative sample, 72.4 percentile (SD = 16.9).

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The Impact of Inclusion on Language Development and Social Competence Among Preschoolers With Disabilities

Yvonne Rafferty

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Despite the legal, moral, and empirical arguments in support of preschool inclusion (Bailey, McWilliam, Buysse, & Wesley, 1998), there is considerable debate in both the literature and in practice as to whether or not it hinders or enhances children's language, social, emotional, and cognitive development (Odom & Diamond, 1998). Inclusion refers to the process of placing children with disabilities in the same classes or programs as their typically developing peers, and providing them with the necessary services and supports (Rafferty, 2002; Winter, 1999). Educators, parents, and policy makers need to be aware of the impact of inclusion on children with and without disabilities, as well as strategies that effectively address attitudinal barriers (Rafferty, Boettcher, & Griffin, 2002).

This study examined the developmental progress of 96 preschoolers with disabilities in inclusion and segregated classes, focusing on language ability (auditory comprehension and expressive language) and social competence (social skills and problem behaviors). Their ages ranged from 33 to 57 months (M = 47.9, SD = 6.0); 71% were male, and 87% were White. Most (71%) were in inclusion classes. The preschool was a private agency-run, community-based program that provided services for children from birth to age 5.

Two research questions were addressed:

1. Which specific attributes of the child, parent, and family show positive relationships with children's developmental abilities at (a) pretest and (b) posttest, controlling for pretest abilities?
2. Does placement type (inclusion vs. segregated) interact with degree of disability (not severe vs. severe) in predicting developmental progress from pretest to posttest (abilities at posttest, controlling for pretest ability)? Specifically, do children with less severe disabilities make greater progress in inclusion classes, and do children with more severe disabilities make greater progress in segregated classes?

Level of development at pretest emerged as the strongest predictor of developmental progress. Other child, parent, and family attributes were not associated with developmental abilities at pretest, or with developmental progress over time. Degree of disability did not moderate the impact of placement type on language development or social competence, once pretest scores had been taken into consideration. An analysis of effect sizes, however, indicated that posttest scores were comparable in both settings for children with "not severe" disabilities, but not for children with "severe" disabilities. Children with "severe" disabilities in inclusion classes had higher posttest scores in language development (auditory comprehension and expressive language) and social skills than their peers in segregated classes. Problem behaviors at posttest, however, were lower for children in segregated classes than for their peers in inclusion classes (Rafferty, Piscitelli, & Boettcher, 2002).

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Teaching Children About Disability

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In order to make inclusion of children with disabilities successful in Head Start programs, it is useful to understand what parents of typically developing young children are teaching their children about peers with disabilities, because young children are influenced by parent's attitudes and experiences about disabilities (Dimond & Innes, 2001; Stoneman, 2001).

In the current study, the authors investigated how 40 parents of typically developing young children taught their children about disability in three naturalistic contexts. The children in the sample, recruited from local preschools, had a mean age of 50 months. There were four situations: (a) reading a book about children with disabilities, (b) child alone play with a Little Tykes toy set including a wheelchair and a ramp, (c) parent–child play with the same toy set, and (d) parent–child toy play with large dolls that had various adaptive equipment. Two raters coded all videotape sessions; acceptable inter-rater reliabilities were achieved across coding categories. The dialogue was coded for teaching/knowledge, positive statements, and familiarity with disability. The parents also completed a Q-sort designed for the study that consisted of statements about attitudes/values concerning children with disabilities.

In the book-reading task, 46% of parents talked about the child in the wheelchair, 57% talked about the child in the walker, and 6% talked about the child with Down's syndrome.

When parents used the large toys to teach their children about disability, 90% of parents talked about the wheelchair and 75% talked about the glasses. Nineteen percent of parents made a positive comment, and 40% of parents talked about the abilities of the doll in the wheelchair in the small toy context. Six percent of parents related the child in the wheelchair to someone known by the child; 15% related the child in the walker to someone known by the child; and 4% related the child with Down syndrome to someone known by the child in the book-reading context. Twenty percent of parents associated the wheelchair to someone known by the child in the small toy context.

When the data were compared across situations there was a significant correlation between the parents' mention of ability during the book reading session and the child's fantasy play during child only play. In the Q-sort, a MANOVA revealed differences in attitudes across the three disabilities (behavior disorders, physical disorders, and cognitive disorders).

One limitation of this study is that the sample had an overrepresentation of families making more than $50,000 a year (55%) and mothers with graduate education (44%). Because the sample distribution is not representative, care must be taken in the application of the results to low-income populations. The correlation between fantasy play during child only small toy play and the parents' mention of ability during the book reading session suggests that information on abilities is important for inclusion. The observations of parents teaching their children about disability reveal that parents spent less time teaching about items familiar to the child.

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An Examination of Motor Functioning in Autism and Asperger's Disorder: An Analysis of Motor Planning and Cortical Brain Activity

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PRESENTER: Amanda Dudley

Although movement abnormalities remain a striking feature throughout the developmental trajectory of autism and Asperger's disorder (AD), there has been little attempt to quantify and describe this area of neurological dysfunction (Ornitz, 1988). Recent studies comparing motor functioning in children with autism and AD have suggested children with AD have greater motor problems, specifically motor clumsiness, than children with autism (Gillberg, 1989; Ghaziuddin & Butler, 1998). Others have suggested that both groups demonstrate a similar global motor delay (see Rinehart, Bradshaw, Brereton, & Tonge, 2001 for review).

The purpose of this study was to further examine possible neurobehavioural differences between autism and AD by examining movement preparation and execution in these groups (Rinehart et al., 2001). Participants were 11 high functioning autism (HFA; M = 8.9 years) and 12 control participants (M = 9.6 years); 12 AD (M = 12.0 years) and 12 control participants (M = 12.3 years). Groups were matched on age, sex, and IQ.

A serial-choice, button-pressing task was employed using a tapping board. The motor reprogramming task involved four buttons, and participants were instructed to move leftward

and rightward as quickly as possible between two reciprocally illuminating target buttons. Two indices were used: (a) movement preparation (amount of time the button is held down) and (b) movement execution (amount of time between the release of one button and the depression of the next). Reprogramming of direction was manipulated by the illumination of an unexpected 'oddball' button during the basic reciprocating sequence. This 'oddball' occurred only once during each of the trials, and participants were informed of this. All participants completed four blocks of 8 trials, with 32 trials in total.

The HFA group executed reprogrammed movements at a similar speed to controls, and both groups executed programmed movements faster than reprogrammed 'oddball' movements. The AD group also programmed movements at a similar speed as controls, and both groups were faster at executing programmed movements than reprogrammed 'oddball' movements. The control group, unlike the HFA group, was faster to prepare movements after having executed the 'odd ball' response; the HFA group showed similar preparation times for movements occurring before, during, and after the 'oddball' response (i.e., no difference).

In contrast to the HFA group, the AD group were actually slower to prepare a movement after having executed the 'oddball' reprogrammed movement.

Results indicate that individuals with HFA and AD have a normal ability to execute movement in this motor reprogramming paradigm with atypical movement preparation. This difference in movement preparation invites speculation about how these disorders may differ neuropathologically. The fronto-striatal region, in particular lateral and mesial premotor circuits, is involved in movement preparation (Cunnington, Bradshaw, & Iansek, 1996) and is therefore a likely area to be involved in these disorders. This research suggests that differences in movement preparation profiles in these disorders reflect differential involvement of the supplementary motor area (SMA).

Using the movement-related-potentials (MRP) experimental technique described by Cunnington, Iansek, Bradshaw, and Phillips (1995), MRP's were investigated in 16 children with high-functioning autism and a matched control group (Rinehart, Bradshaw, Brereton, & Tonge, (in submission). Preliminary results indicate that autism is associated with significantly reduced premovement activity for externally cued movements, similar to that reported for Parkinson's disease patients (Cunnington et al., 1995). Cunnington et al. (1995) interpreted this pattern of results as indicating impaired internal control mechanisms, operating via the SMA. Reduced SMA activation for externally determined movement in children with HFA supports Rinehart et al.'s (2001) suggestion that SMA dysfunction is associated with autism. We are currently conducting comparative MRP studies with children diagnosed with AD.

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Preliminary Findings From Year One of the National Evaluation of the School of the 21st Century

Nicole Fedoravicius, Christopher C. Henrich

PRESENTERS: Nicole Fedoravicius, Christopher C. Henrich

A substantial body of research provides evidence of the influence of quality preschool learning experiences on cognitive and social development, and subsequent academic achievement (Peisner-Feinberg et al., 2001; NICHD Early Child Care Research Network [ECCRN], 2000; Barnett, 1995). The School of the 21st Century (21C) is one such school-based early care and family support model. It combines affordable and accessible child care, preschool education, and parent support services within an organizational and leadership infrastructure that transforms schools into year-round, extended day, multiservice centers.

This poster presents preliminary findings from the 1st year of a multiyear, multisite evaluation of the 21C model by specifically focusing on one of the model's key components, the all-day, year-round early care and preschool education for 3-, 4-, and 5-year-olds. Year one data are examined to determine whether children's academic achievement, emergent literacy, social competence, and parental involvement vary over the course of kindergarten as a function of whether or not children attended 21C preschool.

The sample consists of 337 kindergarten students from five school districts nationwide, representing rural, urban, and suburban communities. The sample is primarily White (78%), with 18% Latino, and 3% African American, and is socioeconomically diverse. Children had a variety of preschool experiences. In the year before kindergarten 41% were enrolled in 21C preschool, 33% attended other center-based care, and 24% had no center-based preschool experiences.

Verbal and math subscales from the Woodcock Johnson III Tests of Achievement (WJIII; Woodcock, McGrew, & Mather, 2001) and the Early Screening Profile (ESP; Harrison et al., 1990) were used to assess academic achievement. Three subscales from the Comprehensive Test of Phonological Processing (CTOPP; Wagner, Torgeson, & Rashotte, 1999) were used to assess phonological awareness. Teachers completed the Social Skills Rating System (Gresham & Elliott, 1990), which assesses children's social skills and problem behaviors as well as academic competence. Parents answered questions about their educational involvement at home and at school.

Children's outcomes in the fall and spring of kindergarten were compared across three groups using repeated-measures analyses, controlling for demographic and site effects. Kindergarteners who had attended 21C preschool (n = 137) were compared to groups of kindergarteners who had (a) attended other center-based preschool programs (n = 108) or (b) had no center-based preschool experiences (n = 80).

Differences were found across several outcomes. Compared to children with no center-based preschool experiences, children with 21C preschool experiences had greater increases in phono-

logical processing over the course of kindergarten. Also, children with 21C preschool started kindergarten with higher levels of overall academic competence and some math abilities; however, children with no preschool caught up to them by the end of the year. These findings suggest that 21C children entered kindergarten in some respects more ready for school. Children with other center-based preschool did not differ from either the 21C or the no preschool children.

Future analyses will consider potential moderating effects of factors such as family demographics, preschool quality, and kindergarten curriculum. As data collection continues, trajectories of children's academic achievement, social competence, and parents' involvement will be followed through second grade.

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School-Based Services: What do U.S. Schools Offer Kindergartners and Their Families?

Elizabeth Rigby, Sharon Lynn Kagan

PRESENTER: Elizabeth Rigby

Using school-level data from the Early Childhood Longitudinal Study–Kindergarten Cohort (ECLS-K), this analysis examined patterns in the provision of services by schools in the US. This sample of schools (n = 866) is representative of the 72,260 U.S. schools providing kindergarten services during the 1998–1999 school year. We focused on the provision of six services by schools, as reported by the school administrator/principal: (a) after school care, (b) summer school programs, (c) parent education programs, (d) family or adult literacy programs, (e) health/social services, and (f) home visits for parent education. On average, schools in the US provide almost three (M = 2.6, SD = 1.52) of these six services. Using K-means cluster analysis, we identified three patterns of service provision among schools in the U.S.: (a) limited, (b) general, and (c) multiple. Schools in the limited services cluster (34.5%) provide low levels of provision of all six services. Schools in the general services cluster (41.3%) provide high levels of the more general services (after school care, summer school, and parent education) and provide low levels of the more targeted services (family or adult literacy, health/social services, home visits for parent education). Schools in the multiple services cluster (24.2%) provide high

levels of all six services. Utilizing logistic regression to predict membership in each cluster, we identified community and school characteristics associated with each pattern of service provision.

Our results indicate that schools in the limited service cluster were more likely (a) to be located in the Northeast or Midwest (vs. West) region, (b) to be in rural areas or small towns (vs. suburbs), and (c) to have fewer students enrolled. Schools in the general services cluster were less likely to be in the Northeast or Midwest (vs. West), and were more likely to be in the suburbs (vs. city or rural locations). In addition, general services schools were often Catholic schools or non-Catholic private schools (vs. public schools), schools with larger school enrollments, and schools with less than 50% of the students in poverty. Schools in the multiple service provision cluster were more likely to (a) be located in rural areas, small towns, or within cities (vs. suburban locations); (b) be public (vs. Catholic or non-Catholic private); and (c) have greater than 50% poverty among the student body. These associations between community and school characteristics and patterns of service provision suggest that the availability of school-based services for children and families is influenced by the school's location, school type (i.e. public), school size, and the poverty level of its student body.

PBS Ready To Learn Service: A Local/National Model of Early Childhood Education Outreach

Abbe Hensley, Mary LaMantia

PRESENTERS: Abbe Hensley, Mary LaMantia

Television is the nation's largest classroom, the electronic hearth around which children and families gather to be entertained and informed. Ernest Boyer (1991) in *Ready To Learn: A Mandate for the Nation* described television as the most influential teacher children can have, second only to parents. Newton Minnow, former FCC commissioner, saw television as the most important educational institution in America. When Congress issued the challenge in 1994 to increase school readiness for children across America, public broadcasting rose to the task in a way no other broadcast medium could.

In response to the critical national education goal that by year 2000, all American children would enter school ready to learn, public broadcasting, with the Department of Education, created a unique and powerful service called Ready To Learn (RTL). For more than 5 years, RTL has set the gold standard for quality educational children's programs—from "Sesame Street," "Arthur," and "Mister Rogers' Neighborhood" to "Dragon Tales," "Between the Lions," and "Clifford the Big Red Dog." Each of these award-winning programs is designed to teach children the new three R's of early childhood education: (a) readiness, (b) resiliency, and (c) relationships. For families with low literacy, limited English proficiency, learning disabilities, or who live in rural areas, RTL's broadcast block of children's programming is a lifeline to helping parents nurture and guide their children. With bold vision and aggressive planning, PBS uses the line up of quality children's programming as a catalyst for high-impact community outreach, building an unprecedented range of services and partnerships. A variety of outreach activities and materials delivered by local public television stations extend the educational impact of the programming for parents, teachers, and other caregivers—for example, workshops that teach parents how to connect television to reading and other learning activities, free books for children who otherwise would not own them, and a RTL magazine in two languages, *PBS Families/para la Familia*.

PBS encourages Ready To Learn stations to partner with Head Start, Even Start, 21st Century Learning Centers, and other child- and family-focused organizations to deliver outreach in their communities. We give examples of the many forms these partnerships take and the ways that they help to extend the reach of Ready To Learn in communities around the nation.

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The Ready To Learn Evaluation: Early Lessons for Program Development

Cheri Vogel, Stacey Uhl, Kimberly Boller, Lindsay Crozier

PRESENTERS: Stacey Uhl, Cheri Vogel

Thirty-two years after the launch of Sesame Street, as young children's television viewing time continues to increase, our society still questions what the appropriate role of television and other media is in the lives of preschoolers. Longitudinal studies and nationally representative, cross-sectional research indicate that children's programming on PBS does make a difference in young children's lives and helps prepare them for school (Anderson, Huston, Schmitt, Linebarger, & Wright, 2001; Zill, 2000).

Going beyond television itself, Ready To Learn is a national initiative focused on extending the learning based on the curriculum in PBS children's programs by conducting community outreach. Studies of this approach indicate that caregivers and parents who were targets of outreach seemed to use television more wisely, engaged in more coviewing and reading with children, and were more likely to link television shows, books, and activities (Bryant, Maxwell, Stuart, Ralstin, & Rainey, 1999; Yotive & Fisch, 2000). What is missing is a descriptive study of Ready To Learn implementation at the station level that can be linked to a subsequent study of Ready To Learn coordinator, parent/caregiver/teacher, and child outcomes.

In this poster, we present descriptive findings about implementation of Ready To Learn, promising practices, and professional development needs. We include results from a baseline Web survey of Ready To Learn Coordinators conducted in spring 2001. The baseline survey data include (a) information about the Coordinators' backgrounds, (b) descriptions of the PBS Ready To Learn stations, and (c) the areas Coordinators identify as professional development needs. Results from our first follow-up Coordinator survey (conducted in spring 2002 and following up on the areas surveyed at baseline) are included in the presentation, along with a discussion of staff retention and trends over time. By summarizing descriptions from one-day site visits to 20 stations conducted in the summer of 2001, we also illustrate how stations develop their community partnerships and meet important requirements of the new cooperative agreement (linking with child care providers, Head Start, Even Start, and 21st Century Learning Centers and targeting special populations—including families with limited literacy, limited English proficiency, children with disabilities, and rural residents).

We also draw from our evaluation of the 2001 Ready To Learn Coordinator Professional Development Seminar to reinforce the themes identified from the other data sources and provide grounding for recommendations for technical assistance and program development lessons. We review the diversity of community partnerships and identify partnerships that seem particularly promising for extending the reach of Ready To Learn. We also use the data from the

coordinator surveys, the seminar evaluations, and site visits to identify the expected outcomes of Ready To Learn and our plans for the outcomes study. We review our design of the outcomes study and how we will work with the stations to recruit study participants. We conclude with the Ready To Learn implementation lessons, including challenges stations have faced and their successes in extending the reach of children's educational television.

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Characteristics and Attributes of Effective Primary Programs and Practices

Katherine M. McCormick, Jennifer Grisham-Brown, Lynley Anderman, Nawanna Privett, Annette Bridges, Mary Louise Hemmeter

PRESENTERS: Jennifer Grisham-Brown, Katherine M. McCormick

(Summary not available)

ESL/Bilingual Issues

A Comparison of Home and Program Variables Associated With Cognitive and Socioemotional Outcomes of Spanish-Speaking and English-Speaking Children in the Family and Child Experiences Survey (FACES)

Shefali Pai-Samant, Nicholas Zill, Ruth Hubbell McKey

PRESENTERS: Shefali Pai-Samant, Ruth Hubbell McKey

Eighty-five percent of the non-English speaking children in FACES (Administration on Children, Youth and Families, 2001) speak Spanish as their primary language. This poster identifies similarities and differences in the home and program variables for Spanish-speaking versus English-speaking children in FACES that can help explain the differences in child outcomes for these two groups of children. The FACES subsamples compared here are 197 Spanish-speaking children and 1,721 English-speaking children. Spanish children were assessed in Spanish in fall 1997 and English in spring 1998.

Information about children's home variables was obtained from parent interviews. Program variables were examined with the Early Childhood Environment Rating Scales-Revised (ECERS; Harms, Clifford, & Cryer, 1998), Assessment Profile (Abbott-Shim, & Sibley, 1987), Arnett Scale of Caregiver Behavior (Arnett, 1989), counts of adults/children, and staff interview. Children's cognitive outcomes were assessed with the (a) social awareness task; (b) Peabody Picture Vocabulary Test-III (PPVT; Dunn, Dunn, & Dunn, 1997)/Test de Vocabulario en Imagenes Peabody (TVIP; Dunn, Padilla, Lugo, & Dunn, 1986); (c) McCarthy Draw-A-Design Task (McCarthy, 1970, 1972); (d) color names and counting; (e) Letter-Word Identification Test, Applied Problems Test, and Dictation Test from the Woodcock-Johnson Revised Tests of Achievement (Woodcock, & Mather, 1989, 1990)/Bateria Woodcock-Munoz Pruebas de Aprovechamiento-Revisada (Woodcock & Muñoz-Sandoval, 1996); and (f) story and print concepts. Information about children's socioemotional outcomes was obtained through parent ratings (FACES Instruments).

Spanish-speaking children had significantly higher scores in spring compared to fall on draw-a-design, color naming, one-to-one counting, and emerging literacy tasks; lower scores on social awareness tasks, letter-word identification, applied problems, story and print concepts, and assessment behavior; and lower standard scores on the PPVT in spring than on the TVIP in fall. When compared to English-speaking children, they had lower scores on all cognitive measures except draw-a-design and dictation in fall and draw-a-design in spring (ACYF, 2001).

Spanish-speaking children had significantly higher scores on social skills and positive approach to learning, and lower scores on hyperactive behavior in spring compared to fall. When compared to English-speaking children in fall, they had higher scores on hyperactive behavior, withdrawn behavior, and total behavior problems, and lower scores on social skills and positive approach to learning. In spring, Spanish-speaking children compared to English-speaking children had lower scores on aggressive behavior; higher scores on hyperactive,

withdrawn, total behavior problems; and higher scores on social skills and positive approach to learning.

When compared to English-speaking children on home variables, Spanish-speaking children were better off in terms of being in households that were intact, had less depressed mothers, and had caregivers who used less spanking, but were less well off in terms of maternal locus of control, education, employment, poverty, and home literacy environment.

On program variables, Spanish-speaking children compared to English-speaking children were more likely to be (a) in Head Start programs that had a moderate average quality factor score and high average ECERS language score, but (b) in classrooms that had teachers without degrees, a high child–adult ratio, more minority families, and few parents with some college education.

These findings suggest that Head Start programs attended by Spanish-speaking children should focus on (a) promoting child acquisition of English through focus on vocabulary, literacy, and numeracy skills; (b) increasing teachers' educational levels, (c) lowering classroom adult–child ratio; and (d) supporting families towards improving their health, education, employment, and home literacy behaviors.

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The Joint Production of Narratives in Preschool: A Situated Perspective of Meaning Making

Alison G. Wishard

PRESENTER: Alison G. Wishard

Narrating, or storytelling, is a salient example of how humans universally use language in an effort to make sense of new and routine experiences that make up their daily lives (Gee, 1985). While adult narratives typically focus on unusual or unexpected events or problems, young preschool children's first narratives often focus on probable life events in the here-and-now (Imbens-Bailey & Snow, 1997). They use narratives to understand and review basic discoveries about the world and to assert their understanding of the world to those around them (Nelson, 1991; Ochs & Capps, 2001). Particularly, through conversations about past and present, children develop the skills to explain or make reference to personal experiences, and through fantasy play children develop the ability to talk about fictional events (Hicks, 1991).

While narratives are found across all cultures and in all languages, the organization and delivery of narratives varies widely according to specific cultural values, goals, and ways of thinking about the world (Michaels & Cazden, 1986; Heath, 1983). Children from different sociocultural communities experience narrative discourse differently in their primary language learning environments because they are participating in different social settings. These experiences early on are the basis for the narrative skills that children bring with them to primary school.

This study explores how toddlers (ages 18–36 months) in a bilingual preschool for low-income families begin to produce narratives in collaboration with their teachers and peers to create social meaning of their preschool world. Naturalistic observations and videotaping were used to capture the activities in which narrative interactions tend to occur, the personnel involved, the language(s) used, and the types and effects of adult scaffolding strategies. Naturalistic observations indicated that all children engaged in a narrative interaction at least once. Eighty percent of all observed narrative interactions were between child and adult, with 20% occurring between peers, and 62% of all narratives occurring within creative play activities. The video portion of the study indicated that while adults vary in their amount and type of narrative scaffolding, the most frequent type of scaffolding was to maintain the narrative topic. Additional analysis on the effects of the narrative scaffolds suggests that adult involvement in narrative interactions can both promote and inhibit narrative interaction.

While the extant research on personal, spontaneous narratives of children below the age of 3 is limited, the possible implications in early childhood education are vast. Preschool is an important environment in which to study narrative development, because a rising number of children, particularly underrepresented children, are attending half- or all-day programs. Narratives have been argued to be an important indicator of literacy acquisition and later school outcomes (Heath, 1982; Snow, 1983; Imbens-Bailey & Snow, 1997). Considering that young children's narratives are often closely linked to literacy acquisition and later school outcomes, for these children frequent narrative interactions in preschool may be essential experiences to prepare them for later social and academic success.

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Early Childhood Study of Language and Literacy Development of Spanish-Speaking Children: Background and Initial Findings

Patton Tabors, Mariela Páez

PRESENTERS: Mariela Páez, Blanca Quiroz, Patton Tabors

Over the last decade, Head Start, along with other early childhood programs, has experienced a sharp increase in the number of children enrolled from homes where a language other than English is spoken. According to the 2000–2001 Head Start Program Information Report, in FY2001, 27% of Head Start children were considered dominant in a language other than English. This situation raises questions for educators concerning the language and literacy development of young bilingual children.

The Early Childhood Study of Language and Literacy Development of Spanish-Speaking Children (ECS) is a longitudinal project designed to identify the factors that influence the course of Spanish and English literacy development for young Spanish-speaking children. There are three objectives for this study: (a) to describe young Spanish-speaking children's proficiencies in Spanish and English as they enter and as they leave prekindergarten, (b) to investigate how these children's language and literacy skills in Spanish and English change over time from prekindergarten to second grade, and (c) to predict Spanish-speaking children's Spanish and English literacy abilities in second grade, based on factors related to the home and school contexts.

The study tracks a sample of 350 at-risk Latino children in communities around Boston, Massachusetts and Montgomery Country, Maryland, as well as a comparative sample of 150 children in Puerto Rico, from the time they enter prekindergarten until they leave second grade. This presentation emphasizes the theoretical background, data collection procedures, preliminary family demographics, and preliminary findings for Fall 2001 when the children where beginning their 4-year-old prekindergarten school year.

The language and literacy tasks for the ECS, which are administered one-on-one in English and in Spanish for the mainland bilingual sample and in Spanish only for the Puerto Rican sample, include assessments of letter word recognition, vocabulary, discourse skills, phonological awareness, general language ability, concepts about print, and listening comprehension.

Our preliminary results indicate that the children in the study have a variety of abilities in their two languages across the tasks. On average, the children in the mainland sample are having difficulty in oral language in both languages, and they are doing significantly less well than the Puerto Rico sample in oral language in Spanish. We found that the different language tasks were positively correlated across children's two languages with the exception of the picture vocabulary

task. The negative correlation between the English and Spanish picture vocabulary task indicates that, on average, children who are doing well in one language are not doing as well in the other.

Information about a more intensive qualitative study with a subsample of 55 families stratified by language proficiency, gender, and language use in the home is also presented. These families are receiving home visits during which parents are interviewed, asked to read a book, and to do a homework sheet with the child. A family mealtime is also tape-recorded. Language and literacy data are being collected with the Early Language and Literacy Classroom Observation (ELLCO; Smith & Dickinson, 2002) in the subsample children's classrooms, and teachers are being interviewed and tape-recorded during a group time activity. Finally, we discuss the next steps in data analysis and the future of the study.

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Home Biliteracy Practices and Vocabulary Development Among Latino Head Start Students

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PRESENTERS: Sandra Barrueco, Doré LaForett, Norman F. Watt

The present study aimed to describe the prevalence and nature of Head Start families' home biliteracy practices upon entrance of Latino students to the program, as well as to advance understanding of the various relationships that exist between home literacy in English and Spanish and children's lexical development within and across the two languages.

The 78 Latino children who participated in the present study were randomly selected from students enrolled to begin a Head Start program in a predominantly Latino section of a Midwestern city. All of the children had never participated in a day-care or early childhood educational program. Fifty-six percent were female, and their mean age was 3.96 years ($SD = .46$, range 3.22 to 4.95). Bilingual examiners assessed the children's receptive and expressive vocabulary in both English and Spanish over the course of 2 days. Information about their language exposure and literacy practices was gathered from the primary caregiver during an interview at their home or over the phone.

On average, the children participated in literacy activities with their families 5 days per week, according to caregiver report. The number of days per week of reading across the two languages was comparable between the Spanish-dominant children ($M = 5.28$, $SD = 4.03$, $n = 44$) and English dominant subjects ($M = 6.00$, $SD = 2.34$, $n = 27$), $t = -.83$, $df = 65$, $p = .41$. Notably, the Spanish-dominant children were found to participate in literacy activities in their dominant language less frequently than English-dominant children, $t = -3.75$, $df = 65$, $p < .001$. Instead, the Spanish-dominant children participated in a relatively greater frequency of reading in their nondominant language (English). As such, the literacy activities of Spanish-dominant children were more likely to be comprised of two languages than the literacy activities of English-dominant children, $\chi^2(1, 71) = 6.54$, $p = .01$.

The impromptu conversations with the caregivers during the interviews provided the following insights on the balance of Spanish and English reading: Many caregivers cited difficulty locating children's books in the Spanish language. If the caregivers could not read in English, they tried to engage their children in drawing and writing activities, and "contandoles unos

cuentos" or storytelling. Since most books were available in English, some Spanish-dominant caregivers asked older siblings and cousins (who were learning English in school) to read to the child subjects.

Importantly, the number of days per week of reading conducted with the Latino children in their dominant language was positively related to their expressive vocabulary in that language (standardized beta = .21, squared semipartial correlation, $p < .05$). This finding is consistent with an array of results demonstrating strong relationships between home literacy practices and language development among unilingual children (e.g., ACYF, 1998; Bus, Van Uzendoorn, & Pellegrini, 1995; Weinberger, 1996).

This cross-sectional finding provides a preliminary affirmation of the existence of a relationship between home literacy activities and lexical development among a group of low-income Latino young bilinguals. Strong relationships between home literacy practices and language development have been demonstrated among children of various socioeconomic backgrounds exposed to one language, (e.g., ACYF, 1998; Bus et al., 1995; Weinberger, 1996).

In all, the study provided the following contributions to the current understanding about literacy activities among Latino Head Start Families:

1. The vast majority of the Latino children were engaged in literacy experiences with their families most days per week.
2. The literacy activities of the Spanish-dominant families included a greater proportion of English than anticipated. The scarcity of Spanish children's books in the area and the development of English literacy skills among the older children in the household are key elements to this finding.
3. The present study affirmed the presence of a significant relationship between home literacy activities and lexical development among a group of low-income Latino young bilinguals prior to their entrance into the formal educational system.

Implications of the set of findings for teachers, psychologists, and researchers were reviewed.

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Early Bilingual Exposure and Lexical Development Among Low-Income Latino Children

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Too little attention has been paid to the linguistic development of children exposed to two or more languages in their early years of life. Yet, a solid understanding of the linguistic development of young children exposed to two languages prior to their participation in formal schooling is essential for the valid identification of early language delays, the valid estimation of abilities by educators and practitioners working with bilingual children, and the valid assessment of the effect of educational intervention programs on language development.

The present study aimed to increase the current knowledge base of early bilingual development in two manners. First, it aimed to describe and thus provide an understanding of, the prevalence, range, and sources (i.e., guardian, siblings, extended family, television) of exposure to English and Spanish within a Latino Head Start population before the first formal educational experience. Second, the present study examined the association of the extent and sources of exposure to two languages with receptive and expressive lexical development within and across Spanish and English.

The 78 Latino children who participated in the present study were randomly selected from students enrolled to begin a Head Start program in a predominantly Latino section of a Midwestern city. All of the children had never participated in a day-care or early childhood educational program. Fifty-six percent were female, and their mean age was 3.96 years (SD = .46, range 3.22 to 4.95). Bilingual examiners assessed the children's receptive and expressive vocabulary in both English and Spanish over the course of 2 days. Information about their language exposure was gathered from the primary caregiver during an interview at their home or over the phone.

Utilizing descriptive statistics and polynomial regression, the study revealed numerous key findings. First, although few children were exposed to an equal balance of Spanish and English before entering school, the vast majority of the Latino children (88%) were experiencing early bilingual exposure in unbalanced proportions. Second, Latino children's receptive vocabulary development within their dominant language was relatively more developed than their expressive vocabulary in their dominant language. Finally, the lexical development of both the Spanish- and English-dominant children was skewed toward the development of English, indicating that Spanish language development may already be at a relative disadvantage for both sets of Latino children prior to entry into school.

Implications of the set of findings for teachers, psychologists, and researchers were reviewed.

Teaching a Second Language in an Early Childhood Program: The Impact on Children, Teachers, and Developmentally Appropriate Practices

Mary DeBey, Bebe Bullock

PRESENTER: Mary DeBey

Brain research has shown us that young children are in a sensitive period for language development. Prior to 5 years of age, children absorb languages effortlessly and are adept imitators of speech sounds. This paper reports a study of the implementation of a second language program at an early childhood center serving English-speaking children.

The educational community now recognizes the importance of early language learning. The process of studying a second language gives students a cognitive boost that enables them to perform at higher levels in some other subjects (Curtain & Pesola, 1994). It has been found that bilingual children outperform their monolingual peers in varied tasks including divergent thinking, metacognition processing, and nonverbal problem-solving skills (Rubio, 1998).

In this ethnographic study, a triangulation model was adopted. Data were collected through interviews, focus groups, observations in the classroom, analyses of children's language use, and review of lesson plans. It was hypothesized that the impact on the program would be a positive one. A positive impact was determined to be the consistency of developmentally appropriate practices in a quality program, teacher and parent satisfaction, and the children's acquisition of Spanish both receptively and expressively.

The early childhood program used in this study is a high quality laboratory school in the Northeast. A high quality center was chosen to provide an environment in which the initiation of the Spanish program would not be hindered by poor program performance variables. The program has highly trained teachers, high teacher/child ratio, small group size, a strong philosophical base, strong leadership, and a developmentally appropriate emergent curriculum. Spanish was taught though daily routines and Spanish group time to 68 children in five classrooms of children ages 2–6. In each classroom, a Spanish-speaking teacher was paired with an English-speaking teacher. Children in the center included children from varied socioeconomic levels and ethnic backgrounds. Five of the children in the program spoke Japanese as their first language.

The results of the study showed that the second language program was a positive addition to a quality program. Administrators, teachers, and parents agreed that the quality of the program was maintained and enhanced. Children in all classrooms and at all age-levels gained a limited working receptive knowledge of Spanish, and a majority of the children answered questions in Spanish during "Spanish time" and expressed basic needs and wants during snack and other group times. Amongst themselves, children spoke English, but often incorporated Spanish words both indoors and out-of-doors at the center and also at home.

The relationship between the Spanish-speaking and the English-speaking teachers was seen as the most important variable for program success. An unexpected outcome included English-speaking teachers learning Spanish along with the children and incorporating it into their daily routines with children.

Difficulties in the implementation of Spanish included less time for developing emergent curriculum ideas, which resulted in less developed projects. There was also an increased need for time for Spanish and English teachers to plan together in both program models.

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Family Functioning/Systems

Predicting Marital Discord and Depression in Early Head Start Mothers: A Step Toward Marriage and Family Therapy Collaboration

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Early Head Start (EHS) parents are at risk for marital discord because they are typically low in socioeconomic status, marry and have children young, and have large families. Many negative outcomes are associated with marital discord: divorce, depression, hostile and insensitive parenting, child adjustment problems, and insecure parent–infant attachment. The American Association of Marriage and Family Therapy (AAMFT) recently sponsored Head Start–Marriage and Family Therapy (MFT) program partnerships. The purpose of this study was to identify predictors of marital discord and depression in a local (Utah/Idaho) sample of EHS couples. The identification of predictors will inform the theory–intervention link needed as a first step toward better EHS–MFT collaboration.

Cross-sectional and longitudinal research methods were used to study 148 EHS married mothers and their spouses. As part of local and national Early Head Start research, both mothers and fathers of EHS children were interviewed at three different assessment points: preenrollment and child age 10 and 24 months. Married couples were contacted separately and interviewed separately, in person or by phone, by trained interviewers. Depression was measured at the 10-month interviews with both parents by the Center for Epidemiological Studies-Depression scale (CES-D; Radloff, 1977). Depression was measured at the 24-month interviews with mothers using a measure used for the national EHS evaluation (CIDI-SF; Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998) with two major screening questions and additional questions about duration and co-occurring depressive symptoms. Marital discord was measured at preenrollment and 10-month interviews by nine items from Dyadic Adjustment Scale (DAS; Spanier, 1976).

Marital discord was measured at the 24-month mother interviews by five questions from the conflict subscale of the Family Environment Scale Real Form (FES; Moos & Moos, 1981). Adult Attachment attitudes were assessed at the preenrollment interview for both parents using the Relationship Attitudes (RA) scale adapted from the Adult Attachment Scale (Simpson, Rholes, & Nelligan, 1992). Age, employment status, education level, religious activity and affiliation, and family size, as predictors of marital discord and depression, were derived from background information assessed during the preenrollment, 10-month, and 24-month interviews.

In general, results revealed that EHS married mothers were less depressed and maritally discordant than what might be expected of low-income parents and more prone to experiencing problems the more children they had. Because up to 22% of the EHS mothers completing outcome measures reported marital discord or divorce, it seems that this represents a significant area for EHS–MFT collaboration and intervention. The results suggest potential markers predicting later marital discord and divorce and also suggest directions for developing marital interven-

tion strategies with EHS programs. Hopefully, early childhood intervention programs will give greater attention to developing marital interventions as well as clarifying adaptive and protective marital processes in future research.

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Low-Income Mothers' Support-Seeking Strategies: Stability and Change Over 3 Years

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PRESENTERS: Laurie A. Van Egeren, Lorraine M. McKelvey, Rachel F. Schiffman

Low-income families enrolled in Early Head Start (EHS) are generally considered at high risk for living in stressful environments and, in turn, for poorer parenting (Coyl, Roggman, & Newland, 2002). Family coping strategies can strengthen or maintain family resources that serve as protection from stressful situations. In this study, baseline maternal reports of service use, economic need, and social resources were used to predict individual differences in later coping behaviors, with EHS program participation examined as a moderator.

Participants were 152 mothers and their infants from a national randomized intervention study of children eligible for Early Head Start. Maternal reports of coping strategies were collected at the time of enrollment, and at 14, 24, and 36 months of age. The mean child age at enrollment was 4.8 months. Coping strategies, including cognitive reframing and three types of support seeking (from family and friends, neighbors, and service providers) were assessed using the Family Crisis Oriented Personal Scales (McCubbin, Olsen, & Larsen, 1987). At enrollment, perceptions of emotional support, degree of social conflict, use of public assistance, use of formal support services, and whether the family participated in EHS were measured (Schiffman et al., 2000).

Growth curve analyses revealed that by the 36-month assessment, use of cognitive reframing increased regardless of EHS participation. However, mothers who reported having more conflicted interactions reported less reframing, and mothers who participated in EHS used the reframing strategy more consistently than non-EHS mothers, regardless of their degree of social conflict or their use of public assistance. For all three support-seeking strategies, relations between the predictors at enrollment and later coping were moderated by EHS participation. Change in support-seeking from family and friends was relatively stable for mothers in the EHS program, but whereas non-EHS mothers who reported having greater levels of emotional support increased in support seeking from family and friends over time, non-EHS mothers who

reported having less emotional support at enrollment decreased in their use of support from friends and family over time, as did non-EHS mothers who reported higher levels of social conflict at enrollment. For support seeking from neighbors, mothers who participated in EHS demonstrated no change, whereas non-EHS mothers who reported more formal supports were more likely to increase in their use of the strategy. For support seeking from service providers, EHS mothers sought more support from service providers than non-EHS mothers. Although both EHS and non-EHS mothers who had a partner sought less support from service providers than those without a partner, non-EHS mothers who did not have a partner were especially unlikely to turn to service providers.

The results indicate that even exceptionally high-risk mothers who participate in EHS are more consistent in their use of positive coping strategies compared to non-EHS mothers. Among non-EHS mothers, those who perceive their support networks more positively tend to cope in similar ways as EHS mothers and those experiencing the highest levels of risk tend to cope increasingly poorly over time. Future research should examine whether these effects on coping mediate relations between EHS program participation and parenting outcomes.

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Protective Factors for Children in African American Families With Low Incomes: A Closer Examination of Protective Factors

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For African American children living in poverty, the support of kin tends to be an especially important protective factor (Allen, 1993; Boyd-Franklin, 1989; McAdoo, 1993). In this study, we sought to further explore supportive kin networks. Over the course of 5 years, we interviewed 9, single African American mothers living in an impoverished inner city neighborhood. We interviewed each mother 12 times, and also interviewed relatives, fictive kin, fathers, and father figures. Using constant comparative analysis (Glaser & Strauss, 1967), several themes emerged from the data.

The support children and mothers received from their kin included social support such as parenting advice and respite child care, and financial support such as the basic necessities of housing and food. Four implicit guidelines tended to govern the flow of support in the families we studied. These included (a) kin comes first; (b) conflicts are resolved quickly or left unresolved and, therefore, often do not interfere with the provision of support; (c) children's

extended family are an important source of support; and (d) fathers should be involved with and contribute financially to their children.

The belief that individuals should lend support to family members first was demonstrated through sacrificial giving over and above individuals' needs and desires. Despite living in poverty, family members provided for one another. For example, in a few cases, grandparents living on a fixed income readily "took in" their daughters and grandchildren.

Support was often sought and provided even when family members were experiencing conflict. For example, in a few cases, despite ongoing conflicts between the children's mothers and grandmothers regarding mothers' boyfriends, grandmothers still provided support. Conflicts within the support network may have been left unresolved because of high need.

Children's extended family members offered considerable support over time. In general, more female kin provided support than did male kin. However, for most children, there was at least one male extended family member who provided support.

All mothers believed that fathers should provide support to their children. In several cases, support offered by fathers was sporadic. Father involvement and financial contribution were often contingent on the existence of the romantic relationship between the mother and father, new romances of either the mother or father, and father unemployment. In a few cases, when biological fathers were uninvolved, social fathers assumed the role of biological fathers. Four fathers (two biological, two social) were consistently involved in their children's lives throughout the course of our study.

Consistent with previous studies, our results suggest that for the children in this study, kin are an important source of social and financial support. Implicit rules governing exchange of support included putting family needs before individuals' needs and desires, providing support despite conflict, and the ability to count on extended kin when in need. Although more women kin tended to provide support, it is important to acknowledge the support offered by males, including grandfathers, fathers, and father figures over the course of this study.

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Grandparent-Headed Families and Head Start: Developing Effective Services

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Grandparents are being recycled as parents in increasing numbers. Recent statistics indicate that over 3 million children currently live with their grandparents in a home where no biological parent is present (Children's Defense Fund, 1997), representing an increase of 53% since 1990 (Casper & Bryson, 1998). High rates of teenage pregnancy, parental alcohol and other substance abuse, incarceration, the death of one or both parents, divorce, child abuse and neglect, HIV/AIDS, unemployment, and other social conditions contribute to this escalating family typology (deToledo & Brown, 1995; Smith, Dannison, & Vacha-Haase, 1998). In 1996, over half the children living with grandparents were under 6 years of age (U.S. Bureau of the Census, 1998). Grandchildren in the care of grandparents are often extremely needy. All have experienced inconsistencies and instabilities in their earliest environments. Emotional themes common in the lives of grandparented children include grief and loss, guilt, fear, embarrassment, and anger (Smith, Dannison, & Vacha-Haase, 1998).

A pilot program partnering a university with a large, countywide Head Start program was initiated in 1999 and focused on serving custodial grandparents, their preschool-aged grandchildren, and Head Start personnel. All three populations participated in a series of pre and posttest assessments to determine the effectiveness of the services provided. Grandparents from both rural and urban sites were randomly placed in treatment and control groups and were invited to participate in an 8-week program focused on educational and support service provision. Topics covered included personal well-being, parenting skills, legal issues, financial concerns, and working with school and community.

Simultaneous services were provided to grandchildren, who participated in a series of eight educational interactions. Session topics focused on enhancing self-esteem, appreciating diverse family types, and on the five emotional themes common in grandparented children's lives. Grandparents were informed on weekly topics and were provided with follow-up literature and activities to use at home.

A third programmatic component focused on educating Head Start personnel about the unique strengths and challenges associated with grandparent-headed families. Sessions presented included strategies for enhancing communication, educating grandparents about child development, locating resources and assistance, and adapting curriculum to more effectively meet the needs of grandparented children.

Preliminary pilot data analysis showed positive changes for all three populations. Grandparents increased in child development and parenting skills knowledge, self-esteem, and awareness of available resources. Decreases were seen in isolation and depression. Grandchildren's use of appropriate social skills increased as did self-concept. Most striking was the finding that both grandparents and grandchildren perceived their interactions with each other much more positively at the conclusion of these sessions. Head Start personnel also demonstrated positive gains. Over 90% of Head Start teachers surveyed had grandparented children in their classrooms, but less than 20% had ever received any information targeted at specifically meeting their needs. Posttest analysis showed increases in knowledge of phenomenon associated with grandparent-headed families, available resources, and strategies for adapting curriculum within the classroom environment.

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Risk, Progress, and Engagement in Early Head Start

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Family and child risk is one area identified in the literature that has been found to have an impact on child and family progress, family engagement in program activities, and rates of home visit completion. Understanding high-risk families is important for Early Head Start (EHS) programs. In this study, which is part of a program evaluation of a local Early Head Start, we attempted to understand the relationship between level of risk at time of enrollment and engagement in EHS program activities, and how risk and engagement, including rate of home visit completion, are related to the progress made by children and families in EHS.

The risk information obtained at time of entry was categorized into two indices believed to impact child and family progress: (a) maternal risk (mother less than age 17 years at time of birth, parental developmental delay, mother with less than an eighth grade education, and maternal depression); and (b) emotional risk (documented or suspected child abuse and neglect, violence in the home, parental substance abuse, incarceration of family member, divorce, and child living outside the home). We also considered the role maternal depression, as measured by the CES-D Scale (Radloff, 1977), might play in engagement, progress, and home visit completion.

We found risk, depending on type, to have a differential effect on family and child progress, program engagement, and rates of home visit completion. For those families viewed by their family advocate to be highly involved, more progress is perceived to occur. Families and children are reaping more benefits from the program if they are engaged and involved in EHS program activities. Some risks appear to relate more than others to child and family progress. Finally, we found that home visit completion and program engagement are unique constructs, each measuring a different aspect of program involvement. By understanding the factors related to perceived child and family progress, EHS programs can better suit activities and opportunities to meet their families' needs.

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Relation of Daily Head Start Attendance to Children's Outcomes: Moderation by Family Risk

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(Summary not available)

A Year in the Lives of Three Head Start Families: Findings From the FACES Case Study

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PRESENTERS: Michael Vaden-Kiernan, Mary Ann K. D'Elio

(Summary not available)

Parenting, Family Routines, Family Conflict, and Maternal Depression as Predictors of the Behavior of African American Preschoolers in Violent Neighborhoods

Sally A. Koblinsky, Suzanne M. Randolph, Katherine Kuvalanka

PRESENTERS: Sally A. Koblinsky, Suzanne M. Randolph, Katherine Kuvalanka

(Summary not available)

Fatherhood

A Qualitative Study of Childhood Experiences Among Early Head Start Fathers

Richard Lower, Vanessa Rodriguez, Hiram E. Fitzgerald, Rachel Schiffman

PRESENTERS: Richard Lower, Hiram E. Fitzgerald, Rachel Schiffman

Recently, Shears, Robinson, and Emde (2002) reported that fathers' descriptions of their relationships with their own fathers were significantly correlated with their self-ratings of fatherhood and attachment to their toddlers, but were not correlated with their behavioral interactions with their older children. However, fathers who reported high levels of antisocial behavior when they were children rated themselves low on fathering and had low levels of involvement with their children. In this study, we focus on the father–son relationship in a nonclinical sample using a detailed qualitative interview to ascertain the nature of the father's relationship with his father, and then assess whether there is any evidence to support the intergenerational transmission of parenting behaviors on father–son interactions.

The data reported here are part of an ongoing longitudinal evaluation to explore issues related to low-income fathers of children eligible for enrollment in Early Head Start. Data were gathered from a total of 49 fathers. Fathers had children who had been randomly assigned to an Early Head Start program (n = 25) or to a community child care alternative (n = 24). Father age ranged from 18 to 57 years old (Median = 26). The purpose of the present study was to develop an understanding of intergenerational influences on fathers. For this study, the primary data collection method was a semistructured open-ended interview conducted in the father's home.

The researchers analyzed the transcripts to develop a set of emergent themes, using coding schemes developed for the larger national data set (Summers et al., 1999). Fathers were divided into two groups (fathers who had "good" and "bad" father–son experiences) based on those themes. The two groups were then quantitatively compared on fathers' reports of their investment with their own children, their disciplinary styles, and depression to further explore the emergent themes from the qualitative interviews.

Although 81% rated the general overall quality of their relationship with their father/father-figure while growing up as "excellent" or "very good" or "good," when respondents discussed their experiences with their father, their responses were not so clear-cut. Analysis of the coded transcripts produced evidence for six major themes descriptive of their relationships with their fathers: (a) special outings; (b) limited experiences; (c) sports, play, and recreation; (c) teaching values; (e) spending time in general, and (f) alcoholic/violent experiences. Themes classified as "major" if the item occurred in the transcribed texts of at least 10 (20%) or more participants. The largest number of fathers (n = 22) recalled their father taking them on special trips or outings such as vacations, hunting, and fishing. For example, when asked to describe a good or fun thing that he did with his father, one respondent replied, "Going to the lake, having cookouts at the park, having just a ball. The most warm and heartfelt experience I had—being with my stepfather and my mom, and my brother." Many fathers (n = 15) mentioned having limited

experiences with their father. One participant described this as, "Experience with him was hardly ever seeing him, like once on a weekend, and then I'd get dumped off at my grandparents house; he'd go to the bar." Along with special outings, many participants (n = 15) played sports and did other types of recreation with their father. For example, a participant enthusiastically replied, "One of the things he did that was good for us, me and all the kids, was water sports. We had a good ole time; we had one of the best times in my life." When fathers were asked about important things their own father taught them, many fathers described the values they were taught. This was exemplified by one father who said, "One of the most important things is if you're gonna get anywhere in life you gotta go out and work for it. Nobody's gonna hand you a new car or house or whatever." Besides being active with their father, some respondents (n = 13) talked about just spending general time with their fathers. One respondent mentioned that his father " . . . would give up a lot of things he would like to do to spend time with us." The most disheartening major finding was that some participants (n = 10) told stories of having alcoholic and/or violent fathers. One father described violent experiences by saying, "Yes, yes he hit me, basically just hitting me with an open hand about the head area. There were times when I felt he actually hated me and that's why he was doing it to me." Correlation analyses of the emergent themes and fathers' reports of their investment with their own children, their disciplinary styles, and depression were not significant.

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Head Start Fathers: Strengths and Challenges in Their Own Words

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PRESENTER: Benjamin J. Gorvine

While research on fathers has been a hot topic in recent years in the social sciences, Head Start fathers remain a relatively understudied group of men. In particular, there has been very little research that has taken a qualitative approach in working with this diverse group. This study seeks to expand our knowledge base about what Head Start fathers have to say about the rewards and challenges of their fathering role, as well as their views on how to foster greater involvement with the Head Start program. The study consisted of interviews with 31 Head Start fathers and father figures from Jackson and Hillsdale counties in Michigan. Fathers were asked three open-ended questions to assess their views on the rewards, challenges, and lessons of fatherhood: (a) What are some of the challenges you've faced as a father and/or in your fathering role? (b) What has been the most rewarding thing? and (c) If you had to give advice to someone who's just starting out as a father, what would it be? Fathers were also asked two questions regarding ways to facilitate greater participation in Head Start activities: (a) What sorts of programs would you have liked to see the Head Start offer that they did not offer? and (b) What sorts of programs offered by Head Start or other agencies would you be most likely to attend?

Some of the most common themes to emerge included (a) learning from mistakes, setting limits, and making enough time to spend with children (challenges); (b) seeing children grow, playing with children, and providing for children (rewards); (c) communication with one's

partner, open-mindedness, and patience (advice to new fathers); and (d) outdoor activities, parent education programs, and programs at times when fathers are available (suggestions for fostering greater involvement).

In addition to the thematic coding, the content of three questions regarding the rewards, challenges, and lessons of fatherhood were analyzed using the Linguistic Inquiry and Word Count (LIWC) computer software (Pennebaker & Francis, 1996), which has an exhaustive dictionary of positive and negative emotion words. Each father received two scores based on the percentage of positive and negative emotion words used across the three responses: (a) a positive emotion words score ($M = 3.01$, $SD = 2.11$) and (b) a negative emotion words score ($M = 1.09$, $SD = 1.15$). Intercorrelations were computed to see if these scores were associated with quantitative levels of father involvement, as measured via mother and father report based on eight items from the "My Family and Friends" measure (Reid, Landesman, Treder, & Jaccard, 1989). Two interesting findings emerged, with a higher percentage of positive emotion words in qualitative responses associated both with higher levels of father companionship and affiliative support of children ($r = .31$, $p < .10$), and with lower levels of conflict ($r = -.32$, $p < .10$) per fathers' reports. Additionally, a higher percentage of fathers' negative emotion words was associated with higher levels of child internalizing problems on the Child Behavior Check List (CBCL; Achenbach, 1991; $r = .54$, $p < .01$), as reported by teachers.

These findings are suggestive of the possibilities for linking quantitative measures of involvement with qualitative data.

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Occupational Patterns and Psychological Health of Low-Income Urban Fathers: Implications for Research and Practice.

Kevin London, Vanessa Rodriguez, Michelle Pelnar, Anna Maria Pinter

PRESENTERS: Kevin London, Vanessa Rodriguez

A significant aspect of many fathers' experiences that is often overlooked is the impact of their employment status and occupation. In fact, African American and Latino fathers experience an unequal burden of job and income loss (Bowman, 1987). With this said, it is imperative to investigate the psychosocial impact of joblessness and unstable occupational patterns often found in this population of low-income urban fathers. Bowman found that decreased psychosocial adjustment is evident among African American men who expect to fail in the role of primary breadwinner, father, and husband.

The goals of this investigation are to:

1. Describe fathers' occupations, occupational status, income level, job satisfaction, level of depression, and recent experience of stressful events.
2. Examine the relationships among fathers' occupational status, income level, job satisfaction, and experience(s) of stressful events with levels of depression, and test to what extent

father's experience(s) of recent stressful events are an added contributor to higher levels of father's depressive symptoms.

3. Explore, through qualitative interviews, the contextual variations of these men's experiences as fathers.

This analysis focuses on the impact that becoming a father has had on these men's lives, the obstacle(s) that stand in the way of these men being the type of father they would like to be, and the various types of help and support they receive.

Participants were recruited predominantly from Head Start agencies in a large urban city. Fathers' mean age was 26 (SD = 10.35). Data collection consisted of qualitative and quantitative interviews of 75 ethnically diverse, low-income fathers. Quantitative data included items from the Quality of Life Questionnaire (Olson & Barnes, 1982) that asks about varying aspects of parents' financial circumstances. To measure major life events we used selected items from a scale of stressful life events that ask whether each of a series of major life events happened in the past year (Belsky & Crnic, 1990). This scale is augmented with items from the Difficult Life Circumstances Scale (Barnard, 1989). To measure father's level of depression, we used the Center for Epidemiological Studies of Depression (CES-D; Radloff, 1977).

Preliminary analyses were completed to examine the relationship between fathers' job satisfaction and level of depression. Results indicated that fathers who reported lower levels of job satisfaction also reported higher levels of depression ($R = .31$, $p < .05$). Further analyses will be completed to examine the relationships among fathers' occupational status, income level, and experience(s) of stressful events with their levels of depressive symptoms.

Based on our analysis of qualitative interviews on a subsample of 20 participants, fathers described five paternal role ideologies: (a) the importance of being physically present for children, (b) providing for children financially and emotionally, (c) being actively involved in children's daily caregiving, (d) spending time playing with and teaching children, and (e) self-improvement through education or better jobs.

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External Relationships as Moderators of Father–Child Outcomes in Biological–Residential and Biological–Nonresidential Fathers

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PRESENTER: Marcel Montañez

Paternal residency status was examined in respect to the father investment in child scores. Moderators of this relationship such as father's relationship with his own father, and his relationship with the mother of the child were found to be significant moderators of the relationship between residency and paternal investment.

The categorical analysis of frequency data yielded the following interesting results:

1. The odds of having a high child investment score are nearly identical for resident and nonresident (1:1); however, this statistic may be misleading when we consider the other important variables.
2. For fathers who reported having a positive relationship with their own fathers, the odds of reporting a high child investment score are 6 times greater for biological-nonresidential (BNR) fathers when very low levels of arguments with mother are reported than when high levels of arguments are reported.
3. For fathers who reported having a positive relationship with their own fathers, the odds of reporting a high child investment score are 1.43 times greater for biological-residential (BR) fathers when very low levels of arguments with mother are reported than when high levels of arguments are reported.
4. For fathers who reported a negative relationship with their own fathers and high levels of arguments with the mother of the child, the odds of having a high investment in child are 3 times greater if the father is a resident (BR) than when he is not (BNR).

The relevance of this work is that it provides information about the complex system of relationships within family networks that serve as contributors to the development of current and future relationships between fathers and their children. The information generated in the current study contributes to the growing knowledge of how fathers contribute to the lives of their children. Specifically, this research provides information as to the importance of mother–father child relationships in respect to resident and nonresident fathers. The results demonstrate that the mother–father relationship is extremely important, especially with nonresidential fathers.

The relevance to EHS policy and practice is that this information offers insight as to the variation between fathering types BR and BNR. That is, the families where the father lives in the home may be different in terms of father–child relationships. Secondly the father–child dyad between two groups of fathers is moderated by outside relationships. This work provides insight to the diversity within EHS families, which are embedded in qualitatively different cultural and contextual households. This information should be considered a starting point for discussion as to whether differential intervention strategies would be beneficial to diverse EHS fathers and families.

Are Actions Really More Important Than Words? Fathers' Influences on Maternal Psychosocial Health and Infants' Home Environments

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PRESENTERS: Lauren R. Barton, Leanne M. Kallemeyn, Lee Anne Roman, Joseph S. Moore, Judith K. Lindsay, Hiram E. Fitzgerald

Recent research has begun to investigate how father involvement influences child development, coparenting relationships, and the family system. This longitudinal study investigated the differential impact of two types of biological father involvement: (a) conversational and (b) direct child-related activities. Secondary analyses of data from a subset of low-income participants in the Michigan Maternal Health Services Study were conducted to explore information on mothers' perceptions about the frequency of discussions with the father about child-related issues as well as her report about his direct involvement in child-related activities (e.g., direct caregiving, supervision and play, or providing resources for the infant). The study investigated how father involvement in the 6 months after delivery of a child influenced maternal psychoso-

cial health and the infant's home environment. Analyses suggest that low-income mothers who reported more frequent conversations with the father of the baby (FOB) in the 6 months after delivery had higher levels of self-esteem, maternal self-efficacy, and promoted more positive home environments and greater responsivity toward the child at 6 months than mothers reporting less frequent FOB conversational involvement. No significant differences in these areas were found between mothers who reported more frequent direct child-related activities by the FOB as compared to those with less frequent direct child involvement. Similar patterns of outcomes were found when 12-month maternal outcomes were examined.

The findings suggest that presence of conversational availability is more strongly related to maternal psychosocial outcomes and characteristics of the home environment than measures of either the father's direct involvement in child-related activities or overall measures of father involvement that incorporate both direct and conversational involvement. These findings affirm that effective coparenting through open conversation about the child may have beneficial outcomes for maternal psychosocial health and responsive maternal–infant interactions.

This study underscores the need for intervention programs that tend to focus on mothers and infants to attend to the broader family ecology and coparenting relationship. Emphasizing the important role fathers play in listening and talking to mothers about the child may be an intervention strategy that promotes positive maternal and maternal–infant outcomes. Implications are discussed for coparenting models and maternal–infant intervention strategies.

An Experimental Study of an Empowerment-Based Intervention for African American Head Start Fathers

Jay Fagan, Howard C. Stevenson

PRESENTER: Jay Fagan

This study examined the effects of an empowerment intervention, Men as Teachers, on African American Head Start fathers. Fathers were randomly assigned to the empowerment program or to a control group in which participants viewed a five-part videotape series on parenting. This study specifically tested the following hypotheses:

1. First, there will be a significant and positive association between participation in the empowerment-based program and fathers' understanding and beliefs about their ability to teach young children and foster children's racial socialization.
2. Fathers in the empowerment-based program also will demonstrate increased self-esteem and satisfaction with the parental role.
3. However, it is also expected that residential fathers will show greater gains than nonresidential fathers in self-esteem and parenting satisfaction as a result of their participation in the program.

The curriculum of Men as Teachers consisted of six major areas. The first topic, the meaning and value of being a father, focused on the role of fathers, the difference between caregiving and providing, being a good role model to children, and relationships with one's own father. The second topic, the need to challenge racism in society, covered society's negative images of African American men and fathers, the effect of racism on men's health and well-being, the influence of racism on fathering, and challenging racism in society. The third topic, obtaining control over one's own destiny, focused on why men abuse their children, the affect of drugs and alcohol on parenting, finding a way around violence and drugs, and helping children to have healthy values. The final three sessions pertained to child rearing. The first of these sessions

focused on racial socialization of children. The second child-related session addressed the role of parents as teachers. The final child-related session focused on positive discipline strategies.

The Jackson Personality Inventory (Jackson, 1976) was used to measure self-esteem. Self-Perceptions of the Parental Role (MacPhee, Benson, & Bullock, 1986) was used to measure fathers' satisfaction with the parental role. The Parent As a Teacher Inventory (Strom, 1984) was used to measure fathers' attitudes about the parent–child interactive system, their standards for assessing the importance of various child behaviors, and their value preferences concerning child behaviors. The Scale of Racial Socialization-Parent Version (Stevenson, 1997) was used to measure fathers' attitudes and values regarding the importance of socializing children about African American heritage and about the realities of racism.

Our results revealed a significant improvement in experimental, but not in control, fathers' attitudes about their ability to teach children. Contrary to expectation, there was no significant change in experimental fathers' racial oppression socialization practices. We anticipated that improvements in fathers' sense of self-esteem and parenting satisfaction would be greater for the experimental group but also would be influenced by the man's residential status. The results confirmed the hypothesis. Residential fathers in the experimental group showed significant gains in self-esteem and parenting satisfaction. Nonresidential fathers in the experimental group did not show improved self-esteem or parenting satisfaction.

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African American Fathers' Strategies for Protecting Young Children in Violent Neighborhoods

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In growing numbers of U.S. communities, families are living in neighborhoods plagued by violence, crime, and drug activity. African American families are disproportionately represented in these violent neighborhoods, where both parents and children may be exposed to robberies, physical assaults, and drive-by shootings. Although researchers have begun to identify the strategies parents use to protect children from violence exposure, the vast majority of research involves mothers and female caregivers. Little is known about the strategies African American fathers employ to help their children cope with community violence.

Given the dearth of research in this area, this qualitative study explored African American fathers' strategies to protect children from violence. We conducted three focus groups with a total of 18 Head Start fathers who lived in high violence neighborhoods. An African American male facilitator led these groups, which were held in Head Start centers in the Washington, DC metropolitan area.

Content analysis of focus group transcripts revealed fathers' use of seven protective strategies, organized under three major themes: (a) monitoring children, (b) educating children about

safety, and (c) improving community life. Under the monitoring children theme, fathers emphasized the need to constantly supervise their children in the home, on the front steps, and on the playground. Fathers also restricted neighborhood contact by avoiding interacting with neighbors and keeping their mouths shut about crime and other problems. Fathers felt that getting involved in the goings-on of their neighborhood would bring danger to adult and child family members.

Under the theme, educating children about safety, fathers taught their children about home safety, including how to avoid opening the door for anyone, how to lay on the floor if they heard gunfire, and how to dial 911. Second, fathers taught their children about neighborhood survival tactics, such as how to avoid drug dealers, which streets were dangerous, and which houses/shops children should go to if trouble occurred. Thirdly, fathers taught their preschoolers how to handle peer conflict through peaceful, nonviolent behavior, such as walking away from fights, or seeking out parents and teachers for help with problems. Some fathers also discussed the need to teach sons and daughters how to defend themselves when provoked by others so they would not be bullied.

Under the third theme, improving community life, fathers discussed directly confronting neighborhood troublemakers (drug dealers, thugs) to combat community violence and engaging in community activism (joining Neighborhood Watch groups, Head Start parent councils, voter registration drives, and community clean-up campaigns) to increase neighborhood order and enhance children's safety in their communities.

Our study suggests that many fathers would benefit from joining supportive groups that address the challenges of living in violent neighborhoods. Reaching out to fathers to join neighborhood improvement activities, together with children's recreational and educational activities, may enhance fathers' male support networks and thwart the growing isolationism in these communities. Programs designed to support parents in their efforts to rear children in safe neighborhoods would be strengthened by antiviolence policies that attempt to improve the economic infrastructure of low-income communities.

Father–Toddler Interactions: Measuring Paternal Psychological Factors

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PRESENTERS: Joanne Joseph, Vanessa Rodriguez, Ana-Maria Pinter

Men's job satisfaction and depressive symptomology were examined in relation to their interactions with their toddlers. Specifically, our goals were to (a) characterize the nature of fathers' and children's play interactions, (b) assess the associations between the quality of fathers' interactions with their toddlers, and (c) assess relations between fathers' job satisfaction and depression symptomology with father–child interactions.

Participants were 50 ethnically diverse, inner-city fathers and their toddlers (23 boys). Data collection consisted of (a) videotaped father–child interactions; (b) eight items from the Quality of Life Questionnaire (QOL; Olsen & Barnes, 1982), which measures aspects of fathers' financial circumstances; and (c) the Center for Epidemiological Studies of Depression (CES-D; Radloff, 1977), which measures fathers' current level of depressive symptomatology. Dyads were videotaped for 10 minutes at home during semistructured free play.

The quality of father–child interactions were coded from videotapes using the Child-Caregiver Affect, Responsiveness, Engagement Scale (C-CARES; Tamis-LeMonda, Ahuja, Hannibal, Shannon, & Spellman, 2001), a 5-point likert scale. Twenty-one father items

(e.g., affect, responsiveness, intrusiveness, language quality) and 16 child items (e.g., affect, responsiveness, involvement with toys, and communication) were assessed.

First, two sets of factor analyses were conducted. Factor analyses on father items indicated a three-factor solution (66% of the variance). The first factor, Responsive-Didactic, reflects paternal behaviors that were positive, responsive, and didactic. The second factor, Negative-Unresponsive-Intrusive, reflects paternal behaviors that were parent driven and achievement-oriented, through using highly structured, negative verbal statements, unresponsive, and intrusive behaviors. The third factor, Inflexible-Teasing, reflects paternal behaviors that were inflexible with high levels of teasing.

The factor analysis on child items revealed a three-factor solution (72% of the variance). The first factor, Cognitive-Playful, reflects child behaviors that were (a) positive in affect, (b) sophisticated in language and play skills, and (c) highly involved with toys. The second factor, Social, reflects child behaviors that were positive, participatory, and responsive toward their father. The third factor, Regulated-Persistent, reflects child behaviors that were highly regulated and persistent.

Next, correlations among father and child factors were performed. Responsive-Didactic father factors related to all three child factors (*ts* range = .33 to .73, *ps* < .05 to .001). Negative-Unresponsive-Intrusive father factors were negatively associated with child Cognitive-Playful factors ($t = -.31$, $p < .05$).

Finally, correlations between father factors, QOL, and CES-D were performed. Findings indicate that fathers' job satisfaction negatively related with their depression level ($r = .31$, $p < .05$). Also, fathers with greater satisfaction with their financial circumstances positively related to their Responsive-Didactic factors ($r = .34$, $p < .05$). Surprisingly, fathers' depression level was unrelated to their behaviors or their children's behaviors.

Findings from this study may be used to inform intervention services available to fathers from impoverished communities, as well as policy-decisions for social and educational services. Specifically, this study builds on our current understanding about the different interaction styles that ethnically diverse inner-city fathers may exhibit toward their toddlers. These findings also contribute to our understanding of how fathers' job satisfaction and current depressive symptomology relate to father–child interactions within the plight of poverty. The extent to which paternal psychological factors and quality father–child interactions exert meaningful, long-term influence on the father–child relationship remains to be examined.

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Father Presence, Exposure to Violence, and the Social Functioning of Head Start Children

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(Summary not available)

Home Visiting

A Meta-Analysis of Home Visitor Programs: Moderators of Improvements in Maternal Behavior

M. Angela Casady, Laurie A. Van Egeren

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Early intervention programs for at-risk families were established in the 1960s following the Supreme Court desegregation case affirming all children's right to an adequate education (Ramey & Ramey, 1998). Evaluations of center-based programs and home visiting family support programs followed their development. This paper presents a meta-analysis of the home visiting evaluation literature and correlates of program effectiveness, based on the difference in maternal behavior between experimental and control groups.

A search of ERIC, Social Work Abstracts, and PsychLit yielded 93 articles. Criteria for exclusion from the study were (a) no quantitative data on maternal behavior, (b) a pretest/posttest study design, (c) a center-based approach in addition to or instead of a home visitor model, (d) program location outside of the United States, and (e) programs for handicapped children. Seven studies, including 9 different groups of participants (N = 1,600), met inclusion criteria.

The mean of the effect size, weighted by sample size, was 0.12, with a 95% confidence interval ranging from -.1 to .3. This confidence interval includes an effect size of zero. However, a test of heterogeneity of the effect sizes indicated that the studies are heterogeneous and should not be combined, $Q = 29.58$, $df = 8$, $p < .005$. In such cases, Hedges (1994) suggests looking for a moderating variable. A regression of effect size on home visitation frequency yielded the chi-square value of 19.02 ($df = 1$, $p < .005$). Q Residual (10.54, $df = 7$, $p < .025$) was not significant. Thus, one variable, home visitation frequency, explains all of the variance in effect size.

Another test for significance of home visitation frequency uses the standard error of the beta (.002); the 95% confidence interval (.005 to .013) does not include zero. The resulting equation, $T = -.114 + .0093$ (number of visits per year), indicates that it is necessary to have more than 12 visits per year to achieve an effect size greater than zero. We concluded that home visitation does produce a positive effect, dependent on the level of home visitation frequency.

Other significant variables included (a) date of study publication ($Q = 7.96$, $df = 1$, $p < .005$), (b) status of administrative organization ($Q = 8.25$, $df = 1$, $p < .005$), and (c) size of sample ($Q = 4.61$, $df = 1$, $p < .05$). These regressions show that earlier publications tended to have larger effect sizes. Government-based programs tended to have smaller effect sizes when compared with university or private programs. Larger programs tended to have smaller effect sizes.

Intercorrelations among the moderator variables indicated that study characteristics might be confounded with frequency of visitation. Later studies tended to be larger than earlier studies ($r = .42$). Government funding may have increased the number of participants ($r = .66$), but the frequency of visitation also tended to diminish ($r = -.74$). A qualitative analysis of early childhood interventions confirmed our findings, suggesting that the intensity of early model

programs was diluted during government implementation (Gomby, Larner, Stevenson, Lewit, & Behrman, 1995).

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Factors Contributing to Engagement and Retention in Early Home Visiting Family Support Services

William McGuigan

PRESENTERS: William McGuigan, Aphra Katzev

Why do some eligible parents who enroll in home visitation programs never fully engage in services? Why do some parents who engage depart before program completion? Two studies were conducted to answer these questions. Data came from Oregon Healthy Start (OHS), a voluntary home visiting program designed to prevent poor child and family outcomes in 15 Oregon counties. Engagement was defined as participation in home visiting services for 90 days or more.

Data from 4,057 enrolled families showed that 745 (18%) never actively engaged in services, remaining enrolled for an average of 34 days. Multilevel analysis revealed that mothers were 36% less likely to engage in home visiting services if they were raising their infant in a county that had poor community health. Community health was measured by six indices from county vital statistics including infant death rate and rate of low birth weight infants. Mothers raising their infant in isolation, or with a limited support network, were 39% less likely to engage in home visiting services. Latino mothers were nearly twice (82%) as likely to engage in home visiting services than were White, non-Latino mothers.

The second study examined data from 1,093 families who were served by one of 71 home visitors who worked within 1 of 12 Oregon counties. Multilevel analysis showed that families were 16% less likely to remain in home visiting services for 1 year if they were raising their infant in a county that had a high level of community violence. Community violence was measured by the county's murder, assault, rape, and domestic violence rates. Another important finding was that every 1-hour of direct supervision that the home visitor received per month nearly doubled (1.89) the likelihood of families remaining in home visiting services for 1 year. In addition, older mothers and Latino families were significantly more likely to remain in home visiting services for 1 year.

By identifying factors across multiple levels of influence, home visitors can develop strategies to increase engagement and retention rates. Younger, White, non-Latino mothers may be the most difficult to engage and retain in early home visiting programs, especially if they live in areas of poor community health or high community violence. To engage these mothers, home visitors may need to increase the intensity and duration of outreach efforts and obtain additional contact information, especially when maternal isolation is identified. Early involvement

in parent support groups may be another strategy to maximize engagement. Perhaps most importantly, this study shows that supervision is essential to retain families in service. For multi-risk families, supervisors may choose to shadow home visitors on visits and work with visitors to develop appropriate service plans. Supervision can also increase program fidelity by reducing the ambiguity of the home visitor's role and reminding visitors that their role is to mobilize families to act for themselves. By identifying factors that are associated with program engagement and retention across multiple levels of influence, a number of viable possibilities for future research, practice, and policy emerge.

Evaluating Denver Best Babies Initiative: A Relationship-Based Home Intervention for High-Risk Primiparous and Multiparous Mothers and Their Infants

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PRESENTERS: Emily Hunt, Lorraine F. Kubicek, Edith Purcell, Anne Rockenbach

Prior research shows that a child's healthy beginning starts before birth and that the first years of life are crucial for fostering a child's social, emotional, cognitive, and physical growth and development (Fox, Leavitt, & Warhol, 1999). Home visitation programs that promote a healthy pregnancy and delivery, provide family health and child development education, and encourage the development of healthy family attachments can make a positive difference in the lives of children and families. This is especially true if they are initiated during pregnancy and continued into the first 2 to 3 years of a child's life (e.g., Olds et al., 1999).

Denver Health provides maternity care for some of the highest risk women in Denver and Colorado. The Denver Best Babies Initiative (DBBI) is a broad-based home intervention program targeted in Denver's poorest neighborhoods. DBBI includes implementation of the Nurse Family Partnership Program (primiparous mothers) or the Healthy Futures Program (multiparous mothers) during pregnancy and continuing until the child's 2nd birthday. Nurses and social workers teach mothers about prenatal healthcare and childbirth preparation and help them with referrals for healthcare coverage and other community resources. They also incorporate Partners in Parenting Education (PIPE; Butterfield, 1996) into their visits. PIPE is a flexible and interactive parenting program that emphasizes the importance of healthy parent–child relationships in promoting early development.

Subjects were 40 low-income women and their families living in communities with high infant mortality, high rates of low birth weight, and/or child abuse who were receiving prenatal care at Denver Health. Half were first-time mothers, and half had prior children. All were at increased risk for pregnancy and/or parenting problems. Half of the women in each parity group were receiving home visitation services through DBBI; the other half, a comparison group, were not receiving these services, but were selected from the same communities. These women were among the first recruited for an ethnically diverse sample that will eventually include 450 women, many of who are teens and/or single parents.

Our repeated measures design allows us to evaluate continuity and change in the mothers and their infants over a period of approximately 25 months. Mothers were interviewed at 36 weeks gestation, and mothers and their infants participated in a playroom laboratory visit when their infants were 4, 12, and 24 months old. This poster focuses on data collected at the first 3 time points.

Analysis and discussion focus on group differences in outcomes between program and comparison mothers and their children. Specifically, the following outcomes were evaluated: (a) enhanced maternal mental health and functioning; (b) greater understanding of child development and more realistic expectations of children; (c) more positive parenting attitudes and behavior; and (d) enhanced cognitive, social, and emotional development for children.

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Adherence to an Early Head Start Logic Model and Achievement of Early Childhood Development Outcomes

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Child Development Resources of Ventura County, Inc. is evaluating the relationship between adherence to an Early Head Start (home-based option) logic model and achievement of early childhood development and family outcomes. Logic models explain how the activities of a program are intended to achieve program goals. The articulation and investigation of logic models are critical in (a) understanding the impact of programs, (b) supporting quality assurance activities, and (c) demonstrating that a program is effective.

Child Development Resources of Ventura County, Inc. is a Head Start/Early Head Start provider. The Early Head Start program is an intensive, home-based option with a capacity to serve 160 infants/toddlers. The program promotes early childhood development (cognitive, physical, emotional, and social), fulfillment of parental responsibilities, and family self-sufficiency.

The Early Head Start home teachers completed a facilitated process to develop a logic model that explains the successive impacts of their home-based program. The process was premised on the model developed by Mario Hernandez and Sharon Hodges (Hernandez, Hodges, & Worthington, 2000). The logic model describes the expected impact of the services at successive levels, extending from the provision of direct-services through each link of the logic model leading to attainment of child development and family goals. The chain of logic that was developed is as follows:

1. Home-teachers receive intensive training in early childhood development, family partnership, and developing strength-based agreements.
2. Trusting relationship with the family is established.

3. A comprehensive assessment is completed.
4. A comprehensive plan of care is completed.
5. Home teaching and services from other agencies are provided across three areas:
   a) Early childhood development
   b) Safe and nurturing home
   c) Empowering parents to act on behalf of their children.
6. Parents show enhanced skills in early childhood development, parental roles and responsibilities, and self-sufficiency.
7. Infant/toddler and family outcomes are achieved.

Child Development Resources has implemented a longitudinal repeat measures, data collection process. Data concerning (a) adherence to program principles and practices, (b) evidence of each link in the logic model, and (c) the attainment of infant/toddler and family outcomes are being collected. Initial baseline data collected at enrollment, and 3 times annually. Data are collected from interviews with parents, home teachers, and review of child charts.

Preliminary baseline data show strong adherence to some of the logic model activities (e.g., developing trusting relationships with families and completing assessments) and partial fidelity to other activities (e.g., development of formal partnership agreements within the program's time frame). These results pinpoint for program managers and staff, areas of program success as well as other areas in need of improvement. Implementation of a logic model assists Early Head Start programs in ascertaining whether their program's practices and principles have a direct impact on early childhood development outcomes.

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Infant/Toddler

What Types of Interventions Best Facilitate Communication Between Toddlers Who Are Developmentally At Risk and Adult Caregivers?

Paula L. Horner

PRESENTER: Paula L. Horner

The past 2 decades have spurred dramatic advances in the ability to identify, assess, and treat a variety of handicapping conditions in their earliest stages of development (Thomaidis, Kaderoglou, Stefou, Damianou, & Bakoula, 2000). When treating a toddler identified as being at risk for later social–communicative delays it is important to consider the multiple influences that affect development of competent communication (Barnard & Carol, 1990; Guralnick, 1999; Kaiser, Hancock, & Hester, 1998; Simeonsson, 2000). Research and theory have come to recognize that natural adult–toddler transactions greatly influence many aspects of the child's developmental process (Grubbs & Niemeyer, 1999; Hanson, Randall, & Colston, 1999; Weisner, 1999; Whitehead, Jesien, & Kearns-Ulanski, 1998). Therefore, the present study was guided by several general questions and factors of interest that address the critical role played by parents in early development. These questions are as follows:

1. What patterns of interaction emerge in infant–mother dyads during play routines?
2. What is the relationship between the infant development status and adult interaction style (MacDonald, 1989)?
3. What service delivery model provides for the most effective and stable generalization into the home environment (Kaiser et al., 1998)?

Fifteen mothers and their 12- to 24-month-old toddlers participated in the study.

Each mother–toddler dyad was assigned to one of three service delivery models: (a) twice-weekly group services for toddlers for a 3-month period, (b) once weekly individual intervention coupled with a weekly parent training session for a 3-month period, and (c) a twice weekly parent training program for 10 weeks. As a means of assessing maternal understanding and use of these techniques all dyads were videotaped 3 times: (a) before treatment began, (b) immediately following the completion of the treatment period, and (c) at a follow-up visit 2 months after the treatment program had ended.

Analysis of the interaction data was an ongoing process throughout the period of the study. Data were analyzed in terms of the three service delivery models as well as across individual infant–mother pairs. Data from the transcription of videotapes were coded using QSR NUDIST 4.

Analysis of the field notes indicated that mothers in the individual treatment program used more closed-ended questions and directives during play. Mothers with this training background usually issued several consecutive questions or directives without providing adequate response time. Nor did these mothers consistently respond to overt communicative bids by their toddlers. Mothers involved in the parent training only and the group treatment conditions displayed the most nondirective and facilitative style of interaction. These mothers responded to toddler vocal

and gestural cues as meaningful, waited longer for responses, and used a more exaggerated facial display during play activities.

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Predictors and Outcomes of Maternal Teaching During Interactions Between Mother and Child at 24 Months

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This study investigated trends associated with maternal teaching of 24-month-old, low-income children. Previous research, based mostly on studies of middle class families, indicates that parenting style is related to child vocabulary growth (Akhtar, Dunham, & Dunham, 1991; Baldwin, 1995; Hart & Risley, 1995). Hart and Risley found that parenting style accounts for 61% of the variation in child vocabulary growth, but their sample included few low-income families. This study extends these findings by looking at maternal engagement style in a larger group of low-income families.

The sample consisted of 55 mother–child pairs from a larger sample of low-income families eligible for Early Head Start in Windham County, Vermont. At baseline, the mothers' average age was 25.5 years (SD = 6.7), and average education was 11.78 years (SD = 1.44). Mothers' verbal intelligence (sample mean scaled score = 9.38, SD = 3.41) was measured using the vocabulary subscale of the Weschler Adult Intelligence Scale (WAIS; Weschler, 1981). Maternal literacy levels (mean grade equivalent = 11.37, SD = 4.29) were assessed using the Woodcock-Johnson Letter/Word Recognition Test (Woodcock, 1978). At the time of observation reported here, children

(31 girls, 24 boys) ranged in age from 22.7 to 28.45 months. Children's cognitive functioning (mean *MDI* = 90.69, *SD* = 13.03) was assessed using the Bayley Scales of Infant Development-II (Bayley, 1993). The MacArthur Communicative Development Inventory (CDI; Fenson et al., 2000) was used to measure children's expressive language (mean number of words = 64.49, *SD* = 23.25).

Mother–child dyads were videotaped in their homes during 10 minutes of activity with a book and two toys. Verbal and nonverbal mother–child interactions were transcribed. In addition, maternal engagement was coded using the Social-Emotional-Cognitive Coding Scheme (Ayoub, Rowe, Major-Ahmed, & Raya, 1999). We considered mothers to be teaching when they were giving definitions, providing explanations, supplying background information, or questioning to check the child's knowledge. On average, mothers engaged in teaching during 27.67% (*SD* = 10.28) of their interactions, ranging from 2.27% to 47.92%. Multiple regression showed that mothers' raw Woodcock-Johnson ($\beta = 1.11$, $p < .001$) and WAIS ($\beta = -0.22$, $p < .05$) scores accounted for 23.22% of the variation in the percentage of teaching engagement used. Children's raw Bayley scores ($\beta = 1.78$, $p < .001$) and mothers' teaching ($\beta = 0.61$, $p < .01$) together accounted for 57.18% of the variation in the child's CDI scores. Other demographic variables (mother age, mother education, child gender, child age, birth order, household income, and participation in Early Head Start) were not significant predictors in either of these equations.

Consistent with earlier studies (Akhtar et al., 1991; Baldwin, 1995; Hart & Risley, 1995), our results reveal that, in general, mothers who engage in a higher percentage of teaching behaviors, such as defining, explaining, informing, and knowledge checking, have children with larger expressive vocabularies. These findings have implications for children's future school readiness and performance, especially since vocabulary is the single best predictor of success in reading, which in turn, is the single best predictor of success in school (Snow, Burns, & Griffin, 1998).

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Noise, Classroom Functioning, and Stress in Classrooms for 2-Year-Olds

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Exposure to high levels of noise is related to negative physiological, motivational, and cognitive effects in school-aged children (Evans & Lepore, 1993; Maxwell & Evans, 2000; Evans & Maxwell, 1997). More specifically, some literature has shown that exposure to chronic noise is related to deficits in the prereading skills of preschoolers (Maxwell & Evans). Furthermore, younger children require a better signal to noise ratio than older children do in order to understand words in context (Evans, Lercher, Meis, Ising, & Kofler, 2001). Studies also show that noise effects may be significant for children with preexisting cognitive deficits. (Johansson, 1983; Nober & Nober, 1975; Zentall & Shaw, 1980). The adverse effects of noise exposure may create larger problems for children already struggling to keep up with their peers.

A limited amount of work has examined these effects for young children under 3 in group care settings. It is, however, an increasingly important area of study for two reasons: (a) changes in child care patterns indicate that more young children are being cared for in group-care settings (Ehrle, Adams, & Tout, 2001) and (b) enrollment in child care is occurring at times when children generally attain important developmental milestones such as language (Goldshmied & Jackson, 1994).

This study explores how classroom noise is related to stress and overall functioning of early intervention classrooms serving 2-year-olds. It was hypothesized that (a) higher noise levels in classrooms would be related to perceptions of lowered classroom functioning, (b) higher noise levels in classrooms would be related to higher teacher ratings of teacher stress, and (c) higher noise levels in classrooms would be related to higher teacher ratings of child stress.

The study was conducted during the summer session in three early intervention classrooms at a university-sponsored preschool that served children under the age of 3. Each classroom scored a 5 or higher on the Infant/Toddler Environmental Rating Scale (ITERS; Harms, Cryer, & Clifford, 1990). Noise level measurements were obtained daily using a Type I Sound Level Meter (Larson–Davis System 814) placed in a similar position in each classroom during each observation. Six classroom teachers completed daily ratings of stress and classroom functioning.

These three classrooms were noisy environments by current noise standards. Furthermore, Pearson product–moment correlations indicated that higher noise levels were related both to higher ratings of child stress and to lower ratings of classroom functioning; there was no correlation between noise levels and teacher stress. Further analyses indicated significant differences between the three classrooms and across the 2 times of day; these differences did not affect the relationships obtained between noise, stress, and classroom functioning. These results are especially significant because these classrooms are not typical of many settings serving toddlers—they had small numbers of children, well trained teachers, good teacher–child ratios, and high ratings on the ITERS. Because toddlers are actively involved in language acquisition, future research should examine the longitudinal effect of early exposure to noise on receptive and expressive language skills, particularly for more vulnerable populations of children.

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Play Interactions Among Early Head Start Mothers and Toddlers

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This study examined the play interactions among mothers' and toddlers' from a Latino low-income background attending an Early Head Start (EHS) program ($N = 60$). The children ranged in age from 15 to 27 months (mean age = 21.07 months). Mothers and toddlers were videotaped for 12 minutes in a free play session with a variety of toys. Their play content was coded independently episode-by-episode using three mutually exclusive play level codes: (a) exploration, (b) nonsymbolic functional acts, and (c) symbolic or pretense play (see, Damast, Tamis-LeMonda, & Bornstein, 1996).

Findings demonstrated that both toddlers and mothers of this group were primarily engaged in nonsymbolic functional play. Although engaging in symbolic play is more developmentally appropriate among mothers and toddlers of this age group (Belsky & Most, 1981; Fiese, 1990; McCune-Nicholich, 1981), we observed very little pretense play among dyads in this group (on average less than 1 minute). Our coding further distinguished between maternal play acts that were immediately preceding toddlers' play (eliciting play acts) versus maternal play acts that occurred immediately following toddlers' play (elaborating play acts). On average, mothers made eliciting play acts to 32% of their toddlers' play. That is, more than two thirds of the time mothers did not make any play suggestion immediately preceding their toddlers' play. Similarly, mothers made elaborating play acts to 34% of their toddlers' play; thus, approximately two thirds of the time, mothers did not make any play suggestions in response to their toddlers' play acts. It is important to note that only 2% of mothers' elaborating play acts occurred when toddlers were uninvolved or unfocused.

These findings have two major implications for practice in the context of Early Head Start. First, research suggests that mothers' knowledge about children's early developing abilities, including their knowledge about play, relates to their behaviors with the children (e.g., Damast et al., 1996; Tamis-LeMonda & Bornstein, 1994). Thus, in the context of early intervention, increasing mothers' knowledge about the development of children's play is important for enhancing their ability to scaffold more age-appropriate play behaviors among their toddlers. Second, in the play interactions we observed, mothers exhibited little evidence of "scaffolding"

their children's play. For example, the mothers we observed often neglected to follow their toddlers' play with a play suggestion at a higher level, especially in terms of scaffolding more imaginary play. The lack of scaffolding among these dyads may be related to different cultural values these mothers may have about the role of adults in children's play. Given that there is a good deal of support in the literature on middle-class Euro American dyads that play enhances children's development in a myriad of ways, it is imperative that we understand better the practices of play among minority low-income parents and toddlers (McCollum & McBride, 1997).

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Neonatal Factors Affecting Infant Readiness

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Infant readiness can be conceptualized as a combination of cognitive and temperamental qualities that better equip the child with the ability to process stimuli and master his/her environment. Deficits in infant cognitive and temperamental functioning have been shown to negatively affect childhood adjustment patterns (e.g., Shaw et al., 1998). As children grow, such deficits, when not addressed, can continue to impair functioning in a variety of domains. Thus, the earlier we can identify which children are at risk for problems with infant readiness, the greater the possibility of intervening successfully and avoiding the accumulation of risk factors.

In the present study, we examined the contribution of a variety of neonatal factors and caregiving factors at birth to indices of lower readiness at 6, 12, and 24 months, including temperamental and cognitive functioning. One hundred African American mother–baby dyads were recruited from the University of Chicago General Care Nursery. Neonates were administered the Neonatal Behavioral Assessment Scale (NBAS; Brazelton & Nugent, 1995). Pre and perinatal factors such as birth weight and obstetrical complications were also assessed. Factors in the caregiving environment that were hypothesized to affect infant readiness were measured, including sociodemographic factors, maternal depression, and family life stressors. At 6, 12, and 24 months, infant readiness was assessed through cognitive development scores obtained using the Bayley Scales of Infant Development-2nd Edition (BSID-II; Bayley, 1993), and temperamental characteristics gathered by mother's reports of child behavior and characteristics. At 12 and 24 months, emotional regulation and engagement was also assessed through the Bayley Behavior Rating Scale.

Infant cognitive development scores are within average range between 6 and 12 months; however, by 12 months declines among scores exist. Relations between neonatal factors and 6-month readiness were tested by computing bivariate Pearson Correlation Coefficients. Significant relations were found between neonatal scores on the NBAS and the maternal factors assessed, and later indices of readiness, at 6, 12, and 24 months. For example, unpredictability at 6 months was associated with neonatal behaviors such as state regulation ($r = .260$, $p < .05$) and consolability ($r = -.282$, $p < .05$) and also with caregiver factors at birth such as difficult life stressors ($r = .347$, $p < .01$) and depressive symptoms ($r = .222$, $p < .05$). Although there are no significant associations between neonatal behavior and 12-month cognitive development scores, neonatal behavior and 12-month behavior during cognitive testing is significantly associated. Low neonatal consolability is associated with low attention ($r = .323$, $p < .05$), high frustration ($r = -.274$, $p < 1.00$), and low persistence ($r = .303$, $p < .05$).

The purpose of the present study was to identify predictors of early learning readiness. The results suggest that newborns that have difficulty with behavioral and emotional regulation are more likely to show problems with readiness in the first 2 years of life. If we consider that important infant qualities seen emerging as early as 6 months quite possibly set a pattern of interference and/or assistance with healthy parent–child relations, then by identifying these at-risk neonatal temperaments correlates provides us the opportunity to intervene at the earliest point possible. Further examination of which children, in which caregiving environments are at risk for suboptimal development is needed to lay a foundation for targeted prevention programs.

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Medical Help-Seeking Behavior Among Low-Income Mothers of Infants and Toddlers

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African American mothers value their children's health more than their own (Rainey, Poling, Rheaume, & Kirby, 1999). However, for many of the young and poor of this group, several health vulnerabilities and healthcare issues have been documented (Barnard & Morisset, 1995). Caring for the health needs of infants and toddlers, especially when they are chronically ill, requires the use of psychological and social–community resources (Tenney & Comer, 2000). Indeed, although chronic poor health in children creates an additional burden that an already struggling household can barely afford (Perrin, Shayne, & Bloom, 1993), it makes ever more critical, appropriate healthcare access and utilization for such families.

This study investigated the factors that impact maternal medical help-seeking behaviors (i.e., healthcare access and utilization) among a group of low-income, inner city African Americans who were eligible for Early Head Start (EHS) services. The following question is examined: How

are children's illness, maternal education, mother–child relationship, and maternal coping skills related to maternal medical help-seeking behaviors?

The mothers (mean age = 19.18, *sd* = 3.06) from a Midwestern, inner-city area were interviewed at the time they were identified as eligible for EHS services and then again, 15 months thereafter. Mothers' education (MEDUC) level was gleaned from the Head Start Family Information System questionnaire. Maternal coping (MCOPE) was based on subscales (e.g., disengagement [DISENGAGE], emotionality [EMOTE]) that make up the Ways of Coping Scale (Carver, Scheier, & Weintraub, 1989). Mother–child relationship (RELATE) was examined using coding of such aspects as maternal sensitivity (PSENS) and mother–child mutuality (DYAD). Coding was performed on the video-recordings of the Three-Bag Structured Play Task (Ware, Brady, O'Brien, & Berlin, 2000). Illness in children (ILLHEALTH) was identified using items that were adapted from the National Health Interview Study by the EHS Research Consortium. Maternal medical help-seeking behavior was established through Principal Component Analysis. This variable was comprised of two clusters of factors: (a) mothers' acquisition and maintenance of child medical insurance (HELP–INSURE) and (b) child health screening and testing (HELP–SCREEN/TEST).

Multiple regression main effects were found. HELP–INSURE was predicted by MEDUC, PSENS, and DYAD ($R^2 = .14$, $df = 3, 91$, $F = 4.709$, $p = .004$). The relationships among the variables indicated that HELP–INSURE required a puzzling combination of better education but less sensitivity and mutuality in mothers. This result reflects the probability that better-educated mothers held jobs that provided insurance coverage for their children. However, working mothers may also have tended to score less on measures of sensitivity and mutuality. Further consideration of this result is needed.

Negative MCOPE (i.e., DISENGAGE, EMOTE) and ILLHEALTH helped explain 11% of the variation in HELP–SCREEN/TEST ($R^2 = .11$, $df = 3, 91$, $F = 3.44$, $p = .02$). The regression estimates indicated that mothers who engaged less in negative coping and had healthy children were the ones who brought their children for health screening and testing. This finding emphasizes the need to support low-income mothers whose coping skills are further challenged when caring for their sickly children.

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Inner City Mother–and Father–Child Interactions: Similarities and Differences in Affect, Responsiveness, Play, and Language Behaviors

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The present investigation compared the interaction patterns of mother–child and father–child dyads within an underrepresented group of low-income, ethnically diverse families. Specifically, the goals were to (a) describe the nature of and examine differences in mother–child and father–child behaviors; (b) identify and compare the underlying factor structures of mother, father, and child behaviors; and (c) examine the associations between mother, father, and child factors.

Participants were 50 mother–child and father–child dyads. Children ranged from 24 to 31 months of age (52% boys). Each dyad was videotaped for 10 minutes at home during semistructured free play. The quality of mother– and father–child interactions were coded from videotapes using the Child-Caregiver Affect, Responsiveness, Engagement Scale (C-CARES; Tamis LeMonda, Ahuja, Hannibal, Shannon, & Spellman, 2001), a 5-point likert scale. Seventeen parent behaviors (e.g., affect, responsiveness, intrusiveness, language quality) and 14 child behaviors (e.g., affect, responsiveness, involvement with toys, communication) were assessed.

First, mothers' and fathers' behaviors during play interactions with their children were described and examined. A striking finding was that fathers were rated significantly higher than mothers on many positive variables such as positive affect, positive touch, responsiveness to verbal cues, and emotional attunement. On the other hand, mothers were rated only significantly higher on negative affect. Children showed significantly more positive behaviors and affect with fathers, and more negativity with mothers.

Second, the factor structures for mothers and fathers were compared. Three factors were identified for each parent. Mothers and fathers shared a Responsive-Didactic factor. However, the mother factor included greater positive affect and responsiveness, whereas the father factor included greater sophistication of play and achievement orientation. Mothers and fathers also shared an Intrusive-Achievement factor. On the third factor, mothers and fathers diverged. The mother factor, Structured Play, reflected play focused on toys rather than the child. The father factor, Positive Touch, indicated "rough and tumble" play behaviors. Three distinct child factors emerged for child with mother: (a) Emotionally-Regulated, (b) Cognitive-Playful, and (c) Socially Responsive. Two of these factors emerged for child with father: (a) Cognitive-Playful, and (b) Emotionally-Regulated. A third factor, unique to child with father was Positive Touch.

Finally, the associations between, mother, father, and child factors were examined. Mothers' Intrusive-Achievement factor negatively related to Emotionally-Regulated child factor ($r = -.38$, $p < .05$). Responsive-Didactic mother factor positively related to the Socially Responsive child factor ($r = .53$, $p < .01$). The Responsive-Didactic father factor positively related to all three child factors (*rs* range .36 to .44, $p < .05$). Fathers high on the Positive Touch factor positively related to Positive Touch child factor ($r = .46$, $p < .01$) and negatively related to Cognitive-Playful child factor ($r = -.34$, $p < .05$).

These findings shed light on the similarities and differences in the ways mothers and fathers interact with their 24-month-old children. Results suggest the need to further examine mother– and father–child interaction patterns at a multidimensional level. Furthermore, while this study is an initial step to exploring how child behaviors relate to parent behaviors during a dyadic play interaction, further research may begin to examine more closely how mother and father behaviors uniquely relate to other outcomes in children (e.g., Bayley, MacArthur).

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Language Development/Early Literacy

Head Start on Science and Communication

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The Head Start on Science and Communication Project is designed as a 5-year intervention targeting science curricula at the 3–5 grade levels. The overall goal is to develop a model for the professional development of teachers to use a learner-centered and teacher-facilitated approach to provide integrated, interdisciplinary links to science knowledge and communication skills development. To achieve reform in science curricula, the program aims to improve three vital areas of science education: (a) curriculum enhancement, (b) resource development, and (c) professional development of teachers.

The framework of the program is closely aligned with the K-2 Head Start on Science and Communication program (Hammrich & Klein, 1999). The program is an inquiry-based, interdisciplinary approach to elementary science education. The curriculum is built on research questions that encourage student-facilitated exploration of the science topic. The program is divided into four modules covering life, earth, physical, and technological sciences. The students are introduced to each science concept through the use of a fictional story, imparting students with the necessary background information to solve the research questions posed in each of the four science areas.

During the first year of program development, the primary objective for the program developers was to establish a knowledge base on current practices in science education. The culmination of the first year was a 3-day professional development program, with 16 teachers from four major U.S. cities.

The teachers were surveyed to determine their commitment to science education, scientific knowledge base, and skills in implementing a science-rich environment. The professional development included sessions on science curriculum alignment with school standards, as well as promoting a constructivist approach to science learning in the elementary classroom. Participants also took part in an all day seminar at the Franklin Institute Science Museum, where they were introduced to the museum as a classroom resource. Teachers were also asked for input on the first science unit.

Teachers are in the process of piloting the first module. Results will be forthcoming by the end of the summer 2002. The first module is entitled *Gidget's Journey: An Exploration of the Human Body*. To begin the first module, teachers have students answer the preassessment questions about the story content. After students read the story, they then begin investigating various science questions related to the story. After the students have completed all their investigations, they reflect on their experience in their science journals, answering targeted questions.

The module also includes background information for students and teachers, vocabulary associated with the story, and all the standards addressed by the module. At the conclusion of

the module, the students take the postassessment. There will be four modules per grade level, for a total of 12 modules in the science areas of life, earth, physical, and technology.

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Literacy Learning Through Play in a Primary Classroom

Linda K. Pickett

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Literacy has always been a concern for educators, but it has now become a hot political topic. While everyone agrees that literacy is essential, the means by which one becomes literate are a subject of ongoing debate (IRA & NAEYC, 1997). Although play has long been acknowledged as a vital component for learning and development by early childhood professionals (Bredekamp, 1997; Stone, 1995), early childhood teachers face increasing pressure to implement standardized curricula designed to address specific skills. This pressure appears to create a conflict between academic learning and the need for play in children's lives.

This paper reports findings of a study exploring ways that play enhances learning in the researcher's first grade classroom. Children's uses of literacy during play were documented and analyzed in the context of a curriculum in which a formal literacy program and a commitment to play were interwoven. During a 2-hour literacy block, children engaged in a formal program. Components of the program included mini-lessons, read-aloud, shared reading, guided reading, independent reading, shared writing, guided writing, games for skills development, dramatic representations, and other extension activities.

An equally important daily practice was "self-selection" or play time. Self-selection was scheduled for a period of 45 minutes each day. During that time, children participated in activities chosen from the various centers in the classroom. The children who chose dramatic play were the focus of this study.

To document children's use of literacy during dramatic play data were gathered over 4 months. Data was triangulated through field notes, interviews, videotape, and artifacts. Analysis was done using steps described by Glaser and Strauss (1967) in the constant comparative method. Units of analysis were defined (Lincoln & Guba, 1985) as "an activity engaged in by at least one person and involving the use of graphic media for some purpose and viewed by the child as a reading or writing activity" (Dyson, 1993). Units were categorized, themes emerged, and hypotheses were tested through a process of searching for instances of negative patterns and alternative explanations.

Observations revealed numerous opportunities for children to learn about reading and writing. The results indicate that one function of play was to enable children to develop identities as literate individuals. Children used literacy for their own purposes as they negotiated relationships and social interactions. As they read and wrote collaboratively, they provided assistance to one another; they were able to operate in a "zone of proximal development" (Vygotsky, 1978).

Interaction between the formal and informal curriculum was revealed as children practiced skills and applied concepts that had been introduced in the formal literacy block. Children

explored various forms and functions of print (Halliday, 1975) in ways that held no risk of failure, but instead provided opportunities to refine understandings and skills. Finally, play afforded many opportunities to enjoy and value literacy as personally meaningful.

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Touching the Lives of Children: WINGS Learning System, A Proven School Readiness Program

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The WINGS Learning System is a researched, proven, accountable, standards-based literacy, language, and numeracy skills school readiness program designed for 3- to 6-year-old children. For the 8 years, this learning system has worked throughout North Carolina, where many children enter public schools unprepared to be academically successful. It is a measurable, scientific-based curriculum for pre-reading, cognitive, and language development that has shown consistent annual growth of over 200% for children in project sites across the state. Over 20,000 children averaged 2 years of cognitive/language progress for each year of program participation. The program expanded to Tennessee 3 years ago and has demonstrated similar results.

Over the past 3 years, WINGS has expanded in a significant way to offer low-income and Head Start preschoolers and teachers easy-to-use, developmentally appropriate, curricular offerings to prepare children for entrance into kindergarten. The WINGS training component helps community volunteers, day-care staff, and Head Start teachers understand and give the gift of early learning.

The WINGS curriculum was made available in a multimedia CD-ROM and web-enabled version during the 2001–2002 school year. Children engage with up to 60 games, sequenced for each child, based upon their pre-test measures of cognitive/language development. The games consist of activities to enhance comprehension, memory, problem solving, decision making and creative thinking, leading to improved literacy and numeracy skills. This version of the WINGS curriculum is especially important for Head Start programs with less skilled teachers, or adult to child ratios that make a labor-intensive, individualized curriculum difficult to manage.

Early research demonstrates that WINGS' new computer-based learning system significantly

enhances pre-reading, numeracy, cognitive and language gains before children enter school. The addition of the computer component can especially augment the gains in those Head Start sites where teachers can be trained with WINGS to provide a personalized program to meet the needs of each child.

During the 2002–2003 school year, the computer interactive version of the WINGS program will be placed in two centers in each of 20 sites in 10 target states: North Carolina, South Carolina, Georgia, Florida, Tennessee, Mississippi, Louisiana, Arkansas, Texas, and California.

Reading Between the Lines: Linking Book Reading and School Readiness in Preschoolers

Barbara Havlik, Catherine Haden

PRESENTER: Barbara Havlik

In this study, an experimental methodology was adapted to examine linkages between mother–child conversational interactions during book reading, and preschoolers' developing language and literacy-related skills. The aim of the project was to see if children's language and literacy-related skills could be enhanced by training mothers to use language to focus children's attention and increase understanding during book reading interactions.

A sample of 24 middle-income 3-year-old children, and their mothers, participated in pretesting, training, and 7-week, 3-month, and 6-month posttraining assessments. Median age of the sample at the start of the study was 40.3 months, and the sample included 13 females. During pretesting, children were administered the TERA-2 (Reid, Hresko, & Hammill, 1989), PLS-3 (Zimmerman, Steiner, & Pond, 1992) and Story Comprehension and Story Production assessments.

Mothers engaged in a shared book reading session with their child, which was audiotaped, transcribed, and coded. During this same visit, mothers of children in both groups were asked to read a total of 12 books to their children over a period of 6 weeks. After the completion of the 6-week reading phase, the posttest assessments were readministered: (a) at the beginning of the 7th week, (b) 3 months, and (c) 6 months after the intervention was concluded.

The actual manipulation in this study involved two components. The first component was a training session with the mothers, focusing on three key reading techniques: (a) open-ended questions, (b) predictions and inferences, and (c) associations. In the second component, mothers in the training group received a set of prepared comments to include in their reading of each book, reflecting the three strategies that were the focus in the training session.

Three main questions were addressed: Can we train mothers to engage in elaborative discussions with their children during book reading interactions? How might maternal style differences link to children's developing literacy skills? Do high-level maternal comments, beyond the information in the pictures or the text, enhance literacy development?

Repeated measures analyses illustrated that mothers in the training group showed significant increases in their use of all the target comments across the three follow-up assessments, as compared with mothers in the control group. Children in both groups improved their language and literacy scores over the course of the study, and no significant differences emerged between the children of trained and untrained mothers. However, there is some suggestion that differences might emerge after a longer delay.

The third question of interest was to assess intra-individual variability across time through multilevel modeling, to describe how maternal commentary and group assignment influenced children's language and literacy skills. Results from the modeling analyses revealed that study

time and mothers' use of prediction and inference comments significantly predicted children's expressive vocabulary. In fact, study time accounted for 11% of the variance in children's expressive vocabulary growth, and predictions and inferences accounted for 7%.

Therefore, children's expressive vocabulary growth was predicted not only by the amount of time in the study, but also by mothers' use of predictions and inferences. This suggests that interventions that target increasing high-demand, high-level commentary can have positive results for children's vocabulary growth.

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Early Literacy Experiences of Latino Children: A Look at Context and Intervention

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PRESENTERS: Lisa Boyce, Mark Innocenti

One challenge of literacy intervention programs is helping parents understand that early language experiences at home can facilitate children's later literacy and school success. The current study examines the literacy practices of low-income, Latino families participating in the Bilingual Early Language and Literacy Support (BELLS) project, an intervention in partnership with the Guadalupe Schools in Salt Lake City, Utah, and a comparison group.

The specific objectives of BELLS are to increase, in both English and Spanish, the total quantity of child-directed speech, adult responsiveness to children's speech, adult use of print with children, and the emotional warmth of language and literacy contexts. Because many parents need support to be responsive to children and interact with them in ways that promote language and emergent literacy, one specific goal of BELLS is to facilitate frequent, interactive, and pleasurable shared reading experiences through weekly home visits.

To increase the comparability of the two groups in the study, only mothers who were not born in the United States were included (BELLS site $n = 37$; comparison site $n = 74$). To examine intervention influences on the home literacy environment, we interviewed and assessed mothers and children in their homes in their primary language, using a variety of measures including sociodemographics, language skills, and home literacy practices. Child assessments at 36 months, and mother interviews when their child entered the study at 18, 24, or 36 months, were included in the analyses.

Mothers in the BELLS intervention group reported higher rates of literacy activities that indicated more frequent and enjoyable book reading than the comparison group. Specifically, mothers in the BELLS group, compared to those in the comparison group, reported higher rates of reading to their children, higher rates of other family members reading to their children, and higher rates of their enjoyment of reading to their children. Ratings of the language and literacy environment were also higher for the BELLS group than the comparison group. These literacy practices led to higher child language scores in English at 36 months. Correlations with Spanish language scores approached significance.

Maternal variables of income, years of education, and language skills in both English and Spanish were related to ratings of literacy practices in the home, but not to how much time

mothers spent reading to their children, or how much they enjoyed reading to their children. These results are promising, suggesting an effective intervention for enhancing the home literacy environment for a group of children at risk for failure, and will be used to inform future intervention efforts aimed at the growing Latino community in the United States.

Text Talk: Developing Young Children's Language Ability Through Read-Aloud Experiences

Margaret McKeown, Isabel Beck

PRESENTER: Margaret McKeown

Concern about young children's language development recently has centered on individual differences in vocabulary and comprehension among children as they begin school (Hart & Risley, 1995; Biemiller, 1999). The goal of Text Talk is to enhance young children's language abilities through listening to and talking about stories read to them. Findings about effective read-aloud strategies are quite consistent (Dickinson & Smith, 1994; Freppon, 1991; Morrow, 1992; Teale & Martinez, 1996). The most effective features include the teacher and children talking about major story ideas, addressing ideas as they are encountered rather than after the story has been read, and involving children in discussion.

However, the most effective read-aloud strategies are far from the most common. Creating a focus on story ideas is not a simple task for teachers of young children. Young children tend to use what is easily accessible to them (Neuman, 1990). Specifically, children respond to questions based on the pictures and background knowledge. This reduces opportunities for children to construct meaning from decontextualized language, which is essential for building mature literacy skills.

Text Talk interactions are based on questions posed during reading; asking children to consider the ideas in the story and to talk about and connect them as the story moves along. Beyond building meaning of a specific story, Text Talk attends to children's language development through questions that elicit greater language production. It also provides vocabulary activities for several words from each story.

Text Talk was implemented in two kindergarten and two first-grade classrooms, and researchers worked closely with the teachers to support their interactions with children during read-alouds. All Text Talk lessons were recorded, along with a baseline lesson of each teacher reading a story to her class before the implementation of Text Talk. To gauge the effects of Text Talk on classroom discourse, we compared teachers' baseline read-aloud discussions with Text Talk lessons, examining the length of student responses and the nature of questions and student responses. Students' responses to questions changed from a mean length of two words to five words in kindergarten, and about nine words in first grade.

Teachers' questions changed from mostly closed at 80%, to mostly open, at 65%. Open questions leave both the form and content of response open to the child while closed questions are answerable in one or two words, often directly retrievable from the text. Children's responses were also scored as open and constructed by the child, or closed, directly retrieved from text. Children's responses were 80% closed in baseline lessons and about 65% open in Text Talk lessons. Children from Text Talk classrooms also showed significant gains in vocabulary compared to children from non-Text Talk classrooms.

Reading aloud and discussing what is read is an important avenue for enhancing young children's language capabilities. Read-aloud discussion formats such as Text Talk, which pro-

mote building meaning based on open questions and discussion, can enhance young children's language production, comprehension, and vocabulary.

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A New Classroom Quality Assessment Instrument: The Supports for Early Literacy Assessment (SELA) for Preschool Classrooms

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This poster presented preliminary findings concerning the potential utility of a new observation-based instrument that can be used to assess early childhood classroom quality. This instrument, the Supports for Early Literacy Assessment (SELA) provides a comprehensive profile of a classroom's supports for preschoolers' emergent literacy skills, knowledge, and interests. It is designed to help researchers and practitioners assess how well early childhood classrooms support preschoolers' (a) language development, (b) print awareness, (c) phonological sensitivity, (d) letter recognition, and (e) motivation to engage in literacy-related activities (e.g., interest in books and prewriting activities). The SELA consists of 21 items, two of which are appropriate only for bilingual classrooms, that are rated on a 5-point scale following a 2 1/2 hour observation and 20 minute teacher interview. Recent research-based sources of best practice guidelines for supporting young children's emergent literacy were used in developing the SELA (Neuman, Copple, & Bredekamp, 1999; Burns, Griffin, & Snow, 1999). The content of the SELA literacy items reflect four developmentally appropriate elements that are used to assess broader features of DAP, such as, use of age-appropriate materials and child-directed activities. We have been using the SELA as a training and research tool in an early childhood professional development project called Best Practices in Early Literacy.

We assessed the reliability of different types of observers using the SELA. First, we assessed reliability of Best Practices trainers who have received training on the use of the SELA. These professionals were specialists with considerable knowledge about developmentally appropriate supports for early literacy in preschool classrooms. Across 31 observations conducted by a pair

of Best Practices trainers, the average reliability was 95%, when calculated as a percent of agreement on ratings within one point, with a range from 78% to 100%. We also calculated reliability between Best Practices trainers and participants in our professional development project who were early childhood program directors or staff developers. These participants were trained on the SELA in a 3-hour group training session that included practice ratings using brief vignettes. Across 40 observations involving Best Practices trainers paired with a participant, the average reliability (percent of agreement within one point) was 94 %, with a range from 47 % to 100 %.

A preliminary analysis of differences in rater reliability across items did not indicate marked variation. For example, it appears to be as easy to reliably assess use of print in the environment with the SELA (94% average agreement within one point) as it is to assess how teachers encourage children to use and extend their oral language (96% average agreement within one point). Discernable changes (mostly modest improvements) were evident using the SELA. This was following a period of training in which program directors and staff developers (trained and supported by Best Practices specialists) worked with teachers in classrooms during four training visits that targeted areas identified as weak in the initial SELA assessment.

A pretraining interview with classroom teachers asked them to rate the extent to which they needed training in different areas assessed by the SELA (e.g., improving the classroom's literate environment, supporting children's language development). There was little or no relationship found between teachers' ratings of their need for assistance and SELA ratings, indicating the value of an objective, observation-based assessment of classroom quality. For example, although SELA ratings and trainers' observations suggested that most classrooms needed considerable help in improving supports for children's language development, 38 % of teachers said they need little or no help in this area and only 10% reported needing "a lot" of help. Following participation in Best Practices activities, 98 % of participants rated the SELA as "very useful," or "useful" in helping them identify strengths and weaknesses in the classroom.

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Validity of the MacArthur CDI for Use with Early Head Start Families

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One of the outcomes that Early Head Start (EHS) was designed to impact is children's language development. Rate of vocabulary acquisition in the earliest months of language learning varies widely (Goldfield & Reznick, 1990; Fenson et al., 1994) and is often difficult to measure. The MacArthur Communicative Developmental Inventory (CDI; Fenson, Bates, et al., 2000) is a parent report measure that is commonly used in research to measure children's early vocabulary.

Some have questioned the validity of parental report, particularly in low-income families. The few studies that have focused on socioeconomic differences in children's language using the CDI have shown conflicting results. Feldman et al. (2000) and Fenson et al. (1994) found higher CDI scores for children whose mothers had less education. This finding is counter-intuitive and was explained by the suggestion that less educated mothers (who also often have

lower incomes) tend to over-report their children's emerging language skills (Fenson, Pethick, et al., 2000).

However, Arriaga, Fenson, Cronan, and Pethick (1998), studying younger siblings of Head Start children, found that income and CDI scores were positively related. In addition, over 75% of the children in their sample scored below the median. These results suggest that either low-income parents tend to underreport children's language skills, or that low-income children on average acquire language at a slower pace.

The current study was designed to compare maternal reporting on the CDI to observed child language production, to determine whether the CDI is valid for use with low-income, White families. The 126 participants in the study were drawn from a larger sample of predominantly White, native English-speaking families in rural New England who were participating in the national evaluation of EHS.

All mother–child dyads who agreed to be videotaped at home during a 10-minute semi-structured play session were included. Videotaped interactions were transcribed using the Child Language Data Exchange System (MacWhinney, 2000), yielding the number of word types (different words) used by the child. The association between observed child word type production and maternal report was then estimated.

Significant positive bivariate correlations were observed between maternal report of child vocabulary production and children's observed vocabulary production at 14 months ($r = .36$, $p < .0001$) and 24 months ($r = .63$, $p < .0001$). Multiple regression analyses indicated that parent report and child gender accounted for 20% of the variation in word types at 14 months. At 24 months, parent report and birth-order together accounted for 41% of variation in child word types. Maternal education was not a significant predictor at either age.

Furthermore, EHS program effects were observable using both parental report and observed measures. These results are important for both researchers and practitioners working with low-income families. The CDI is easy to administer and poses only modest literacy and time demands for parents. The CDI can be used by home visitors as a language assessment tool and as an opportunity to engage parents in conversation about their children's early language abilities. Our results suggest that maternal report is a valid measure of young children's language skills.

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The Role of Mothers' and Fathers' Language in Children's Semantic Diversity

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PRESENTERS: Tonia Natalie Cristofaro, Eileen Rodriguez

Studies illustrate the crucial roles of parents' language for toddlers' language competencies. Bloom (1998) highlights social interactions as important for children's language acquisition. Mothers who provide a linguistically rich environment have children who are linguistically more advanced (Tamis-LeMonda, Bornstein, & Baumwell, 2001). The assessment of toddler semantic categories taps into their understanding of grammatical and functional relationships (Tamis-LeMonda & Bornstein, 1994). Tamis-LeMonda and Bornstein found that 20-month semantic diversity was correlated with symbolic play. Like play, children's semantic categorization is a key index of their representational thinking.

Few studies have investigated characteristics of low-income fathers' language. Ely and Berko Gleason (1995) explain how fathers' speech may have specific influences on children's language. As Tamis-LeMonda and Cabrera (1999) discuss, research on the multifaceted nature of fatherhood and child outcomes in economically disadvantaged families is limited. Few studies have illustrated similarities and differences in the nature of mother and father language, and how these features contribute to children's use of semantic categories in language. Since children's early language experiences impact their linguistic and cognitive growth, research that enhances children's optimal development and that has public policy implications for literacy and school readiness is critical.

The language of 50 ethnically diverse, low-income mothers and fathers and their toddlers was assessed from videotaped play interactions. The goals were to (a) explore the functional uses of mothers' and fathers' language during play with their toddlers, focusing on language quality; (b) describe children's increasing use of semantic categories in language; and (c) explore associations between quality of maternal and paternal language and children's linguistic competencies.

Mother–child and father–child interactions were videotaped separately in their children's homes. Dyads were videotaped for 10 minutes of semistructured free play with three functionally similar, yet distinct, sets of age-appropriate toys. Both mother–child and father–child language was transcribed from the videotaped observations. Researchers coded parent and child language from the transcripts while viewing the videotapes, using a coding system adapted from Longobardi (1992). Mother and father utterances were coded into 31 language categories, including information-rich utterances, for example, labels. Children's utterances were coded into 31 semantic categories in language, for example, possession.

Factor analyses indicated the existence of a responsive/didactic factor and a control/intrusiveness factor of maternal language. Mothers high on responsive language tended to provide rich information about ongoing events. Mothers high on the control factor tended to use many directives. Modest to strong relations were obtained between maternal speech and children's language. Various styles of fathers' language also emerged, including fathers who described objects and expanded on their toddlers' words, and fathers who asked open questions to encourage talk. Because existing literature suggests that individual differences in semantic diversity predict children's later cognitive development (Bates, Bretherton, & Snyder, 1988; Tamis-LeMonda & Bornstein, 1994), this study examines semantic diversity as one measure of toddler language. This study sheds light on the development of semantic categories in language in children from low-income families, in the context of their engagements with both mothers and fathers.

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Home and Preschool Connections: Meeting in the Contact Zone

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A teacher in an elementary school in northern Virginia complains that immigrant parents do not make an effort to become literate in English so they can support their children's school work. A parent voices her struggles to become literate and support her children's developing literacy.

This research grows out of these contradictory perspectives. We explore the reality of literacy practices among the families served by the Arlington Mill Preschool, to understand the dilemmas they face as their children move into the public school system, which expects them to have developed basic literacy in English. The research question guiding our research is this: What literacy patterns and practices do immigrant families have?

Where the culture of a school differs from the culture(s) of the families it serves, and where family literacies are different from school literacies, we define the contact zone: "where cultures meet, clash, and grapple with each other, often in contexts of highly asymmetrical relations of power" (Pratt, 1991).

Linguists studying the literacy practices of segregated language communities emphasize the diversity of practices within communities. Mainstream U.S. citizens often cannot distinguish people who do not have literacy in English from those who lack literacy in any language. School staff sometimes interpret lack of literacy in English to mean complete lack of literacy and disengagement from care for one's children.

The parents, mostly mothers, of successive cohorts of children attending Arlington Mill Preschool have been interviewed in focus groups to raise literacy and other educational issues. In addition to information collected in the focus groups, the bilingual interviewers talked about literacy practices in more detail with a number of the mothers.

Patterns of literacy practices vary widely, even among the immigrant families served by the Arlington Mill Preschool. Parents, especially the mothers, are aware of the consequences of their

lack of fluency in English. These consequences manifest themselves in power relations within families, in the mother's inability to provide support for the literacy development of her children, in employment opportunities for mothers, and in their inability to interact with the larger society.

Many mothers have the practice of reading to their children as a result of either their own prior experience or from the practices that are promoted in the family support workshops. Their own literacy development may preclude reading in English, so a number of the Spanish-speaking mothers read to their children in Spanish. Mothers especially express the desire and intention to learn English.

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Phonological Awareness Versus Language Intervention with Children in Head Start Classrooms

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Fifteen years of converging research has identified specific skills needed to learn how to decode an alphabetic written language like English. The vast majority of studies identified phonological awareness (PA) as one of these skills (Catts, Fey, Zhang, & Tomblin, 2001).

Snowling, et al. (1997) define PA as "the ability to reflect upon and manipulate components of spoken words." PA includes multiple skills, but exactly how many, their developmental order, and relationship to each other, have not been determined. Different tasks have been used and development frameworks proposed by a variety of researchers (Adams, 1990; Catts, 1993; Whitehurst & Lonigan, 1998).

Existing research suggests, however, that some PA skills develop early (MacLean, Bryant, & Bradley, 1987; Lonigan, Burgess, Anthony, & Barker, 1998). Using six PA tasks, Gravani, Meyer, and Smartwood (2001) tested 56 students from six private preschools, ages 0–3 to 4–9 years. The six PA tasks included: rhyme detection, rhyme production, sentence segmentation into words, word segmentation into syllables, alliteration detection, and alliteration production. The Preschool Language Scale-3 (PLS-3: Zimmerman, Steiner, & Pond, 1992) was used to verify the subjects' age-appropriate articulation, receptive, and expressive language development.

Analysis using ANOVA and Tukey HSD indicated no developmental progression for sentence segmentation, since all subjects were able to do this task. Other abilities showed a developmental trend. Detection preceded production for rhyme and alliteration ($p < .001$). Using regression analysis, the Auditory Comprehension score from PLS-3 was a predictor for rhyme detection ($p < .002$) and alliteration detection ($p < .047$).

Two Capital Area Planning Council (CAPCO) Head Start classrooms in Cortland, New York, were selected for the following year for assessment and intervention. The PLS-3 and the PA tasks were administered. Mean standard scores for both sections of the PLS-3 were significantly lower than the non-Head Start group ($p < .001$). Children in Head Start also scored significantly lower on all six PA tasks ($p < .001$). There were not significant differences between the Head Start classes.

Previous research indicated that PA intervention was successful in lower elementary grades (Ball & Blachman, 1991). The present study sought to determine whether these skills can be taught to preschool children. Children in one classroom received direct instruction in PA;

children in the second class received language stimulation, focusing on narratives. Twenty-eight sessions were conducted twice weekly, for a total of 11.5 hours for each group.

Activities for PA followed a developmental progression, beginning with segmenting sentences into words. Multiple modalities were used when teaching rhyme and alliteration. There was a significant intervention group and time interaction for alliteration detection ($p < .027$), with the PA group showing increased alliteration detection. Both groups improved in segmenting sentences ($p < .053$) and words into syllables ($p < .044$).

The results indicate that at least one PA skill, alliteration detection, can be taught to 4-year-olds in a Head Start program. Many kindergarten teachers begin focusing on sounds in the beginning of words when teaching pre-reading skills.

Both groups improved in narrative skills ($p < .001$). There was an intervention group and time interaction, with the language intervention group showing better narrative skills ($p < .03$).

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Training Head Start Teachers in Active Listening

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Language development is closely related to intellectual growth and lays a foundation for the expansion of early literacy skills in young children (Snow, Burns, & Griffin, 1998). Unfortunately, children raised in poverty often have less advanced language and vocabulary skills than their more advantaged peers (Hart & Risley, 1995). An important challenge faced by Head Start teachers is to provide opportunities and experiences that support the language and vocabulary development of their at-risk students, preparing them for success in school.

Research has shown that teachers, in general, have difficulty providing children with opportunities to use language to express themselves (Cross, 1989). To support Head Start teachers in

meeting this critically important need, the Johns Hopkins Language and Literacy Training Project, a five-module training program, provides specific strategies and activities that help to promote verbal interaction between adults and children in the classroom through a variety of early literacy activities.

A case study of three Baltimore City Head Start teachers' training in, and implementation of, Active Listening (the first training component), provides important insights into several aspects of professional development in Head Start: (a) teachers' classroom and curricular training needs, (b) best practices for training delivery, and (c) systemic structures needed to support training.

The Active Listening component features explicit, child-friendly guidelines for conversations. Teachers are encouraged to help children master these routines and to thoughtfully plan many learning conversations into their lessons. Important concepts are introduced during training: such as the principle that active listeners do more than just "keep quiet"; they stay involved in the conversation, by giving their full attention and respect to the speaker and thinking of a question or comment.

Researchers provided an interactive training manual and explained the specific techniques. They also provided supporting materials including a collection of books and a felt board with felt pieces and sentence strips to facilitate construction and labeling of the face of an active listener. The researchers helped teachers plan lessons using the new strategies, observed these lessons, and offered feedback in individual conferences.

Both quantitative and qualitative data were collected on the intensive training cycle provided by the Johns Hopkins Language and Literacy Project. An analysis of children's performance on the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn & Dunn, 1997) and the Expressive One-Word Picture Vocabulary Test (EOWPVT; Gardiner, 2000) indicated that children in the three intervention classrooms scored significantly higher than children in three comparison classes. Analysis of classrooms using the Early Language and Literacy Classroom Observation (Smith & Dickinson, 1998) revealed that teachers in the intervention earned higher scores than their comparison peers.

With regard to the active listening component, qualitative classroom observations and teacher reports suggested that intervention teachers took ownership of active listening strategies and integrated them into their curricula, and that their students began to practice active listening with their peers and used the phrases from the felt board with their teachers and friends.

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Language Functioning in Preschool Foster Children

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Children in foster care are an increasingly large segment of the Head Start population and often receive priority enrollment status. The development of foster children is an understudied phenomenon, with few recent studies reporting on global developmental outcomes. Current evidence suggests that over half of young foster children screen positive for developmental problems (Berrick, Needel, Barth, & Jonson-Reid, 1998).

The current study fills a gap in the literature concerning language development in preschool foster children. Seventy-five foster children 4–6 years of age comprised the sample, with an average age of 62.11 months (SD = 9.8). About 51% were male, and 73% were African American. The children resided in traditional foster family homes (57%), as well as kinship foster family settings (43%).

Measures of language included standardized tests, including the Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1981) and the Kaufman Brief Intelligence Test (K-BIT; Kaufman & Kaufman, 1990) Expressive Language subtest. Transcription of children's conversations with their caregivers was conducted, based on videotaped parent–child interaction. In addition, the Home Observation for the Measurement of the Environment (HOME; Caldwell & Bradley, 1984) and a background questionnaire were completed. Data were collected during one home visit and one laboratory visit. Foster parents received $100 for participation, and children received several toys.

Regarding receptive language, this sample of foster children scored in the moderately low range (M = 82.7, SD = 15.9). Expressive language as assessed via standardized testing was in the normal range (M = 93.0, SD = 10.8). In contrast, the average Mean Length of Utterance for this population was 3.3, which is in the below average range. Over half of the children (57.3%) scored below 85 on the PPVT-R, and 30.7% of the children scored below 85 on the K-BIT. No differences were found between children in traditional and kinship homes on any variable, despite the findings that traditional foster families had better quality home environments and more concrete resources than kinship families. The HOME environment was highly associated with children's language outcomes on the PPVT-R ($r = .33$, $p < .01$) and the K-BIT ($r = .43$, $p < .001$).

These findings confirm prior data that foster children exhibit developmental delays, specifically in the language domain. They need particular support regarding their receptive language and skills in producing complex language in conversational speech. Universal developmental screenings and language-based early intervention would benefit this population of children.

As has been found in multiple studies, the HOME environment played a critical role in the development of the young children in this study. The results of the current research suggest that the environments of foster family homes may be more influential regarding language outcomes than whether children are placed in traditional or foster family settings. In this regard, home-based parent–child intervention that focuses on language development and other developmentally stimulating activities has the potential to ameliorate developmental deficits that may emerge in children in kinship families, due to their lack of concrete resources.

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Parenting in Context: Multiple Pathways to Early Reading

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Accumulated research has demonstrated that individual differences in reading and reading-related literacy skills emerge early (Hart & Risley, 1995) and are relatively stable over time (Cunningham & Stanovich, 1997). While parenting practices constitute a key source of variability in early reading (Teale, 1986), they operate in the context of other multiple influences. Many previous studies explaining 'multiple factors' had an isolated list of predictor variables, without focusing on dynamic interactions among them (Snow, Burns, & Griffin, 1998). The present paper explores a comprehensive model designed to link sociocultural, parenting, and child factors in predicting pathways to reading achievement.

Participants in this study included 142 kindergartners from the Child Development Supplement of the Panel Study on Income Dynamics 1997. The letter–word identification score from Woodcock-Johnson was used as the dependent variable. Predictors included sociocultural factors, such as maternal education and adjusted family income; parenting-cognitive stimulation and emotional warmth/support as measured by the Home Observation for the Measurement of the Environment (HOME; Caldwell & Bradley, 1984); child variables-cognitive skills of digit-span memory from WISC-R; and socioemotional characteristics of attention and sociability adapted from Achenbach and Edelbrock (1983). Path analysis was conducted using Structural Equation Modeling (Bentler & Wu, 1993). In this way, direct and indirect associations between sociocultural, parenting, child factors, and early reading could be examined simultaneously.

Results of the path analysis indicated that sociocultural, parenting, and child factors presented a strong model of early reading. Both sociocultural and parenting variables predicted early reading. Whereas the direct effect of family income was only marginally significant, parenting variables mediated the relation between sociocultural factors and reading. Mothers with more education were likely to provide greater cognitive stimulation, which in turn yields higher reading scores for those children. Similarly, families with higher income were more likely to have stimulating environments, and children from these families were more likely to have stronger reading skills.

Child cognitive skills acted as a mediator of parenting. Emotional warmth/sensitivity significantly predicted children's cognitive skills, which exhibited a direct path to reading. These results suggest that emotional warmth and consistent sensitivity may support children's reading skills. One unexpected result was that cognitive stimulation did not predict child cognitive skills in the present model. It is possible that digit-span was not sensitive to variability in stimulation. Furthermore, children's attention and sociability did not significantly mediate parenting influence on reading, in contrast to previous studies (Morrison & Cooney, 2001), which might be due to outcome measure characteristics. A measure of higher order skills such as reading comprehension may have been directly predicted by children's social skills.

Findings revealed that sources of influence combine in complex ways to yield multiple pathways to early reading. For example, maternal education influenced reading skills through cognitive stimulation, and simultaneously, through parental warmth, which was associated with child cognitive skills that directly predicted reading scores. Head Start professionals may utilize these multiple pathways to formulate effective parenting interventions. For example, parent education programs may want to emphasize to parents the importance of providing consistent emotional support to their child as well as cognitive stimulation.

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The Impact of Literacy-Focused Prekindergarten Curricula and Teacher Mentoring Support on Classroom Outcomes

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Research has shown the importance of children developing reading and literacy skills early, before traditional formal education begins. In fact, how well children master key literacy skills (the ability to speak, read, and write) influences how successful they will be in other academic areas. Language and vocabulary accomplishment at 3 years of age have been shown to be predictive of language and reading performance at age 9 (Hart & Risley, 1995). Learning environments that are rich in print, reading materials, and resources will provide young children a solid foundation on which to build reading and literacy skills to positively influence all areas of academic achievement (Hunter, 2000).

Site managers were informed of the project's goals during September 2000. Targeted teachers were provided with specialized training on creating print-rich environments, encouraging phonemic awareness, conducting read-alouds, and providing language and literacy activities for young children. The training was provided by mentor teachers who received training from CIRCLE, the coordinating agency for the Texas Educational Component Grant.

Additionally, consultants from the curriculum model programs provided training to all teachers in the treatment group. The training was provided over a 9-month period. Some on-site training was provided; most training was provided during large groups in centralized locations. The mentor teachers provided ongoing curriculum support and technical assistance to each target teacher. The mentor teachers visited the target teachers' classrooms twice weekly to model strategies and activities, provide instructional materials, and monitor the implementation of the selected curriculum models.

Fifteen Head Start teachers were randomly selected to participate in the present study. Eight teachers were randomly assigned to the treatment groups, and seven were randomly assigned to the control group. Ten children were then randomly selected from each of the groups. The

treatment group contained 96 children, and the control group contained 69 children. During the fall of 2001 and spring of 2002, trained field data collectors administered the Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997), the Expressive Vocabulary Test (EVT; Williams, 1997), and the Developing Skills Checklist (DSC; CTB, 1990) to 165 Head Start students. Literacy evaluation areas included (a) phonological awareness, (b) letter knowledge, (c) print awareness, (d) auditory comprehension, and (e) math concepts and operations.

Children's test scores were compared to norms for each child outcome measure (PPVT-III, EVT, and DSC). Independent *t*-tests and repeated measures analysis of variance were used to analyze data between treatment groups and the control group. Results of the study in year 1 revealed that children in the LEAP treatment classrooms scored significantly higher than both the control classrooms and *Success For Life* classrooms on the PPVT, EVT, and the DSC. These results showed that children in LEAP classrooms significantly increased their vocabulary skills.

Findings from analysis of the Developing Skills Checklist showed that children in the LEAP intervention classrooms scored near national norms on all subscales: (a) math concepts and operations, (b) memory/letter knowledge, (c) auditory/phonological awareness, (d) print, and (e) total prereading. In fact, children scored significantly higher on letter knowledge in comparison to national norms. Children in *Success For Life* and control classrooms scored significantly below national norms on all subscales.

In LEAP classrooms, 8% of participants spoke Spanish as their dominant language, whereas *Success For Life* and control classrooms included 19.6% and 27.6% Spanish-dominant speakers, respectively. Language differences were not shown to be a primary factor in achievement outcomes. Other factors that may have influenced these differences are being investigated during year 2: mentoring style, quality of modeling effective classroom practices, curriculum implementation, and family educational attainment.

Interview data suggest that Head Start teachers are highly motivated to implement the literacy-focused curricula. They have experienced many successful interactions with mentor teachers. Reports from target teachers suggested that mentors provided instruction in the following areas that support literacy development: (a) read-alouds, (b) use of expressive language, (c) reading strategies such as KWL charts, (d) phonological awareness activities, (e) writing centers, (f) numeracy activities, (g) letter recognition, (h) use of story props, (i) instructional materials, (j) classroom arrangement, (k) literacy charts and graphs, and (l) increased use of reading and writing materials throughout the classroom. Mentoring was found to enhance the confidence of both target teachers and mentor teachers working with the teachers and program managers.

Overall, findings from year 1 analysis are favorable and indicate that children showed developmental skills gains in the areas of letter recognition, print awareness, phonological awareness, and math concepts. However, children from Spanish-dominant classrooms generally attained significantly lower mean scores than English-dominant children on all measures. Many language-minority children have the same risk factors that also affect the performance of native-English-speaking children. These risk factors include limited parental education, single parent status, large family size, and poverty (Sameroff, Seifer, Barocas, Zax, & Greenspan, 1987). As mentioned, other factors are being investigated in year 2 that may provide greater insights into how the literacy-focused curricula and mentoring influence children's achievement outcomes.

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The Role of Family Involvement in Literacy Activities in an Early Intervention to Enhance Literacy Skills Development in Native and Non-Native English Speakers

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(Summary not available)

Development of Emergent Literacy Skills Across the Head Start Year

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(Summary not available)

Maternal Mental Health

Early Childhood Predictors of At-Risk Boys' Relationship Quality With Mothers and Teachers After School Entry

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Can maternal questionnaire measures completed when a child is a toddler be used to predict the quality of a child's relationship with both his mother and teacher in first grade? In this exploratory secondary analysis of data drawn from a larger, longitudinal investigation of approximately 300 low-income families and their sons, data from the toddler period did robustly predict relationship quality as reported by mothers and teachers in first grade.

Families were recruited from a Women, Infant, and Children Nutritional Support Program in Pittsburgh, Pennsylvania, when the target son was approaching 18 months, and were then assessed on an almost yearly basis. The present analysis contains data from the 18-, 24-, and 72-month assessments. At the 18- and 24-month assessments, mothers completed the Infant Characteristics Questionnaire (ICQ; Bates, Freeland, & Lounsbury, 1979), the Parenting Daily Hassles (PDH; Crnic & Greenberg, 1990), the Beck Depression Inventory (BDI; Beck & Beamesderfer, 1974), and the Maternal Social Support Index (Pascoe & Earp, 1984). The Child Behavior Checklist for Ages 2–3 (CBCL; Achenbach, 1992) was completed at the 24-month assessment.

When the target child was in first grade, mothers and teachers both filled out a version of the Student-Teacher Relationship Scale (STRS; Pianta & Steinberg, 1991; the scale was modified for parental use). Scores from both informants were used to calculate two summary scores: (a) Conflicting Relations (10 items; teacher alpha = .92, mother alpha = .86) and (b) Positive Relations (7 items; teacher alpha = .81, mother alpha = .74). Based on these scores, three analysis groups were formed: (a) Conflict boys (n = 34) had Conflict scores in the top 40%, Positive scores in the bottom 40%, with at least one of these scores in the most extreme 20%; (b) Positive boys (n = 36) had Conflict scores in the lowest 40%, Positive scores in the highest 40%, with at least one of these scores in the most extreme 20%; and (c) Middle boys (n = 64) had Conflict and Positive scores in the central 60%, with neither score in the extreme 20%.

Results of a MANOVA (Wilks' Lamda: $F = 4.46$ (10), $p < .001$) indicated that Conflict boys were significantly differentiable from Positive boys on the PDH, the CBCL, the ICQ, and the BDI. Scores on these four measures were entered into a logistic regression to ascertain their ability to correctly classify Conflict and Positive boys. This combination of variables correctly predicted the group status of 85% of the boys, with equally good sensitivity and specificity. Maternal report of daily parenting stress (PDH) was particularly influential, $B = 2.46$, Wald = 9.91, $p = .002$, Exp (B) = 11.73 [95% CI for Exp (B) = 2.53 – 54.32]. These measures are easy to complete and could be useful as a screen for future risk. These data suggest that early intervention programs can help prevent negative relationship outcomes in first grade by targeting depressed mothers who perceive their toddler as temperamentally difficult and prominently externalizing, and who report high levels of stress associated with daily parenting tasks.

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A Pilot Study of Stress and Coping in High-Risk Mothers: Difficult Life Circumstances, Psychiatric Mental Health Symptoms, Education, and Experiences in Their Families of Origin

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A pilot study was conducted to test methods and measures used to assess factors related to stress and coping in high-risk mothers, and their impact on parenting. Twenty mothers with 2-month-old toddlers were recruited from a Women, Infants, and Children (WIC) population; they came into an observational laboratory where they were interviewed about stressors in their lives, and symptoms of stress, and were videotaped interacting with their children. Maternal difficult life circumstances, psychiatric mental health symptoms, education, maternal experiences in their families of origin, and parenting stress explained 74% of the variance in maternal sensitive-responsiveness with their toddlers in the laboratory setting.

The findings support the methods of the study and hopefully validate (a) the complex and challenging set of conditions faced by these mothers as they parent their children, and (b) that these conditions must be addressed by the professionals who choose to work with them. As Guralnick (1997) notes, we know that early intervention works, now our task is to learn which interventions work best for which populations and when. While this sample was small and these findings must be replicated before generalization can occur, these findings underscore that along with interventions addressing maternal difficult life circumstances and parenting stress, interventions addressing family of origin issues and psychiatric mental health symptoms may also be important to consider when working with high-risk mothers.

Resources for assessment and treatment of psychiatric mental health symptoms are indicated, and further research is needed to establish normative and criterion level information on family of origin screening assessments, that is, the meaning of individual scores and what scores may indicate cause for concern. In conjunction with further research, it is hoped that these findings will assist us to further tailor assessments and interventions to be increasingly relevant for the mothers they are intended to serve, which will ultimately serve their children as well.

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Maternal Anxiety and Attention Regulation in Children From Head Start

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It is well understood that voluntary attention in children develops through social interactions with parents and other caregivers (Vygotsky, 1962; Wertsch, 1979). When a task is too difficult for a child, the parent may arrange the task to make it simpler or provide help so that the child can be successful on at least a part of the task. As the task becomes easier for the child due to age or practice, parents typically provide more opportunity for children to independently work on the task. One important factor influencing the way parents interact with their children is the parents' mental health. Mental health problems in the mother have been linked with less responsiveness toward the child and a more insecure attachment (Chorpita & Barlow, 1998; Whaley, Pinto, & Sigman, 1999).

In the current study, we examined the impact of subclinical levels of maternal anxiety on the process of children's developing attention regulation. A total of 41 mother–child dyads participated in a puzzle-solving task together. Children also completed a similar puzzle alone 1 week later. We designed our study to answer two questions: a) Do mothers who have elevated levels of anxiety instruct children differently in a parent–child puzzle matching task? and b) Do children of mothers who have elevated anxiety perform differently in a puzzle-matching task when they have to complete the puzzle alone?

The participants in this study were 41 children and their mothers enrolled in a Head Start program. A standard assessment of anxiety in adults was employed (the Spielberger State-Trait Anxiety Scale; Spielberger, Gorsuch, & Lushene, 1970), and median splits defined a high and low anxiety group, although none of the participants exhibited clinical levels of anxiety.

Results showed that the mothers with higher anxiety group (MHA) significantly differed from the mothers with lower anxiety group (MLA) in nonverbal behavior. The MHA group pointed more than the MLA group, but exhibited similar amounts of verbal behavior. In addition, the children of mothers with higher anxiety had a lower proportion of self-regulated gazes of attention (61% for MLA and 40% for MHA) as compared to the children of mothers with lower anxiety. That is, children of MLA had more independent gazes to the model puzzle than children of MHA.

The manner in which children completed the puzzle-matching task when they were by themselves was also compared for the two groups. There were no significant differences in the proportion of self-regulated gazes by children with MHA or MLA. There were also no differences in the number of correct pieces inserted for the two groups. We conclude from this that children in the two groups had the same ability for completing the puzzles.

In sum, maternal anxiety was shown to relate to differences in maternal nonverbal behavior in a puzzle-matching task. It appears that the children of mothers with higher anxiety were given more directives. Children of mothers with higher anxiety also demonstrated less independent attention regulation. Future research is needed to determine the causal connection between these two findings.

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Environments of Physically and Emotionally Neglected Children

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Child neglect has been associated with factors such as poverty and parental substance abuse (Kropenske & Howard, 1994; Sedlak & Broadhurst, 1996). Yet, experience with child neglect suggests that a focus on individual variables is artificial (Belsky, 1993; Lee & Lynch, 1998). An evaluation of the entire system in which the child develops may uncover additional areas of concern and may assist in the understanding of child neglect (Yoshikawa & Hseuh, 2001). Thus, we tested an ecological model related to the provision of adequate physical care using previously collected data (Gaudin, Polansky, Kilpatrick, & Shilton, 1996).

Participants included 132 at-risk families with a high incidence of substantiated maltreatment reports: 38% for neglect only, 8% for physical abuse and neglect, and 1% for sexual abuse and neglect. Head Start provided services for 27% of these families; all families included in this analysis had at least one preschool child. The primary caregivers had a 56% rate of high school graduation; 69% of the families had income below the federal poverty level.

Caseworkers familiar with each family were trained in the use of the Child Well-Being Scales (Magura & Moses, 1986) to assess physical and emotional neglect. In the original Child Well-Being Scales, high scores represented higher levels of neglect, while the derived factors of physical and emotional well-being used in this study are reverse-scored with higher scores representing higher levels of child well-being. Caseworkers also completed a checklist of adult problems (e.g., criminal offenses, substance abuse, poor physical health). Trained graduate students administered an oral interview to obtain information about (a) social support, using a modified version of the Social Network Map (Tracy & Whittaker, 1990); (b) depression, using the Generalized Contentment Scale (Hudson & Proctor, 1977); and (c) demographics.

Rather than compare groups based on the presence of substantiated reports of maltreatment, this study examined continuous variables of the quality of physical and emotional caregiving as the criteria. Two multiple regression analyses tested our ecological model of child neglect. The first model examined correlates of the physical neglect factor from the Child Well-Being Scales, $F(5, 108) = 10.99$, $p < .001$; the second model examined correlates of the emotional neglect factor, $F(5, 108) = 7.27$, $p < .001$. Social support of the caregiver and stressful life events were related to child emotional well-being; adult problems, stressful life events, and ethnicity were related to child physical well-being.

Many studies define neglectful families as those who have a documented and legally substantiated report of child neglect; however, neglect—or, from an asset-oriented perspective, child well-being—is a continuum ranging from neglect to simply adequate care to child well-being. This study views children's environments as a continuum of adequacy of care in the home, rather than basing conclusions on the presence or absence of substantiated reports. An overview of the ecosystem of these low-income families suggests that families who have fewer problems at the microsystem level are able to provide more adequate care.

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Maternal Psychopathology and Infant Social–Emotional Problems: Common and Unique Associations

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Although representative studies show a prevalence of significant emotional and behavioral problems in 2- to 3-year-olds ranging from 7–24% (Briggs-Gowan, Carter, Skuban, & Horwitz, 2001; Roberts, Attkisson, & Rosenblatt, 1998), there is relatively little empirical information about the nature and correlates of infant–toddler social–emotional problems. Social–emotional problems may interfere with infant–toddler functioning and prohibit the achievement of mental-age appropriate social–emotional competencies (Aber & Jones, 1997). Empirical information on social–emotional development is critical to best serve families in programs promoting young children's social–emotional competence (e.g., Early Head Start).

A well-documented family-level risk factor for infant–toddler social–emotional problems is maternal psychopathology. Children of depressed mothers are at increased risk for emotion regulation difficulties and problem behaviors (Radke-Yarrow, 1998). Similarly, mothers with depression and anxiety have shown less optimal play interactions with their infants than mothers with only depression or mothers without psychopathology (Carter, Garrity-Rokous, Chazan-Cohen, Little, & Briggs-Gowan, 2001).

Data from a large-scale longitudinal study of infant–toddler social–emotional development were examined in this study for the differentiation of common and unique associations (i.e., multi and equifinality; Cicchetti & Rogosch, 1996) between maternal depression and anxiety, and infant internalizing (e.g., depression, social withdrawal, anxiety) and dysregulation (e.g., sleeping, negative emotionality) problems. Two main questions were addressed: (a) What are the common and unique concurrent associations between maternal depression and anxiety and

infant internalizing and dysregulation when infants and toddlers are 1 and 2 years of age? (b) Do the associations and patterns replicate when these children are 1 year older?

The Year 1 sample included 1,278 parents and their toddlers who participated in the Community Birth Cohort Survey of the Connecticut Early Development Project (Briggs-Gowan et al., 2001). Year 2 included 1,219 parents and their toddlers. At first data collection, children were 24 months on average; 50% were boys. The sample is socioeconomically representative of the Greater New Haven, Connecticut population.

Internalizing and dysregulation were assessed with the Infant-Toddler Social and Emotional Assessment (ITSEA), an adult-report questionnaire measuring social–emotional problems and competencies in 12- to 36-month-olds (Briggs-Gowan & Carter, 1998; Carter & Briggs-Gowan, 2000). Maternal symptoms of depression and anxiety were assessed with standardized self-report measures (Radloff, 1977; Beck & Steer, 1991).

Confirmatory factor analyses demonstrated adequate representations of the relationships among the measured variables and excellent goodness-of-fit indices in both Years 1 and 2. Latent regression analyses demonstrated common and unique associations in Years 1 and 2 from maternal to infant constructs in the predicted directions. Specifically, standardized parameter estimates were greater from Maternal Depression to Infant Internalizing and Dysregulation than they were from Maternal Anxiety. Maternal Depression and Anxiety accounted for 16% of the variance in Internalizing and 19% in Dysregulation in Year 1, and 25% in Internalizing and 22% in Dysregulation in Year 2.

These findings support theoretical hypotheses of common and unique associations between maternal psychopathology and infant social–emotional problems when children are 1–2 years old, and when 1 year older. Given elevated rates of affective symptoms among disadvantaged mothers, implications for Head Start programs that promote young children's social–emotional competence were discussed.

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Early Head Start Participation: Mobilization of Maternal Parenting Competencies as a Way to Influence Children's 30-Month SocioBehavioral Development.

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Mothers in disadvantaged families face multiple challenges in securing resources for meeting family needs and mastering adult and parenting competencies required for childrearing (Super & Harkness, 1997). Sociodemographics, resilience, and resources comprise risks and supports available for mothers' general competence (Wolin & Wolin, 1993). General competence, reflected in specific beliefs and emotional orientation, underpins parenting beliefs (Walsh, 1998). In turn, parenting, reflected through maternal competence in coping with personal life stresses and children's needs, view of self in a parenting role, and disciplinary actions, becomes the proximal part of the childrearing context surrounding children's sociobehavioral development (Friedman & Wachs, 1999).

Through a collaborative partnership between the Catholic University of America and United Cerebral Palsy Early Head Start (EHS), researchers investigated whether the interaction among such maternal challenges creates an environmental influence for children's 30-month sociobehavioral development. This local research is nested within a national longitudinal evaluation of EHS. Half of the 149 applicants were randomly assigned to EHS child care and family development services, and half sought available community services. Research-trained staff collected baseline, 24-month, and 30-month child-age-related outcome data through structured interviews. All applicant mothers provided information for baseline; 70%, for 24-month, and 75%, for 30-month data. Baseline measures included (a) maternal resilience attitudes (Biscoe & Harris, 1994), (b) resource adequacy (Dunst & Leet, 1987), (c) social support (Dunst, Trivette, & Deal, 1988), and (d) demographics (Head Start Information System Protocol). Outcome measures included (a) 24-month mothers' perceptions of general and parenting competencies including a view of self in a parenting role (Abidin, 1995), (b) mother's use of spanking (EHS 24-Month Parent Interview Protocol), and (c) 30-month children's sociobehavioral development (Achenbach, 1991).

Multivariate analyses suggest that EHS mothers viewed their baseline resilience and adequacy of family needs and resources significantly lower than mothers in the comparison group. Mothers' resilience, needs and resources, and instrumental social support predicted 33% of the variance in their 24-month general competence. EHS mothers viewed their 24-month parenting role slightly but significantly more positively than comparison mothers. Although mothers with lowered general competence were slightly but significantly more likely to spank their children at 24 months, their use of disciplinary spanking was unrelated to parenting competence or children's 30-month sociobehavioral development. Mothers' participation in EHS, birth status (U.S.-born, immigrant), and 24-month parenting competence including view of self in a parenting role, however, significantly influenced 17% of the variance in their children's sociobehavioral development. While children in both groups scored within the normative range for sociobehavioral development at 30 months, EHS children were perceived as manifesting more externalizing behaviors. Children's gender did not exert any influence. Among the alternate explanations, it is possible that this small sample of EHS mothers was more sensitized to report children's externalizing behaviors as part of their increased attunement to their children's needs through EHS family development services or that EHS children differed temperamentally at baseline.

The findings suggest utilizing family-based interventions for strengthening families' general and parenting competencies as one way to enhance children's sociobehavioral development. Using EHS services offers one way to mobilize family resources.

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The Triple Coping Challenges for Immigrant Mothers: The Early Head Start Experience

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During resettlement, immigrant women face both ordinary immigration challenges of managing survival needs, loss, language, and cultural change, and resettlement challenges associated with changed life demands such as resource mobilization, service access, and formulation of future goals. With the advent of children, immigrant women, however, find themselves having to cope with a third challenge—the demands of motherhood (Hulewat, 1996). Immigrant mothers find themselves having to mobilize their personal adult competence in general, and parenting competence in particular, in order to meet childrearing demands for adequate parent–child attunement, developmental expectations, adult–parent role balancing, and parental self-confidence (Goodnow, 1996).

Conceptually, the interaction among these three maternal coping challenges creates an environmental pathway with risks, supports, and consequences for child sociobehavioral functioning (Friedman & Wachs, 1999). Through a collaborative partnership between The Catholic University of America and United Cerebral Palsy Early Head Start (EHS), researchers investigated whether the interactions between these maternal challenges create an environmental path with implications for toddlers' sociobehavioral development at 24 months. This exploratory study of 56 immigrant mothers grew out of a 5-year local research project nested within a national cross site study of EHS services and outcomes. The immigrant mothers met the EHS research criteria of having poverty level income and the age of the focal child being less than 1 year. Half of the mothers were randomly assigned to receive EHS child care and family development services and half, to seek available community services. Research-trained bilingual staff collected baseline and 24-month child-age-related outcome data through structured interviews. Baseline measures include mothers' perception of immigration losses experienced and connectedness with culture of origin (adapted from Coehlo, Yuan, & Ahmed, 1980),

resilience attitudes (Biscoe & Harris, 1994), resource adequacy (Dunst & Leet, 1987), social support (Dunst, Trivette, & Deal, 1988), income, language adequacy, social problems in daily living, service use patterns, and future goals (Head Start Information System Protocol). Twenty-four-month measures are comprised of mothers' perception of general and parenting competencies including a view of self in a parenting role (Abidin, 1995) and the toddlers' sociobehavioral functioning (Achenbach, 1991).

The results suggest that, for this small sample, the baseline measures and 24-month outcomes reported in this study did not vary by mothers' program use. At baseline, immigrant mothers' perception of social support, loss at immigration, resilience, and connectedness to culture of origin explain 52% of the variance in the adequacy of family mobilization of needs and resources. Immigrant mothers' resilience and instrumental social support predicted 34% of their 24-month general competence. In turn, general competence and their 24-month parenting role perception predicted 63% of their 24-month parenting competence. Last, mothers' parenting role perception and resilience influenced 47% of their toddler's sociobehavioral development at 24 months. The findings suggest promoting family-based interventions designed to strengthen (a) immigrant family psychosocial competence through natural helping networks that enable cultural connectedness, offer social support, and promote best parenting practices, and (b) their toddler's psychosocial competence through mobilizing maternal resilience in coping with adversity and mediating their child's exposure to stress.

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Exploring Life Stress, Social Support, and Self-Efficacy Among Maltreating Mothers

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(Summary not available)

Mental Health: Interventions and Services

Project CALM CARE: Developing Frameworks for Serving Children and Families From Traumatic Environments

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Project CALM CARE (Care-Giving Affects Long-term Mental Health: Creating A Responsive Environment) was an ethnographic investigation conducted to enhance Early Head Start's (EHS) understanding of (a) childrearing frameworks of families from traumatic environments, (b) the framework of EHS organizational culture and its influence on services to families from traumatic environments, and (c) vocal/verbal and tactile behaviors used by EHS staff, foster mothers, and birth mothers in response to infants' cues.

Data were gathered through interviews of birth parents, foster parents, and EHS staff and administrators, observation of adult–child interactions, and review of EHS documents. QSRN5 (Richards & Richards, 2000), a qualitative data analysis program, was used to discover the categories of knowledge that formed the cultural frames for each group interviewed. Videotaped observations were analyzed using the Computerized Language Analysis (CLAN; MacWhinney, 2000) program to identify the patterns of adult–child interactions.

Birth parents focused on meeting basic needs and connecting to community resources. Childrearing, development, and discipline were secondary concerns that they expected family educators and EHS to help them learn in classes and on visits. Foster parents focused on reading and responding to cues, protecting the child, and learning about caregiving for an at-risk child. Often birth and foster parents disagreed about child care, requiring family educators to mediate between them.

EHS administrators focused on collaborating with community agencies to determine and provide service needs for families in traumatic environments and training for personnel working with these families. The administrators emphasized a family-centered and strengths-based philosophy toward intervention. They employed a reflective supervision approach with staff, attempting to support them in directly dealing with the families and in handling their own emotions arising from the difficult situations they encountered.

EHS family educators were most concerned with service provision for families that they described as multineed and multistressed. They spoke about modeling behaviors for families and providing them with information and activities to improve parenting skills. Their interviews revealed the same approaches espoused by administrators; however, they felt that they were crisis oriented, and that while responding to immediate concerns and meeting basic needs of families, they might be neglecting long-term goals and objectives. They were focused on meeting basic needs of families and connecting them to resources.

Birth and foster parents engaged in a variety of physical interactions, functional and pretend play, and reading with their children; however, they struggled with providing age appropriate stimulation. They frequently underestimated or overestimated their children's developmental

levels. EHS staff found it difficult to address the needs of parents and simultaneously read the children's cues.

EHS administrators and family educators verbalized a family-centered, strengths-based philosophy including the idea of developing self-regulatory skills within families (e.g., "teach them to fish rather than feed them"). There were problems in implementing this philosophy, however. The severe crises that many of the families were in constantly, resulted in EHS doing crisis management, so that minimal time was available for teaching the skills that would enable the families to learn how to fish through development of self-regulation.

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Early Childhood Mental Health Services: A Multicomponent Prevention and Early Intervention Model

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There is a growing need to provide prevention and early intervention mental health services in Head Start programs to promote school readiness and family resilience, reduce referrals to special education, and increase staff competence. Children with emotional and behavioral problems are under identified (Donahue, Falk, & Provet, 2000), or not eligible for special education services (Grossman & Pollari, 2000). Also, Head Start families at risk due to the cumulative effect of extra- and intrafamilial stressors may not seek treatment. Since traditional mental health services do not reflect best practices in Head Start, a more proactive approach is to deliver on-site staff consultation and direct services to children and families that are embedded in routine program activities (Yoshikawa & Knitzer, 1997; Knitzer, 2000).

Mental health services were piloted as part of a New York University–Head Start Partnership Grant in two Head Start programs from 1999–2001 (Spellmann, Tamis-LeMonda, & Grossman, 1998). The interventions are based on three premises: (a) a multicomponent consultation and direct service model is necessary to meet the mental health needs of children, families, and staff; (b) a mental health consultant must demonstrate a broad range of competencies and spend sufficient time on site to become part of the program culture; and (c) family-centered services must address the mental health needs of mothers in order to promote adaptive parenting skills and child competence.

The consultation component of the model integrated case and program consultation for family workers to become more competent and to promote their mental health. Teacher consultation services focused on child and classroom-based interventions to help teachers identify children with developmental delay, manage challenging behavior, and monitor inclusion practices for children with special needs. Consultation with administrative staff was implemented for systemic change and quality improvement practices.

The direct service component was a weekly parent group that addressed the mental health needs and parenting practices of mothers (Grossman & Shigaki, 1994; Luthar & Suchman, 1999; Webster-Stratton, 1994). Based on a stress-support-coping paradigm and theories of adult female development, the Role Competence curriculum integrated education, support, psychotherapy, and activity-based approaches over 20 weeks. Since positive experience and achievement generate resilience (Rutter, 2000), personal goal setting was an important objective.

Baseline data on the Head Start sample (n = 102) indicated significant child, parent, family, and community risk factors. One third of the children were at risk for school readiness due to cognitive and language delays, and one third demonstrated behavior problems. Familial risk factors included maternal depression (21%), Post-Traumatic Stress Disorder (PTSD; 36%), community violence (11%), domestic violence (10%), poverty/Medicaid (55%), and unemployment (48%).

Program evaluation activities were restricted to direct parent services at one site. Qualitative data were collected through surveys (n = 18), focus groups (n = 15 participants), key informant interviews (n = 4), and case study. The fifteen participants were primarily Latino (90%). Areas of role strain were equally distributed among partner, homemaker, worker, and parent. Thematic analysis of the data yielded the following themes: (a) friendship and women's issues, (b) information and mutual support, and (c) personal growth.

The lessons learned warrant the replication and evaluation of services. Consultation services seem to be an effective way to promote mental health, but research is needed to examine the intensity of services and the training needs of consultants. Direct services must address multiple role demands and the psychological needs of mothers. Based on this preliminary work, the model has been refined.

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Organizational Influences on Children's Mental Health: The Importance of Shared Vision

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Head Start programs have long acknowledged the importance of children's social–emotional development, and engage in multiple strategies to support and promote this aspect of school readiness. Head Start performance standards now emphasize and mandate mental health consultation as one key strategy. Structuring the best mental health services within Head Start programs requires attention not only to how individual professionals assess and treat children and families, but also to organizational characteristics. A program's structure, its vision and philosophy of mental health, and how mental health is conceptualized in relationship to other program components are features that influence individual staff behavior and skills. Little research has focused on understanding the influence of organizational variables on the effectiveness of children's mental health services; the few studies that do, suggest that these are crucial variables in understanding child outcomes (Bryant & Peisner-Feinberg, 2000; Buysse, Wesley, Bryant, & Gardner, 1999; Lara, McCabe, & Brooks-Gunn, 2000; Zelman, Friedman, & Pasquariella, 1996).

Three contrasting Head Start programs were selected for initial qualitative study. Programs were selected to represent rural and urban regions, culturally diverse populations, and contrasting approaches to mental health program design. Semistructured, face-to-face interviews were conducted with a total of 73 persons representing a range of Head Start staff. Interview questions addressed the extent to which mental health services were holistic and integrated, inclusive, prevention oriented, family centered, culturally competent, developmentally appropriate, and strengths based (Jivanjee & Simpson, 2001; Knitzer, 1996). Interviews were summarized and entered into NUD*IST (1998) qualitative data analysis software. Interviews were coded to determine the extent to which participants' responses reflected the principles outlined above.

Analyses were conducted to delineate different organizational philosophies and characteristics among the programs, and whether these were related to staff understanding and discussion of key best practices in children's mental health.

Results suggest that the programs differed in the expected ways in terms of the number of staff who perceived that there was an articulated program philosophy related to children's mental health: Two sites, which we identified *a priori* as having less well developed approaches to children's mental health, had more staff who indicated that there was no philosophy (45% and 35%), compared to the third site (17%). Being able to articulate this philosophy was related to how staff defined children's mental health: Those who had a clear understanding of the program philosophy saw mental health more holistically, as more integrated into other program components, and talked about the program's approach more in terms of quality of interactions between staff, families, and children, and less in terms of specific curricula or assessments. Staff who understood the program philosophy also had more positive relationships with the mental health consultant and saw more value to mental health consultation. Overall, results suggested that having a well developed, articulated philosophy and vision related to children's mental health was associated with increased evidence of the use of best practices.

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The Head Start PATHS Program: A Universal Curriculum to Improve Children's Social and Emotional Competence

Celene Domitrovich, Rebecca Cortes, Mark Greenberg

PRESENTER: Celene Domitrovich

According to the *Head Start Program Performance Standards*, a primary objective of Head Start is to promote the social competence of the children it serves by facilitating their emotional, behavioral, and cognitive development. Effective social-emotional skills are related to social adjustment in the preschool and early school years, and have the potential to serve as protective factors against negative outcomes such as mental health problems by reducing the impact that risk factors have on the child and family (Rutter, 1985). Recently, there has been increased interest in the development of universal prevention programs focused on the promotion of social competence in school-age children. These programs have shown significant effects on social-cognitive skills and children's overall social adjustment. Researchers are now developing similar programs for preschool-age children (see Bryant, Vizzard, Willoughby, & Kupersmidt, 1999 for a review).

The purpose of this presentation is to share the findings from a randomized clinical trial evaluating a universal preventive intervention that was implemented by teachers in two Head Start Programs in Pennsylvania during the 2000–2001 school year. A University–Head Start Partnership Grant was awarded to the first two authors to fund the project. The program was based on a well-known, empirically validated social-emotional curriculum called Promoting Alternative Thinking Strategies (PATHS; Kusche & Greenberg, 1994). The preschool version of PATHS consisted of 33 lessons that were delivered by teachers during circle time once to twice a week. In addition to the lessons, teachers were encouraged to generalize the skills being taught by using extension activities throughout the day that were designed to integrate with the centers and activities that are well established in Head Start. Materials were sent home to encourage parent involvement.

The goal of the PATHS Preschool program was to improve the mental health functioning (i.e., social competence, behavior) of Head Start children by improving children's emotion knowledge, emotion communication, social competence, and cognitive skills (i.e., attention, problem solving). The final sample for this project included 248 children from 20 Head Start classrooms. Trained research assistants interviewed children individually in the Head Start center at the beginning and the end of the school year. In addition, both parent and teacher ratings of child behavior were gathered at these time points.

Findings indicated that with appropriate support, Head Start teachers could effectively implement Preschool PATHS with fidelity and alter children's outcomes in a 1-year period. According to both teachers and parents, children who participated in PATHS were more socially competent than children in control classrooms at the end of the year. These changes were also evident on direct child measures. While the program did not impact externalizing behavior after 1 year, teachers reported that internalizing symptoms decreased for children who began the school year with problems in this area. The findings suggest that Preschool PATHS is a promising intervention for use by Head Start programs. The authors recognize the need for additional evaluation of the curriculum and are considering a more intensive model that will be more likely to impact negative behaviors.

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Relationship for Growth Project: Preliminary Evaluation of a Relationship-based, Systemic Mental Health Model in Head Start

Ellen Halpern, Faith Lamb-Parker, Ronni Fisher, Veronica Klujsza, Lenore Peay, Rebecca Shahmoon Shanok

PRESENTERS: Lenore Peay, Veronica Klujsza, Faith Lamb-Parker

Preliminary results of an evaluation of Relationships for Growth (RfG), a relationship-based mental health intervention was presented. Focus was on outcomes for children who participated in peer play groups to enhance their social and emotional, language and literacy, and motor development, and reduce problem behaviors. The intervention aimed to increase protective factors such as attachment, self-control, positive play behaviors and peer play interaction, initiative, and motivation to learn.

The RfG model is based on ecological (Bronfenbrenner, 1979), psychodynamic (Mahler et al., 1975) and family systems (Minuchin & Montalvo, 1967) theories of human growth and development, and on progressive early childhood education practice. (National Research Council, 2001). Furthermore, a cornerstone of growth lies in the one-to-one relationship between two people or within small groups of people, one of whom is a supportive adult (Shahmoon-Shanok et al., 1989).

The study focused on the impact of peer play group participation on children's interpersonal relationships and behaviors as compared with their nonpeer play group counterparts. Through classroom observation and discussion with staff and parents, the children with the greatest challenges are selected for playgroups.

Ninety-two children participated in 25 playgroups. Assessments of individual strengths and problem behaviors were collected in fall 2000 (baseline) and spring (2001).

Prelimary results suggest that children in playgroups benefited solidly and across many important dimensions related to school success from the experience. At the end of the school year, these at-risk or diagnosable children ended up closer on average to their peers, on the emotional/social indicators of school readiness, after participation in a peer playgroup. The data suggest that although playgroup children appear to begin to catch up to their nongroup age-mates, given their age-mates own continued growth, they need more time to close the gap.

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Methods/Measures/ Instrument Development

Head Start Enrollment Study

Douglas Klayman, Ruth Hubbell McKey, Richard Wertheimer

PRESENTERS: Douglas Klayman, Ruth Hubbell McKey

The Head Start Enrollment Study, also known as the "Descriptive Study of Children Eligible for Head Start," was designed to provide estimates of the numbers of children eligible for Head Start and the extent to which Head Start agencies are meeting the demands of the evolving demographic composition of Head Start communities. The dynamic sociodemographic characteristics of Head Start communities and the constant influx of immigrants with limited wage earning potential gave impetus to the study. Xtria and our subcontractor, Child Trends, conducted a comprehensive secondary analysis of existing data sets to determine the number of Head Start eligible families by state and county. The analysis employed descriptive–inferential statistics, data modeling procedures, and geocoded national, regional, and county-based maps. The estimates provide county-level information on populations served, unserved, and underserved.

The study also included telephone interviews with staff from the 50 Head Start agencies whose communities experienced the largest changes in demographic composition. The telephone interviews discerned the impact of demographic changes on Head Start agencies and focused on (a) program and staff experiences serving various ethnic groups, (b) outreach and recruitment strategies, (c) the impact of demographic changes on the Head Start population and the community at-large, and (e) their impact on program policy and practice. The study was completed in June 2000.

Using the Developmental Indicators for the Assessment of Learning (DIAL-3) Spanish Version to Evaluate a Bilingual Curriculum Program for Limited English Proficient Latino Preschoolers in Head Start

Roman Garcia de Alba, Salvador Hector Ochoa, Eleazar Ramirez, Nell Carvell

PRESENTERS: Roman Garcia de Alba, Salvador Hector Ochoa, Eleazar Ramirez, Nell Carvell, Liston Mike Rice, Ann Minnis.

The purpose of this presentation was to discuss the development and evaluation of a culturally and linguistically appropriate curriculum for 79 preschoolers in a Head Start Center located in the Southwest. A description and samples of the curriculum are presented. The 79 preschoolers were assigned to one out of the following three language proficiency groups: (a) English Dominant, (b) Spanish Dominant, or (c) Limited English Proficient based on their performance

on the Pre-IDEA Proficiency Test (Pre-IPT; Williams & Dalton, 1988) in both English and Spanish. The Developmental Indicators for the Assessment of Learning-Third Edition (DIAL-3; Mardell-Czudnowski & Goldenberg, 1998) in Spanish was used to assess students' progress in the following domains: (a) motor, (b) concepts, (c) language, and (d) total scores.

Results indicate that the children who were identified as English Dominant made statistically significant growth in all domains of the DIAL-3. The preschoolers who were classified as Spanish Dominant made statistically significant gains in the concept and motor domains as well as in the total DIAL-3 score. The pupils designated as LEP made statistically significant improvement in the concept domain and in the total DIAL-3 score. Effect sizes were calculated for each of the DIAL-3 domains within each of the different language proficiency groups.

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Defining Sociometric Status for Head Start Children

Sue Vartuli, Dong Hwa Choi, Carol Bolz

PRESENTER: Sue Vartuli

The primary objective of this research was to determine if three methods of assigning sociometric categories contribute similar information. Theory and research on sociometric measures and social competence provide the foundation for this study (Moreno, 1934; Gronlund, 1959; Peery, 1979).

The participants for this investigation consisted of 72 Head Start children from three classrooms who had complete data sets and their classroom teachers. The children, whose average age was 4 years, 8 months (*SD* 6.01); included 33 girls (46%); and 100% of the children were African American. Researchers met individually with children from each classroom to administer the sociometric interviews. After rating each child in their class, children also nominated three children they would like to play with (positive nominations) and three children they would not want to play with (negative nominations). The three classroom teachers were asked to complete a modified form of the Teacher's Social Skills Rating Form (Mize, 1984).

Peer ratings (five categories) were positively related to children's nominations (five categories) ($r = .92$, $p < .01$). Teacher's social skills ratings (total score) were positively related to age ($r = .38$, $p < .01$) but not peer ratings nor children's sociometric nominations. The proportion of children allocated to social status groups by each sociometric classification procedure revealed that the rejected category had the most uniform percentage across all three methods (17–18%). The neglected and controversial categories had more variability and less substantial overlap within methods. When the social status category agreement was calculated, the concordance of status classifications between the nomination and rating methods was high, Kappa = .75, $p <. 001$). Fifteen of the children's social status categories were compared over a 9-month interval to explore stability of categories. There was no significant relationship between the social status categories over time for either method, rating categories $r = -.005$, $p < .98$, and nomination categories, $r = .13$, $p < .69$.

The results of this study demonstrate that social status categories based on peer ratings and nominations are highly related. The weighted peer rating system was not as exacting, because of the use of only three categories. The weighted peer rating system was also the most conservative.

The rejected category appeared to be the most uniform percentage across all three methods. There was no stability of categories over time for either rating or nomination categories. Peer social status categories were not significantly related to teacher's reported ratings.

The results of this research indicate that social status categories based on peer ratings and nominations could be used interchangeability. All three methods—peer ratings, nominations, and weighted peer ratings—were equally effective in identifying rejected children, and the rejected children are the ones most in need for social skills intervention. Since the objective of this research was to determine which measure was the best method for selecting children in need of social skills training interventions, it is recommended that when children are selected for social skills training intervention the child's perspective be a part of the assessment.

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Identifying Needs of Single Caregivers With Young Children Attending Early Intervention and At-Risk Prevention Programs: The Parenting Stress Index (Short Form) and Family Centered Practice

Elizabeth Park, Donald Unger, C. Wayne Jones, Lisa Farling

PRESENTERS: Elizabeth Park, Donald Unger

The validity and reliability of the Parenting Stress Index-Short Form (PSI-SF; Abibin, 1995) with single caregiver families whose children were receiving early intervention and prevention services were evaluated. It was expected that the PSI-SF would be related to factors that contribute to and/or result from parenting stress, as well as factors that buffer parenting stress such as (a) severity of the child's developmental delay, (b) childrearing attitudes including parent satisfaction with parenting role and with one's family and home environment, and (c) parent–child interaction. It was also expected that the measure may, although it was not designed to, reflect other dimensions contributing to or buffering parenting stress among low-income minority families such as (a) social resources (social support), (b) emotional well being (mental health and self-efficacy), (c) level of education, and (d) economic/financial resources (Martin & Martin, 1978; Scott & Black, 1989; Taylor, 1986).

The sample included 218 low-income nonmarried caregivers with a young child recently enrolled in one of 21 different early childhood programs (early intervention programs, Head Start Centers, and at-risk preschools). The sample was comprised of mainly African American (88%) women, with the majority being between 20 and 34 years of age (7% teenage parents) and not employed outside of the home (85%). Fifty-nine percent of the children were male, and ages ranged from 1 to 5 years (median 2.4 years). According to an overall delay index created for this study, 30% of the children were severely impaired, 16% were moderately impaired, and 25% were mildly impaired.

The internal consistency reliability of the PSI-SF for the present study (alpha = .66–.89) was adequate and resembled those reported in the PSI-SF manual (alpha = .80–.91.) and alpha

coefficients reported in studies with low-income caregivers with young children in the United States (.74–.96; Musil, 2000; Nitz, Ketterlinus, & Brandt, 1995; Ritchie & Holden, 1998). The subscales of the PSI-SF were found to be intercorrelated ($r = .45$ to $r = .56$, $p < .001$). In addition, the three subscales and the Total Stress Score were related to many of the same measures used to establish construct validity ($r = .19$ to $r = .53$, $p < .05$ to $p < .001$). Results of this study suggest that for a low-income, single parent population, scores from the PSI-SF represent a global measure of parenting stress rather than stress related specifically to the child, parent, or parent–child dyad as proposed in the manual. Also, the Total Stress Score appears to be a more valid measure of parenting stress, than any individual subscale for this population.

Lastly, the available norms for the PSI-SF did not seem appropriate for this population. The PSI manual indicated a parent's raw score of > 90 (90th percentile) meant professional parenting intervention was likely needed (Abidin, 1995). In the present study, 62% of the sample scored > 90 at Time 1, and 66% scored > 90 at Time 2. Using the suggested cut off, two thirds of the present sample would be viewed as needing professional parenting intervention. However, the results from the observational measure of parent–child interaction (Parent/Caregiver Involvement Scale; Farran, Kasari, Comfort, & Jay, 1986) did not indicate such great dysfunction. When compared to other studies with low-income African American samples, the mean total stress scores for the present sample appear to be less extreme (Bhavnagri, 1999; Davis & Spur, 1998; Musil, 2000; Nitz et al., 1995). Until revised norms are available, it is suggested that the measure be used in combination with measures assessing family strengths, needs, and child's functional status.

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Implementing a Home-Based and Center-Based Early Head Start: A Case Study

Diane M. Horm-Wingerd, David A. Caruso, Julianna C. Golas

PRESENTERS: Diane M. Horm-Wingerd, David A. Caruso, Julianna C. Golas

Less than 7 years ago the Advisory Committee on Services for Families with Infants and Toddlers and the Advisory Committee on Head Start Quality and Expansion recommended the implementation of an Early Head Start program to service the needs of at-risk families with infants and toddlers. Since that time over 600 Early Head Start programs have begun serving this target population, and 17 of these programs are participating in an extensive national evaluation (U. S. Department of Health & Human Services, 2001).

Preliminary results from the 17 experimental Early Head Start sites have yielded some optimistic results regarding the efficacy of the program (U. S. Department of Health & Human Services, 2001). However, research examining program efficacy oftentimes neglects or superficially attends to the formative evaluation of program implementation. This is true despite the fact that formative evaluations have the potential to provide insight to other grantees initiating a program. The purpose of this poster was to highlight the importance of the formative evaluation in the early stages of program implementation and to explore how two Early Head Start centers implemented different program delivery models: home-based and center-based approaches.

The two Early Head Start programs were both grantees serving mostly suburban and urban families. Most of the families consisted of single, White mothers with a high school diploma or GED. The one demographic variable the two centers differed on was employment status. Those families attending the center-based program worked part or full time, versus the home-based population, which was unemployed.

An integral question of the formative evaluation was whether families were receiving the full intensity of services. Much of the literature suggests that program outcomes and effects are only achieved after at least 1 year of services (Haskins, 1989; Olds, et al., 1998; Striefel & Robinson, 1998). The center-based program was much more successful in maintaining family enrollment, with over 90% of the families continuing in the program for more than 1 year. Approximately 50% of home-based families failed to meet the minimum 1-year benchmark, and those families who did remain in the program received on average three out of four home visits per month. Both center-based and home-based families who remained in the program for over a year showed gains in their scores on the Dunst and Trivette Family Support Scale (Dunst, Jenkins, & Trivette, 1994).

Both programs struggled with the parent involvement component of Early Head Start. Although the programs offered numerous opportunities for parents to participate, parents reported a lack of flexibility in their work schedules prevented them from participating. Attendance for family day in the home-based program was very low, with less than one third of the families attending. Staff suggested that the mental health of the home-based parent was a major contributor to the lack of attendance.

Continuous funding of Early Head Start relies heavily upon the positive outcome evaluations of the pioneer programs. However, policy makers must recognize the ever-burdening struggles that each grantee must endure and overcome to achieve program maturation and effectively deliver a comprehensive and high quality program for children and parents.

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Preschool Learning Behaviors and Their Relationship to School Readiness Competencies for Urban Head Start Children

Marlo A. Perry, John Fantuzzo, Paul McDermott

PRESENTER: Marlo A. Perry

School readiness includes a multifaceted set of competencies that help young children make successful adjustments to school demands and expectations (Lewit & Baker, 1995). The National Education Goals Panel (NEGP; Kagan, Moore, & Bredekamp, 1995) delineates five important components of school readiness: (a) Physical Well-Being and Motor Development, (b) Social and Emotional Development, (c) Approaches Toward Learning, (d) Language Development, and (e) Cognition and General Knowledge. According to NEGP, approaches toward learning "comprise the least understood, the least researched, and perhaps the most important dimension. Because approaches to learning frame the child's entire being and are at the core of social–emotional and cognitive interactions, the dimension warrants more attention" (p. 21). Learning behaviors, therefore, are a strategic focus for early intervention.

The Preschool Learning Behaviors Scale (PLBS; McDermott, Green, Francis, & Stott, 2000) was developed to assess the learning behaviors of preschool age children. Three dimensions were found in the original validation study. Competence Motivation refers to a child's curiosity about learning activities, as well as his/her motivation to understand and succeed in those activities. A child's ability to attend to relevant stimuli and persevere with difficult tasks describes the Attention/Persistence dimension. The Attitude Toward Learning dimension is characterized by a child's general demeanor in learning activities and the way in which he/she interacts with others in those learning activities (McDermott, Leigh, & Perry, 2002).

The purpose of the present study was to address the need for further investigation of the validity of PLBS learning behavior constructs for use with low-income, urban preschool children. This investigation employed multivariate statistical methods and used stringent, multiple criteria to address three questions. First, does this measure yield psychometrically robust dimensions of approaches to learning for a sample of urban Head Start children? Second, is the factor structure based on the Head Start sample congruent with the factor structure found by McDermott et al. (2002). Third, do these dimensions relate to other developmentally salient constructs of school readiness competencies?

Participants of this study included the teachers and caregivers of 642 children recruited from 41 Head Start classrooms in a large, northeastern city. Racial demographics of this sample indicated that the majority of the families (85%) were African American. Factor analyses revealed three robust dimensions, congruent with the Competence Motivation, Attention/Persistence, and Attitude Toward Learning dimensions found by McDermott et al. (2002). Canonical variance analyses were conducted to explore possible multivariate relationships

between learning behaviors and other child competencies, as measured by teachers, parents, independent observers, and through direct assessment. Canonical variance analyses indicated significant multivariate relationships between ratings of children's learning behaviors and both teacher and parent ratings of children's play behaviors. Additionally, significant multivariate relationships between ratings of children's learning behaviors and independent observer ratings of children's self-regulation were found. Finally, bivariate correlations between the PLBS dimensions and children's expressive and receptive vocabulary scores revealed some significant relationships between learning behaviors and emergent literacy skills. Implications of these findings for early childhood research and practice were outlined in this presentation.

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Using Systematic Observations to Study Process in Head Start and Other Group Settings

Jeanne Montie, Jill Claxton, Patricia P. Olmsted

PRESENTERS: Jeanne Montie, Jill Claxton

Measures of process, a child's actual experience in a setting, can be used to obtain an index of quality in early childhood settings that goes beyond quality assessment based on structural characteristics alone. This study presents findings from systematic observations used to study process in a carefully drawn U.S. sample. The data are part of the International Association for the Evaluation of Educational Achievement (IEA) Preprimary Project. The observation systems used in the study were developed by an international team of early childhood experts specifically for the IEA Preprimary study.

Five types of settings were included in the U.S. data collection: (a) Head Start programs, (b) public preschools, (c) other organized group settings (preschools and child-care centers), (d) family day-care homes, and (e) children's own homes. Data collection took place at six sites around the U.S. that varied in geographic location and degree of urbanization, and together the six sites included families from all major cultural/ethnic and sociodemographic groups. The final sample consisted of 559 children: 109 children enrolled in 31 Head Start programs, 107 children attending 24 public preschool programs, 193 children in 45 types of organized programs, 71 children in 32 family day-care homes, and 79 children cared for in their own homes. The mean age of the children at the time of data collection was 4.5 years ($SD = .29$).

Findings are presented from the combined observation system used to gather information about adults' management of time, children's activities, and adults' behaviors. The child activities observation system (CA) was used to record the activities in which the target child was engaged and amount of time spent in different activities. The adult behavior observation system (AB) was used to record the behaviors of the primary adult and the nature of the adult's involvement with the children. The management of time system (MOT) was used to keep a running

record of how the adult organized children's time—the activities proposed by the adult, the time of each proposed change of activity, and the proposed group structure.

The following are examples of basic findings presented for each of the observation systems. MOT data show the percentage of time specific activities were proposed and how group structure varied by type of activity. Data from CA show the percentage of time children were engaged in specific activities and whether the child was interacting. AB data show the percentage of time spent in various activities such as teaching, child management, and nurturing. The CA and AB observations were completed concurrently with the MOT; thus, it is also possible to create a matrix that shows child and adult behaviors during specific proposed activities. The observation systems provide a proven and objective means of gathering process information in early childhood settings. This information can be useful in examining issues related to quality and showing where teaching practices result in desired outcomes and where changes should be considered.

Myers-Briggs Type Inventory (MBTI) and Teacher Retention in Head Start

Johnnie Cain

PRESENTER: Johnnie Cain

"Time is money, and there are few things more costly to programs than the time and expense associated with employee turnover." (Half, 1986). Studies within the past decade show that 50% of new hires last only 6 months in their new jobs. It is important that you get an idea of what tasks the individual likes or dislikes doing, not only because people are invariably better at the things they like to do, but because people who do not like what they do rarely last on the job.

Data from a 6-year study (1994–2000) utilizing the Myers-Briggs Type Inventory (MBTI), Form G (Self-Scoring) (Myers & Briggs, 1977) in the Head Start environment support a thesis from earlier research that certain temperament types are retained longer in early childhood teaching positions. In this study, 67 (84%) of the Region X Head Start programs yielded 1,538 MBTIs. 797 of these inventories were from teachers. Findings indicate that 75% of teachers (approximately 8 out of 10) are of the Sensing/Judging (SJ) and Intuition/Feeling (NF) temperament types.

Early findings from David Keirsey and Marilyn Bates' studies from the 1970–80s with California Schools Systems indicated that 8 out 10 teachers who remained the longest in early childhood education came from primarily SJ and NF temperament types (Keirsey & Bates, 1984). SJ types in the Keirsey-Bates study accounted for 56% of those who had a long stay in teaching, while 45% of these were SJs in the 6-year study. SJ types generally exhibit a love for structure in developing responsibility and utility in their students. As for NF types, they represented 32% of those who had a long stay in teaching in the Keirsey-Bates study and 30% in the 6-year study. NFs typically have a love for developing identity and integrity in their students.

Head Start generates annual Program Information Reports (PIRs) based on PIR reporting required of all grantee programs throughout the United States. In years 1990–1994, The PIR reports indicate that the national turnover rate of Head Start teachers was consistently 12.5% (U.S. Department of Health and Human Services, 1994–2000). In the 1999–2000 PIR, the turnover rate was 9.3% nationally and 10.89% regionally. This decline can be attributed to the inception of performance standards by Head Start in 1994 (U.S. Department of Health and Human Services, 1996). The nature and structure of the "standards" are particularly suited for SJs and NFs and thereby provide the type of guidance that particularly suits these temperaments.

Although there are many other variables, one striking conclusion is that type is related to retention of selected individuals as well as to those who tend to remain the longest in the teacher positions. Therefore, the author suggests that the MBTI could be successfully utilized as a predictive first-step assessment/preselection tool where retention and cost are important to the survival of an early childhood educational organization. In addition, further study should be done comparing the job performance of SJs and NFs to other types over time to evaluate "quality of tenure."

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Parental Reports of Preschool Children's Social Behavior: Relations Among Peer Play, Language Competence, and Problem Behavior

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Head Start has maintained children's social and emotional adjustment as a primary program goal. Successful peer interactions are critical for both immediate and long-term emotional adjustment. Play is a salient context for the acquisition of social competence and has important connections with school readiness (Coolahan, Fantuzzo, Mendez, & McDermott, 2000; Mendez, McDermott, & Fantuzzo, 2002). In addition, play may be an important context in which language skills, such as expressing emotions and providing comfort to others, are refined (Dunn & Brown, 1991; Sawyer, 1997).

Raver and Zigler (1997) note the importance of validating developmentally and culturally appropriate measures of social competence. To address this need, researchers developed the Penn Interactive Peer Play Scale (PIPPS; Fantuzzo et al., 1995). While multiple validation studies have been completed with the teacher form of the PIPPS (Coolahan et al., 2000; Fantuzzo et al., 1995; Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998a), additional evidence is needed to substantiate the assessment capabilities of the parent version of this measure. The primary purpose of this study was to further examine the validity of the parent version of the PIPPS. A secondary objective was to study relations among constructs of play, behavior problems, and language competence for African American preschoolers using a brief longitudinal research design.

Parents and teachers provided information on 113 preschool children enrolled in a Head Start program. A subset of these children (n = 34) who participated in a 1st year of this early

intervention preschool program was assessed at 8-month follow-up. Canonical correlational analysis confirmed relations between parent ratings of play performance, parent ratings of problem behavior, and teacher ratings of play performance at time 1. Canonical analyses comparing the PIPPS (Fantuzzo, Mendez, & Tighe, 1998b) and the Conners Parent Rating Scale (Conners, 1997) revealed two significant variates. The first variate pair, called Problem Behavior, was characterized by strong positive relationships between the Play Disruption and Play Disconnection scales of the PIPPS and each of the four Conners problem behavior scales. Additionally, Play Interaction loaded negatively on this variate pair. The second variate pair, called Inattentive/Disconnected, was defined by a strong positive relationship between the Play Disconnection scale of the PIPPS and the Inattention scale of the Conners.

Parent ratings of play were also related to assessments of children's language competence at the beginning of the following school year, while parent ratings of problem behavior were not related to subsequent language competence. Specifically, parent ratings of disruptive play and disconnected play had significant, negative relations with children's expressive and receptive language skills 8 months later. Parent ratings of interactive peer play had significant positive relations with receptive language ability.

These findings provide additional validity for a parent measure of preschool children's peer play and support the need for greater inclusion of parental assessment of young children's social behavior during early childhood. Results emphasize the need to use multiple measures, such as the PIPPS, which capture the social competencies of the child while also providing diagnostic information about problem behaviors.

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The Social Skills Rating System for Urban Low-Income Kindergarten Children

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Research has long shown that social competency is a critical component of school success (Ladd & Coleman, 1997; Wentzel, 1999). Quality assessments of this important competency should include consideration of both home and school contexts (Fagan & Fantuzzo, 1999). Parents and teachers need a shared understanding of children's strengths and needs, so that they can plan appropriate activities and interventions in both home and school settings and follow children's progress through the transition from preschool to kindergarten.

The Social Skills Rating System (SSRS; Gresham & Elliott, 1990) was developed in response to the need for multicontextual, multiinformant assessment measures, and has both parent and teacher versions. Items for this system were a priori delineated into two scales: Social Skills and Problem Behaviors.

While national standardization studies suggest the general utility of the Social Skills Rating System with elementary school children, results from a study examining the use of the preschool SSRS in urban, low-income areas found different factor structures than the original (Fantuzzo, Manz, & McDermott, 1998; Manz, Fantuzzo, & McDermott, 1999). Therefore, the purpose of this study was to examine the construct validity of both the teacher and parent versions of the SSRS with a sample of urban low-income Kindergarten children. Specifically, this study investigated (a) whether the teacher and parent versions of the elementary SSRS yield the same constructs for an urban, ethnic minority kindergarten population as published in the SSRS manual, and (b) whether there is empirical support for independent Social Skills and Problem Behavior domains.

The participants in this study were 493 kindergarten children (predominantly African American) from low-income areas in a large urban school district. Responses from both parents and teachers in this study were subject to independent exploratory factor analyses to evaluate underlying constructs across items of the social skills and problem behavior scales, respectively. Results yielded a three-factor solution for both scales of the teacher SSRS, replicating the original structure in the manual. However, for the parent version, analyses resulted in a three-factor solution for the social skills scale as opposed to the original four-factor solution in the manual. In addition, factor analysis of the problem behavior scale yielded a three-factor solution as in the manual, although the factor items loaded differently.

Higher order factor analyses were examined as an empirical test of Gresham and Elliott's (1990) theoretical proposition of two unique constructs of social competence. Preliminary analyses for the teacher version suggest that there are two overall constructs measured, although they are not distinctly representing social skills and problem behaviors, whereas resulting constructs for the parent version support the original constructs of social skills and problem behaviors.

Differences in the exploratory and higher order factor structures between the parent and teacher SSRS raise important issues for researchers and policy makers in early childhood education. Particularly for low-income children, the assessment of social competency is an issue that requires thoughtful evaluation of children's functioning across contexts. In addition, this study highlights differences between key informants' ratings of children's social competence.

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Forging the Link Between Children's Teachable Learning Behaviors and the Head Start Curriculum

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The purpose of this study was to develop behavioral performance objectives that would serve as the foundation for a curriculum to teach learning behaviors to children in Head Start. Learning behaviors refer to the characteristic and observable behavioral patterns that children display as they approach and undertake learning tasks. Examples include task persistence, competence motivation, flexibility, and attentiveness. Learning behavior, as distinct from cognitive ability or intelligence because it is uniquely teachable, accounts for substantial aspects of school performance that are untapped by ability measures, and reduces the risk of school failure and social maladjustment substantially more than ability.

The Preschool Learning Behaviors Scale (PLBS; McDermott, Green, Francis, & Stott, 2000), a nationally standardized rating instrument, was completed for 2,329 Head Start children in Philadelphia during the 2000–2001 school year. From the teacher responses provided, two empirical procedures were applied to identify within PLBS dimensions, the basic building blocks or behavioral areas that comprised the dimensions of early learning behaviors.

Consistent with development of behavioral sets for children in kindergarten through grade 12 (McDermott & Watkins, 1987; Stott, McDermott, Green, & Francis, 1988), two empirical procedures were used: (a) exploratory factor analysis and (b) cluster analysis. The goal of each procedure was to establish a maximally robust, stable, and educationally meaningful collection of behavioral sets, where each set was composed of PLBS items that reflected the same phenotypic skills. Both procedures were used because, depending on the amount of common and unique variance among PLBS items for Head Start, one or the other procedure was likely to form more useful behavioral areas. After careful review of the resulting groupings of items, it was determined that the results of the factor analysis made more sense based on their content meaning, and thus were used as the final nine behavioral areas. Each of the nine areas was then named for its component items.

Behavioral performance objectives were written for each of the empirically derived behavioral areas, with input from two Philadelphia Head Start educational coordinators. These professionals helped to identify the most relevant and teachable of the behavioral sets and to develop a

hierarchy of instructional objectives that would apply to the 3- to 5-year-old age range found in Head Start. The resulting instructional objectives were put into a survey format that presented 3-point likert anchors indicating 'Most Achievable' to 'Not Achievable.' Six Head Start teachers from the Philadelphia schools regional clusters were identified and asked to rate each objective in terms of relevancy for Head Start and teachability within the Head Start context. A follow-up discussion meeting was held with the participating teachers and educational coordinators to discuss the objectives and their ratings.

The survey results were shared with the educational coordinators and teachers at large to stimulate discussion. The information generated from these discussions, along with the resulting behavioral objectives from the study, can now be used to provide a foundation for the development of a Head Start Learning Behaviors Curriculum.

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Early Head Start Program Evaluation: Manualized Assessment of Progress

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The Early Head Start Manualized Assessment of Progress (EHS MAP; Dickstein, Kuersten-Hogan, Eguia, & Seifer, 1999) was designed as a program evaluation tool to be integrated within the fabric of EHS, and utilized by all EHS staff with input from families. It serves to document ongoing progress of children and families while enrolled in the program, as well as the fidelity of services provided. EHS MAP was developed to flexibly monitor progress of children and families in home-based and center-based programs and to yield systematic information about child and family goal progress in areas including (a) Parent Self-Sufficiency; (b) Child Developmental Readiness; (c) Parent Promotion of Child's Development; (d) Health, Nutrition, and Mental Health; and (e) Program-Community Integration. Child and family goals were chosen, rated on a scale ranging from "non-optimal functioning" to "developmental strength," and tracked over time (Dickstein, Seifer, Eguia, Kuersten-Hogan, & Magee, 2002).

We present data collected during 1 quarter in a local EHS program with a total enrollment of 108 children. Results are based on chart review of 65 center-based children (who participated in the program for at least 7 weeks during the quarter). We found that:

1. All (100%) children had individual developmental goals identified by their teachers, complying with program performance standards.
2. Most (69%) children had health, nutrition, and/or mental health goals reflecting important needs in these areas.
3. On average, substantial progress was made on all child developmental goals.

4. Parent Self Reliance goals were selected by 46% of families.
5. Parent Promotion of Child Development goals were selected by 29% of families.
6. On average, some progress was made in both family goal domains.

The EHS MAP was designed to document continuous improvement and growth in the context of ongoing social, developmental, and/or familial challenges. Anecdotal information suggests that implementation of this system heightened staff awareness of normative developmental processes and improved quality of service provision by (a) enhancing cooperation among the EHS team; (b) facilitating staff–family partnerships; (c) challenging EHS staff to flexibly address child, family, and community needs; and (d) shifting the focus of work with families to a proactive strength-based case management approach.

Program evaluation within a system of service delivery requires specification of methods for assessing and tracking child/family outcomes, as well as for training evaluators. Some challenges include the need to (a) establish agreement among staff regarding rating system components and (b) monitor potential biases associated with staff simultaneously being evaluators and service providers. A benefit includes highlighting the interplay of normative and maladaptive processes in developmental context, consistent with "developmentally appropriate practices" for early childhood professionals (Bredekamp & Copple, 1997). Another benefit includes the ability to link assessment (or program evaluation) with service provision in a manner well articulated by Meisels (2001). That is, program evaluation (a) is an ongoing and dynamic process based on multiple experiences with the child/family and on varied sources of information, (b) generates hypothesis-testing functions to better elucidate child/family strengths and needs, and (c) is linked with implementation of individualized child/family programming. The EHS MAP is a promising tool that requires further validation.

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Assessment of Emergent Numeracy in Head Start

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Helping children enter school ready to learn is a primary objective of Head Start. To attain this goal, early childhood programs need to nurture the development of competencies in several areas, including numeracy (Kagan, Moore, & Bredekamp, 1995). Emergent numeracy is particularly important because the ability to learn math and science in later years is based on children's understanding of early math skills. As programs such as Head Start help children to develop emergent numeracy skills, appropriate methods are needed to identify children's success in mathematics. A useful assessment measure is the Test of Early Mathematics Ability (TEMA-2;

Ginsburg & Baroody, 1990), which provides a broad assessment of early math for children ages 3 through 8. The TEMA-2 evaluates both informal and formal mathematics. Moreover, this instrument can help to identify topic areas in math that children find difficult, and can reveal informal strengths among children who are performing at low levels.

Although the TEMA-2 has many useful features, our work with Head Start children has found that it can be time consuming to administer, leading to difficulties with maintaining children's attention and with assessing large numbers of children. Given these concerns, the purpose of this research was to develop and validate a shortened version of the TEMA-2.

The participants included ethnic minority Head Start children in a large urban school district. Exploratory factor analyses were conducted to determine the latent structure of the TEMA-2. The reliable three-factor solution included the constructs of Basic Math Skills, Intermediate Math Skills, and Advanced Math Skills. Subsequently, a short form consisting of 14 items was developed. The short form yielded the same three factors, and demonstrated reliability. Bivariate correlations were calculated to examine the relationship between the scores on the short and long forms of the TEMA-2 for a sample of Head Start children. The results yielded positive correlations that were strong and statistically significant. The short form scores of children in Head Start and the long form scores of children in kindergarten also correlated positively and produced strong, statistically significant correlations.

The results of these studies indicate that the short form provides an assessment of children's early math skills across levels of skill development, in keeping with the full version. Moreover, the short version demonstrates a strong, significant relationship with the full form. Further analyses continue to explore the validity of this instrument. These results indicate that the short version is a promising screening instrument for Head Start children. The use of a shortened math assessment can help to identify large numbers of children who need assistance with math and can be used to evaluate the results of interventions aimed at improving children's math skills. Both of these uses would benefit Head Start children by helping to improve emergent numeracy skills as part of a strategy for enhancing school readiness.

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Native American

Vision Problems Among Native American Head Start Children

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Research has demonstrated a higher prevalence of astigmatism among members of several Native American tribes than has been reported in other populations (Abraham & Volovic, 1972; Boniuk, 1973; Coleman, 1970; Hamilton, 1976; Kershner & Brick, 1984; Levy & Wall, 1969; Maples, Atchley, & Hughes, 1996; Miller, Dobson, Harvey, & Sherrill, 2000; Woodruff, 1986). Without eyeglass correction, individuals with astigmatism have poor near and distance vision. In addition, research has indicated that if the astigmatism is not corrected while children are young (prior to age 7), they can develop refractive amblyopia (Mitchell, Freeman, Millodot, & Haegerstrom, 1973). This condition is defined by poor visual acuity in the absence of ocular abnormalities even while wearing appropriate eyeglass correction, and treatment success is limited after age 7. Thus, uncorrected astigmatism may interfere with performance in preschool due to poor visual acuity, and may have permanent effects on vision and school performance as the children grow older. The goal of the current study was to determine the prevalence of eye problems including astigmatism, and other amblyogenic risk factors in Tohono O'odham preschoolers.

Participants were children at least 3 and less than 5 years old, enrolled in the Tohono O'odham Head Start Program between 1997 and 2000, who were not identified by the Head Start Program as having special needs. Each child received a complete eye examination. Eyeglasses were provided to 3-year-olds who had 2.00 D of astigmatism in either eye, and to 4-year-olds who had 1.50 D of astigmatism in either eye.

Of the 667 children tested, 612 met the inclusion criteria, 4 (0.6%) were too old, 21 (3.1%) were too young, and 30 (4.5%) were identified as having special needs. Of the remaining children, only 8 (1.2%) had eye abnormalities (e.g., nystagmus, strabismus), 48% had astigmatism 1.00 D in the right eye, and 48% had astigmatism 1.00 D in the left eye. Eyeglasses for correction of astigmatism were prescribed for 32% of the children. Only 1 of the included children (0.2%) was identified as having high refractive error in the absence of high astigmatism.

The results indicate that almost one third of Tohono O'odham preschool children require correction of astigmatism, while other amblyogenic risk factors (e.g., strabismus) are rare. These results highlight the importance of identifying risk factors specific to the population of interest when implementing screening protocols aimed at identification of factors that may affect visual performance. The screening methods most often used in preschools focus on the detection of strabismus and high refractive error. In this sample of Native American children there is almost no strabismus, whereas there is a high prevalence of astigmatism. For these children, and perhaps for children of some other Native American tribes, the most effective vision screening would focus on the detection of astigmatism. Early correction of refractive errors and amblyogenic risk factors are likely to make significant contributions to academic performance and to healthy visual development.

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Culture, Context, and Child Development in One American Indian Tribe

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Our goal was to explore culturally appropriate ways of assessing cognitive and social-emotional development in American Indian toddlers. We also examined some of the more robust correlates of development in these areas. All participating families in this study were recruited from families eligible for Early Head Start services on one Northern Plains American Indian reservation as part of a study funded by the Head Start Bureau. Data on a total of 98 families are presented here.

Children were assessed at 24–30 months of age in an effort to better understand the unique challenges of toddlerhood for families in this community, especially the difficulties that can arise with emerging autonomy in the child.

Children's cognitive development was assessed using the Mental Development Index (MDI) of the second edition of the Bayley Scales of Infant Development (Bayley, 1993), language development was assessed using the MacArthur Communicative Development Inventory (CDI; Fenson, et al., 1993), and social–emotional development was assessed using five subscales of the Infant and Toddler Social and Emotional Assessment (ITSEA; Carter & Briggs-Gowan, 1999). Exploratory factor analyses of these seven individual measures revealed three main factors, which are used in the analyses presented here: (a) children's cognitive–language development (composed of the Bayley MDI and the MacArthur CDI), (b) children's social–emotional

competencies (composed of two subscales of the ITSEA), and children's social–emotional problems (composed of three subscales of the ITSEA).

Correlates of child development were drawn from interviews with the child's mother and observations during a home visit using the Home Observation for Measurement of the Environment (HOME; Caldwell & Bradley, 1984). The correlates included in these analyses are (a) mother's alcohol use at the time of the interview, (b) mother's spirituality (using a scale validated in a large study of psychiatric epidemiology in American Indian communities), and (c) the responsivity and variety scales of the HOME. These correlates emerged consistently from a somewhat broader set of correlates used in preliminary analyses.

Mother's alcohol use was correlated with social and emotional problems in the child, mother's spirituality was correlated with social and emotional competencies in the child, and child's cognitive–language development was correlated with responsivity and variety on the HOME.

Each of these findings is consistent with ongoing ethnographic work in the community, and provides support for program emphases, especially those that involve working on parent's substance abuse and strengthening parents' knowledge of traditions. Our results in the area of cognitive–language development also emphasize the value of traditional parenting practices in this community, which emphasize noninterference by parents and patterns of caregiving distributed broadly through the extended family.

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Maternal Reports of the Daily Routines of Toddlers From American Indian Families Living on a Northern Plains Reservation

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Family routines are patterned interactions that occur with predictable regularity in the course of everyday living. Routines help to organize family life, reinforce family identity (Wolin & Bennett, 1984), contribute to family stability and continuity (Fiese, Hooker, Kotary, & Schwagler, 1993; Boyce, Jensen, James, & Peacock, 1983), and provide the context for much of early childhood socialization (Reiss, 1981; Rogoff, Mistry, Goncu, & Mosier, 1993).

Routines are generally considered a universal attribute of family life that cuts across ethnic and cultural background and socioeconomic status (Bossard & Boll, 1950; Boyce et al., 1983). Nevertheless, few details are known about the actual day-to-day practices of families with young children living in contemporary American society, particularly those with low incomes. Two studies involving low-income Head Start preschoolers point to the beneficial effects of family

routines on child outcomes (Churchill & Stoneman, 1997; Keltner, 1990). These results suggest a promising area in need of more systematic research.

Subjects were 15 American Indian mothers selected from a sample of 105 participants living on a Northern Plains reservation. Fifty-three percent of the target children were enrolled in an Early Head Start program.

During a home visit when their toddler was between 24 and 30 months of age, mothers were videotaped taking part in the Caretaking Routines Interview (Kubicek & Emde, 1998) in which they were asked to describe their daily routines for activities such as getting their child dressed, playtime, dinner, and bedtime. There were also questions about the best and the worst times of day for the family and why mother perceives these times that way and how discipline is handled. Each interview was coded according to a global rating system that was specifically designed to evaluate responses to this interview.

Results from these 15 illustrative cases indicate that routines are a regular part of the day-to-day lives of all of these families. Every family had a predictable pattern for at least three of the four targeted routines. For many families, routines provided opportunities for social and emotional engagement and for child autonomy. With respect to child autonomy, mothers in this sample seemed apt to follow their child's lead, for example, "I let him/her." This may reflect a cultural value of respect for the autonomy and free will of the child. Most mothers spent time engaged with their child in some type of child-centered activity on a daily basis, and all stated that routines were somewhat- to very important in keeping their families strong.

Given the reported benefits associated with the practice of family routines, these results are encouraging for those concerned with improving outcomes for children and families. Future reports will focus on the relation between different demographic variables, such as maternal education and participation in Early Head Start, and the practice of family routines. Of particular interest is how variation in this practice may relate to child outcomes.

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Impact Evaluation in the Canadian Aboriginal Head Start Program (AHS)

Lynne Robertson, Richard Budgell

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This presentation describes the Aboriginal Head Start Program(AHS) Impact Evaluation challenges, instruments, and methodology. Health Canada's Aboriginal Head Start Program, launched in1995, now serves more than 3,500 children in 114 sites. AHS addresses the needs of preschool First Nations, Inuit, and Metis children living in urban and northern communities. A similar federal program for First Nations children living on Indian reserves operates separately. AHS is designed to meet participating children's spiritual, emotional, intellectual, and physical needs in community-based early childhood programs where parents and guardians play a key role in the planning, development, operation, and evaluation. The six AHS program components are (a) Aboriginal Culture and Language, (b) Education and School Readiness, (c) Parental Involvement, (d) Health Promotion, (e) Nutrition, and (f) Social Support.

Evaluation approaches and indicators of program success were developed through Aboriginal community consultations with academics, participating families and other community members, and Health Canada staff. The impact evaluation demonstrates the effects of AHS on participating children, families, and communities, and will evaluate change in each of the six program component areas.

There are three phases to the AHS Impact Evaluation: Development, Piloting, and Evaluation. A major challenge to the impact evaluation design was identifying standardized instruments that were suitable for all AHS sites. To ensure scientific rigor and community relevance, a group of specialists in child development, evaluation, and working in Aboriginal communities recommended and/or developed a set of culturally sensitive instruments and a methodology for impact evaluation. The instruments and methodology were piloted in the 2001–02 school year, and the evaluation study will begin in the fall of 2002. The instruments are (a) Work Sampling System (WSS; Four domains for child observation are used to demonstrate child progress and school readiness), (b) Enviroview (This instrument was developed as a descriptive environmental rating scale to describe the cultural context for participating sites), and (c) Aboriginal Vocabulary Acquisition Test (This innovative instrument based on pictures, dolls, and colored balls was developed to test the child's vocabulary acquisition of Aboriginal words taught in his/her program. The pictures and format are designed for use in diverse cultural settings).

A set of instruments (questionnaires) was developed to measure change indirectly by collecting Perceptions of Change of informants. Individual interviews or focus groups were conducted by community evaluators with (a) parents/caregivers (entrance and exit annually); (b) AHS staff; (c) elders and traditional teachers, community professionals, and others (including former parents/caregivers); (d) kindergarten teachers; (e) social workers; and (f) health professionals. The methodology focuses on a participatory approach that builds community capacity and allows for adaptations to cultural differences. Sites selected for piloting and evaluation incorporate the linguistic, cultural, and geographic diversity within the program. Local AHS staff are trained in WSS, and communities recommend local evaluators for training and to carry out the community evaluation. As the Aboriginal communities play an increasing role in development and evaluation of their programs, they ensure their children are participating in high quality programs that are in harmony with their cultural values. Participants are recognizing the importance of evidence-based results for accountability, to demonstrate outcomes to funders, and for program improvement.

Normal Child Development

The Young Child in Relationships: A Descriptive Study of Patterns of Variation in Cognitive Skill, Social Perspective-Taking, and Emotional Expression.

Catherine Ayoub, Kathleen Guinee, Claire Russell

PRESENTERS: Catherine Ayoub, Kathleen Guinee, Claire Russell

This study explored cognitive skills and the emotional expression of young children. Children between 2 and 3 years of age demonstrate a variety of skills along the representational continuum from sensorimotor expression to representational mappings. There are socially constructed interactions that facilitate or deter the child's pattern of responses (Fischer & Ayoub, 1994). Differences ultimately impact not only the child's style of interaction, but also, her ability to learn.

Our sample consisted of 123 children eligible for Early Head Start in rural Vermont. The Nice Mean Scales (Fischer, Hencke, Hand, Ayoub, & Russell, 2001) were administered to the children at 24 and 36 months. These scales assess the development of children's representations of mean and nice social interactions and coping strategies. Mothers provided reports of the child's vocabulary production at 24 and 36 months. In addition, risk and resilience measures—parenting stress and harsh parenting practices—were obtained from mothers during the child's 1st year of life. These data were assessed using the MacArthur Communication Development Inventory (Fenson, Pethick, & Cox, 1994b), the Parenting Stress Index (Abidin, 1983, 1995), and the Child Abuse Potential Inventory (Milner, 1986).

We predicted differences in patterns of cognitive skill levels and coping strategies associated with entry-level maternal risk factors and vocabulary and expressive style—controlling for gender, age, and income. Children differ in their abilities to represent the self as separate and engage in telling simple stories about one's self in interaction. At 24 months, children are often not fully representational (M = .36; SD = .66). Only 5% of the sample children were able to reach skill level 1 (identifying a person in one action fitting a social-interaction category of mean or nice). By 36 months, children are solidly performing at the single representational level (M = 1.34; SD = .99). Ten percent of the sample children remained unable to represent a person as a separate agent, and half were actively able to represent a person performing two actions fitting an interaction category of mean or nice. Five percent of the children were able to shift behavioral categories.

Age was the most powerful predictor of skill level (t = -6.53, p = .001) and of cognitive complexity in storytelling (t = -5.35, p = .001). There were no other influences on skill level passed and complexity of storytelling, demonstrating that cognitive skill was not dependent upon gender, vocabulary production, or parents' income.

Children engage in a variety of coping strategies to diminish uncomfortable stories. The use of coping strategies, specifically distraction/refusal and spontaneous storytelling, are negatively associated with higher skill levels (r = -.58, p = .0001). A small group of children focused on the

expression of negatively charged social constructions and used the largest number of coping strategies (33%) to avoid anxiety. These children were more likely boys than girls (t = -2.24, p = .05). Older children used more elaboration and shifting, coping strategies more positively associated with higher skill levels (t = -3.04, p = .01; t = -2.85, p = .01). Three-year-olds had a more positive style of emotional expression (t = -4.67; p = .001) than did 2-year-olds.

Children's ability to successfully pass cognitive skill tasks was influenced by maternal parenting stress during the child's 1st year of life (R^2 = .30). Younger children's performance on cognitive tasks was impacted by an increase in material stress; maternal stress did not impact on the complexity of children's stories.

These findings suggest that it is not the child's core cognitive ability that is impacted by maternal stress, but the child's ability to attend to task and respond to social requests of another.

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False-Belief Understanding in a Head Start Population

Rachel A. Peters

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While there is a wealth of information concerning false-belief understanding in normative preschool samples, little is known about false-belief and its correlates in children living in less optimal conditions, such as poverty. The purpose of this study is to examine the validity and applicability of the false-belief construct to children in Head Start. Specifically, the following three issues surrounding false-belief in Head Start were examined: (a) the coherence of the false-belief construct across three standard false-belief tasks, (b) the relation between false-belief and verbal ability, and (c) the relation between false-belief and teacher-reported social competence.

Participants included 53 children (26 males and 27 females; average age = 4 years, 6 months) who were part of a Pennsylvania State University–Head Start collaboration. Verbal ability, specifically receptive vocabulary, was assessed using the Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997). Children completed a battery of three false-belief tasks, which included the prototypical box task (Hughes, 1998), and two subtasks of the peep-through book task (Gopnik & Astington, 1988; Hughes, Dunn, & White, 1998). These tasks assessed both children's understanding of their own false belief as well as their understanding of another's false belief. Teachers reported on children's social competence using the Preschool and Kindergarten Behavior Scales (PKBS: Merrell, 1994).

Although children's success rate varied across tasks, there was moderate support for a relation among false-belief tasks. Results support a positive significant relation between performance on the box and "own" book tasks ($\phi = .31$; $p < .05$). Thus, if children passed the box task, they were more likely to correctly identify their own initial false belief on the book task than children who failed the box task. Results also suggest that performance on the "own" and "other" questions of the book task were related ($\phi = .28$; $p < .05$). Thus, children who correctly identified their own initial false belief were more likely to successfully identify the false belief of another than children who failed the "own" questions.

Additional analyses examined relations between false-belief and its proposed correlates. The relation between false-belief and verbal reached significance for females $\tau(23) = .41$; $p < .05$. A similar pattern emerged with respect to the relation between false-belief and social competence. Specifically, the relations between false-belief and social skills $\tau(23) = .35$; $p < .05$ and between false-belief and problem behavior $\tau(23) = .39$; $p < .05$ reached significance for females.

Overall, results suggest that false-belief is applicable to Head Start children. Results suggest moderate consistency in children's performance on various tasks used to assess false-belief understanding and support was found for relations between false-belief understanding and both verbal ability and social competence, but only for females. One explanation for the gender effect is that adults may use different criteria when judging social competence in boys versus girls. Findings from the temperament literature support this notion (Eisenberg et al., 1993). An alternative explanation for the gender effect extends from the differences in family type and sibling status (Perner, Ruffman, & Leekam, 1994) between males and females in this sample.

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Visual Acuity and Testability With the Lea Acuity Chart in Children From 2 to 7 Years of Age

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The early detection of amblyopia ("lazy-eye") is dependent upon accurate measures of visual acuity and comparison to norms. The Lea symbols acuity chart with apple, house, circle, and square shapes has been used clinically in the pediatric population; however, there are no published reports of normative acuity values in children across age using this chart. The purpose of this study was to measure visual acuity and evaluate testability with the Lea chart in young children.

A review of records from comprehensive vision examinations in 353 children with nonsignificant refractive error and normal ocular health ranging in age from 2 to 7 years was completed. The visual acuity test was included in the battery of tests performed during each child's comprehensive eye examination. Lea chart visual acuity was measured for each eye at a 3-meter viewing distance using a descending method of limits. Children received cereal rewards for correct answers. Children verbally identified the shapes or pointed to a matching shape on a key card.

Seventy-six percent of the children (270) completed the monocular Lea acuity tasks to threshold. Testability increased with age: from 8% of the 2- to < 2.5-year-olds, 31% of the 2.5 to < 3 over 4 years. Visual acuity improved on average from 20/31 to 20/22 from 2 to 7 years of age.

The Lea symbols acuity chart uses symbols that are recognizable by even young children. In the clinical setting, testability with the Lea symbol acuity chart is age-dependent, and visual acuity improves slightly from 2 to 7 years. Monocular acuity measures can be obtained with the Lea chart in more than 75% of children from 3.5 years of age and older despite the time constraints often found in clinical practice. The Lea acuity chart provides a means for quantifying visual impairment and amblyopia in young children. The national prevalence of amblyopia is 2–5% and an additional 75,000–200,000 three-year-olds develop amblyopia each year (Flynn, 1991). Although amblyopia develops in the first 6 years of life, it has lifelong consequences and is estimated to be responsible for loss of vision in more people aged less than 45 years than all other ocular disease and trauma combined (Dell, 1991). The earlier the detection of amblyopia, thus facilitating early intervention, the greater probability of a favorable treatment outcome.

In the pediatric eye care community, preliterate optotype charts are the recommended means for measuring visual acuity in children. The Lea symbols chart has several advantages over other picture and symbol charts by including shapes readily recognizable by preschoolers. The Lea chart meets the recommended standard procedures for measurement and specification of visual acuity (National Research Council, 1980). Furthermore, testability even in very young children is high, and threshold acuities reach about 20/23 on average in children starting school.

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Attentional Strategies in a Memory Task and Prereading Ability in Children From Head Start

Florence Chang, Barbara Burns

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Phonemic awareness refers to the ability to detect individual sounds in words and is shown to be the single strongest predictor of reading ability (Stanovich, 1986; Wagner, Torgesen, & Rashotte, 1994). Preschool children from low-income households have been shown to score lower on tests of phonemic awareness than children from middle class households (Marcon, 2000). Similar gaps across SES groups have been shown in kindergarten and first-grade children's performance (Warren-Leubecker & Carter, 1988). Researchers suggest that the cycle of poverty may begin with lower reading ability, and consequently, lead to lower academic achievement (O'Sullivan & Howe, 2000). Thus, it is important to examine the underlying mechanisms involved with phonemic awareness development within the context of poverty.

Previous research has shown that attention and memory skills are essential to the development of reading. Attention and memory have been shown to differentiate good and poor readers (Brannan & Williams, 1987; McDougall, Hulme, Ellis, & Monk, 1994). The current study examined attention and memory as underlying mechanisms in early deficits in prereading skills demonstrated by 36 children from Head Start. Phonemic awareness was assessed using Adams' Phonemic Awareness Task (Adams, Foorman, Lundberg, & Beeler, 1998). Attentional strategies were assessed using Miller's Same-Different Task (Miller & Aloise-Young, 1995; Miller & Harris, 1988).

In the Same-Different Task, children's attentional strategies were inferred by their pattern of door openings. In the task, children must open the doors to decide whether two rows of objects have a vertical one-to-one correspondence such that twins have put their toys away "the twin way" or "not the twin way." The memory component of the task consists of the child remembering at the end of each session whether the toys were "the twin way" or "not the twin way." Previous research has shown a developmental progression in attentional strategy use from a horizontal strategy with poor memory to a more mature vertical strategy with good memory performance. In between, children have been shown to progress towards a more mature vertical strategy with no benefit for memory performance. This lack of correspondence between a good strategy and benefit is referred to as a strategy utilization deficiency (SUD). It was hypothesized children who demonstrated more mature attentional strategy use and better memory were expected to perform well on the phonemic awareness task. In particular, children who exhibited a SUD were expected to have lower phonemic awareness ability than children who produced a mature strategy and benefited from it.

Analyses support the importance of both attention and memory in children's prereading ability. An ANCOVA (with age and IQ as covariates) indicated that children who showed utilization deficiency had lower Phonemic Total Scores than children who did not show a utilization deficiency. Better memory was related to a higher score on the Phonemic Awareness Task, after controlling for IQ and age. The current study suggests that both attentional skills and memory skills are important in understanding children's development of phonemic awareness.

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Rate of Physical Growth and Its Affect on Head Start Children's Motor and Cognitive Development

Rebecca A. Marcon

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Anthropometric research links growth retardation with cognitive development in postnatally undernourished children. Height for age shows the strongest anthropometric relationship with young children's cognitive development (e.g., Karp, Martin, Sewell, Manni, & Heller, 1992). Weight for height is associated with cognitive performance and attention in older children (e.g., Paine, Dorea, Pasquali, & Monterior, 1992). Head circumference and midarm circumference are linked with children's neurodevelopment (e.g., Stoch, Smythe, Moodie, & Bradshaw, 1982). In the United States, growth retardation is higher among low-income children, with adverse cognitive effects of undernutrition more prevalent when combined with poverty (e.g., Pollitt, Gorman, Engle, Matorell, & Rivera, 1993). Few studies have been conducted in the United States, where under nutrition among children is mild-to-moderate and rarely reaches the severe levels of deprivation seen in developing nations.

The present study examined anthropometric indicators of physical development and their relationship to motor and cognitive development in Head Start children. Unlike previous studies that used global measures of development, research on brain development guided selection of cognitive and motor measures. Between ages 3–5 dominance shifts from the right to left hemisphere, and rapid myelination of the hippocampus and fiber tracts connecting the cerebellum and premotor cortex occurs (e.g., Case, 1992; Fischer & Rose, 1997; Thatcher, 1994). Therefore, motor integration and sequential and simultaneous memory were examined in relationship to rate of physical growth. The sample of 34 rural Head Start children (M = 49.03 months) was 59% female, 82% White, and 18% African American, with 26% classified as low-birth-weight (LBW; < 5.5 lb). Anthropometric data (height, weight, body mass index [BMI], midarm and head circumference) were collected monthly. Motor and cognitive measures were

administered four times at 10-week intervals. Motor development was assessed by six items from the DIAL-R (Mardell-Czudnowski & Goldenberg, 1990). Visual and auditory memory were measured by the Kaufman Assessment Battery for Children (K-ABC; Kaufman & Kaufman, 1983). Development of the premotor cortex was assessed by the Berry-Buktenica Developmental Test of Visual Motor Integration (VMI; Berry & Buktenica, 1997).

Growth norms indicated 2 of 34 children were stunted (ht < 5th %tile), and one of these children was classified as wasted (wt < 5th %tile) at the beginning of school. Although both grew, they remained stunted at the end of the year. Mean anthropometric changes across the 9-month period were graphed. After controlling for age, analyses indicated significant increases in height, BMI, and head circumference across the year. Boys and girls were similar on all anthropometric measures except boys' head circumference was greater ($p = .005$). Although LBW children were similar to peers in height, they weighed less ($p = .06$), had lower BMIs ($p = .08$), and smaller arm circumference ($p = .05$). Analyses indicated improvement across the school year in three motor and four cognitive measures: (a) VMI ($p = .007$), (b) Hopping-right foot ($p = .04$), (c) Finger Control ($p = .07$), (d) Magic Window ($p = .07$), (e) Word Order ($p = .000$), (f) Matrices ($p = .008$), and (g) Spatial ($p = .075$). No cognitive differences were found between boys and girls, and motor differences were limited to girls' greater skill at hopping, skipping, and finger control. Relationships between rate of physical growth and memory and motor development were explored further.

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The Development and Influence of Motivational Beliefs in Head Start Graduates

Susan M. Hegland

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According to a developmental contextual model of person-context interaction (Lerner, 1991), control beliefs are influenced by the child's own cognitive abilities and interactions with parents and teachers. In turn, these motivational beliefs influence subsequent performances. Skinner (1995) argued that adults influence these beliefs through four types of behaviors: through (a) guiding children to moderately challenging but achievable tasks, (b) giving high expectations for children, (c) providing only the minimal help required for the child to be successful, and (d) giving feedback to the child that successful outcomes were related to the child's efforts. Skinner argued that perceived control can be assessed in elementary school children across subject areas and specific tasks, by assessing the child's belief in general control of success in schoolwork, beliefs in the effectiveness of each of five strategies (e.g., ability, effort, unknown causes, luck, and powerful others), as well as her beliefs in her own capacity to successfully employ each strategy. To assess these beliefs, Skinner developed two scales, one measuring control beliefs likely to promote effort and one measuring control beliefs likely to undermine effort.

The purpose of the present student was to identify predictors and correlates of children's motivational beliefs. In a substudy of a Head Start Transition Study, Head Start graduates from lower income families ($N = 61$) were followed from kindergarten through third grade in a small Midwestern city. Individual measures of children's reading and mathematics performance (Woodcock & Johnson, 1990) and a measure of their receptive vocabulary (Dunn & Dunn, 1981) were used. In addition, parents were interviewed about their "nurturant responsiveness," related to Skinner's forms of parent encouragement (Slater & Power, 1987), in kindergarten, first, and third grade. Teachers rated children's social skills in the classroom (Gresham & Elliott, 1990) at the end of each grade. Finally, in third grade, Skinner's measure of children's beliefs regarding strategies of effort, ability, unknown causes, luck, and powerful others were used to produce promoting control and undermining beliefs scores.

After controlling for family background and children's language skills upon entering kindergarten, parental nurturant responsiveness accounted for 23% of the variance in third graders' undermining control beliefs. In turn, analysis of partial correlations showed that children's undermining control beliefs were significantly correlated with children's third grade achievement in mathematics, reading, and social skills, after controlling for the same skills measured in second grade.

Head Start graduates with higher levels of undermining control beliefs in third grade had entered kindergarten with lower levels of language skills than other Head Start children. Their parents reported providing these children lower levels of nurturant responsiveness through the early elementary grades. Furthermore, children with higher levels of undermining control beliefs showed lower gains from second to third grade in measures of mathematics, reading, and social skills. The high levels of effort reported by the children throughout the primary grades, coupled with the steadily decreasing assessment of success in schoolwork, suggests that some of these children may be at risk for learned helplessness.

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Characteristics of Effective Peer Models in an Integrated Preschool Setting

Monica Gordon Pershey, Anita M. Visoky

PRESENTER: Monica Gordon Pershey

IDEA legislation encourages provision of early childhood special education services in settings that integrate children who have disabilities with peers who are developing typically. Yet, there is little information on the traits that nondisabled children need to manifest to be considered competent peer models. There is no published protocol for identifying a capable peer model. Given so little data, might educators and policy makers be left to assume that any child who is nondisabled will be a capable peer model? This may be a less than adequate determination.

To attempt to answer the question of how to identify a capable peer model, an integrated preschool program reviewed the behaviors of peer models. Visoky and Poe (2000) provided an observation of models' interactional behaviors. To expand upon these data, the present study used:

1. Observations of 20 models' behaviors in class during 30-minute cycles over 7 months using 2-minute interval continuous sampling. Notes on behaviors (language, play, prosocial, modeling) were charted on a 50-item coding sheet.
2. Two informal sociometric measures, completed by each child, intended to reveal their peer preferences.
3. Teacher questionnaires.

Over 10,000 minutes of observations of play, social, and language behaviors documented what peer models did on a daily basis. Models played parallel with special needs peers, but also sought these peers as associative playmates, organized play routines that involved special needs peers, and engaged in conversation with them about topics in the here-and-now and related to imaginative play. When play was cooperative, the typically developing children sought one another out. The most frequently occurring behaviors were solo play, seeking an adult, listening to adult input, responding to an adult, conversation leader, merriment (silly songs, joking), seeking a peer to play or talk with, organizing play, waiting, and playing collaboratively. Models did little coaching of special needs peers; they assisted them with dressing, hand washing, and manipulating objects at teachers' requests.

Models provided excellent language models during group activities. The special needs children were keenly observing and shadowing their regular education peers. They seemed to sense that they could take language and behavioral cues from these children more than they could from their special needs peers. If these able peers were not present, the special needs children would have fewer models to observe.

Sociometric measures revealed that when the peer models self-nominated three children with whom they play the most, 31/60 nominations were for special needs children. When peer

models self-nominated three children they like best, 27/60 nominations were for children with special needs. The two measures were in agreement 92.5% of the time (same children named twice). Teachers named children who peer models play with and their nominations agreed with children's nominations 60% of the time. When teachers were asked, "Whom does the peer help the most?" 39/40 nominations were for special needs children. When children were asked, "Who needs help?" 16/20 nominated special needs children. When children were asked, "Who is a good helper?" 16/20 nominated a peer model.

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Parent Involvement in Children's Education

Supporting Immigrant Families Through University–Community Partnership: A Model Parent Involvement Initiative for Early Childhood Education Settings

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PRESENTERS: Elizabeth DeMulder, Leo Rigsby, Selma Caal, Laura Newton

This study describes and assesses a model university–community partnership initiative to support low-income, immigrant families—particularly to support parents' active involvement in their preschool children's learning. Studies have demonstrated effects of parent involvement on school readiness for at-risk children (Denton, 2001; Marcon, 1999), including links to children's literacy development (Bryant, Peisner-Feinberg, & Miller-Johnson, 2000). While studies suggest that parents' early intellectual support is linked to their children's academic success, parent involvement in preschool activities also appears to influence a child's liking of school (Hutsinger, Krieg, & Jose, 1998). In fact, Head Start's comprehensive service plan for preschoolers suggests that parent involvement and family support are key strategies for program success (Mallory & Goldsmith, 1991).

This parental involvement initiative developed in the context of an ongoing university–community partnership that established a high-quality preschool program in the low-income, immigrant Columbia Heights West community of South Arlington, Virginia. The partnership model encourages the involvement of members of the community in the development, monitoring, and evaluation of programs serving the community (Denner, Cooper, Lopez, & Dunbar, 1999). The research study explores the strengths and needs of recently-immigrant parents, and the roles that schools, communities, and universities can play to support families and children's healthy development in this social–cultural context. The goal of this research is to develop a model for facilitating parent–teacher communication and parental involvement in early childhood education settings.

The preschool's family support and parent involvement initiatives included (a) weekly parent workshops focused on supporting children's early development, nutrition, safety, and so forth; (b) a Family Literacy program that met twice a week; (c) a Parent Assistant program that allowed parents to work in the preschool; and (d) a Family Support Coordinator.

Data were drawn from focus group sessions and interviews with parents conducted over 1 year during the family's preschool involvement (conducted in Spanish or in both Spanish and English, documented with audiotape or extensive written notes, translated and transcribed). Teachers, researchers, and the Family Support Coordinator took observational notes of interactions among parents, teachers, and children in the preschool classroom and of interactions with parents throughout the year.

Evidence suggests that many parents were eager and willing to take advantage of opportunities to be involved with the preschool, to make use of resources, and to participate in the parent education initiatives. Parents reported that their involvement helped them to gain knowledge

and to develop skills that contributed to their growing confidence and competence to support their children's social, emotional, physical, and cognitive development. This developing confidence and competence led to a sense of agency and voice in the community, to enhanced communication and collaboration, and to greater support of their preschool children's learning and development.

Evidence suggests that trusting, ongoing relationships are key to constructing a family-centered program and that supporting these developing relationships and encouraging a sense of ownership among the participants are continuing challenges. Ongoing activities must be constantly reassessed to keep pace with changing circumstances and needs, requiring continual feedback from parents, so that the activities are relevant, meaningful, and engaging for those involved.

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The Quality of the Mother–Father Relationship and Its Influences on Father Involvement in Low-Income, Inner City Families

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PRESENTER: Tracy Poon

Forty quantitative interviews were conducted to examine the quality of mother–father relationships and its influence on father involvement with their 14- to18-month-old children. Mothers and fathers were asked how much "practical" and "emotional" support they received and how much "conflict" they experienced. Father involvement was measured based on Lamb's (1997) taxonomy: (a) accessibility—a father's presence and availability to the child (e.g,. how often did you look after your child in the past week?); (b) responsibility—a father's understanding and meeting the child's needs (e.g., how often do you stay home when your child is sick?); (c) engagement—a father's experience of direct contact and shared interaction (e.g., how often do you sing nursery songs with your child?). In addition, twenty qualitative interviews were also analyzed for themes relating to the quality of mother–father relationship.

Participants were recruited from community agencies in a large urban city. Fathers were between 17–35 years old (M = 22.97, SD = 4.97) and mothers were between 16–32 years old (M = 22.5, SD = 4.56). Fathers and mothers were ethnically diverse. Most of the families were eligible for public assistance.

T-tests were performed to examine the quality of mother–father relationships. The majority of fathers and mothers reported being in supportive relationships with each other (father:

$M = 2.57$, $SD = 3.93$; mother: $M = 2.37$, $SD = 3.64$). However, mothers reported having more conflict with fathers than fathers reported having with mothers (mother: $M = 2.97$, $SD = .97$; fathers: $M = 2.47$, $SD = 1.28$).

Pearson Correlation tests were performed to examine the association between the amount of support and guidance that fathers received and the level of involvement with their children. Fathers reported receiving high practical, emotional support, advice, and guidance from their partners; they also reported having a great amount of influence in making decisions related to their child's health care, child care, and religion (*rs* range = .48 to .49, *ps* < .05). Surprisingly, fathers that reported experiencing high conflict with their partners were more likely to have lunch with their children and reported taking their children to public places (*rs* range = .34 to .43, *ps* > .05).

For mothers' perception of father involvement, fathers who reported receiving high practical, emotional support, advice, and guidance were perceived by their partners as more likely to take their children to visit relatives and engage in educational, play activities and caregiving tasks (*rs* range = .33 to .43, *ps* < .05). In contrast, fathers who reported experiencing high conflict with their partners were perceived by their partners as less likely to engage in singing nursery rhymes with their children (*rs* = -.36, *ps* < .05).

Twenty qualitative interviews were examined for themes relating to the quality of mother–father relationships. Each partner was classified as positive, negative, or positive/negative across three domains: (a) amount of support, (b) amount of conflicts, and (c) overall attitudes and feelings toward the relationship. Five relationship categories were found.

This study adds to the existing literature of low-income samples regarding the quality of mother–father relationships and its influences on father involvement. It is also a first step toward a more in-depth understanding of mother–father relationships from both parents' perspectives.

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Association of Client Characteristics With Parenting Outcomes Among Early Head Start Participants

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Recent findings from large-scale evaluations of family-based interventions have shown mixed results (Reichman & McLanahan, 2001). Absence of across-the-board program effects has infused interest in looking at what is happening inside the program; researchers are focusing attention on program theory, program implementation, and characteristics of program participants to answer some critical questions related to pathways to program effects and active ingredients leading to program outcomes (Chen, 1990; Reynolds, 2002). In any case, clients served by prevention programs are at the core of intervention effects. In the present investigation of an Early Head Start (EHS) program, we addressed the following questions: (a) Are program effects the same for all program participants? (b) Was the intervention more effective for some clients than others? (c) Do clients' characteristics predict differences in program outcomes?

A primary goal of EHS is to support the overall development of children from birth to 3 years of age by promoting responsive parenting. While it is assumed that parents want to foster

healthy development of their children, sometimes their efforts are thwarted by a wide variety of risk factors such as economic hardship and education. The program under investigation began providing services in 1997 to an ethnically diverse population in a semi-urban community. Services include weekly home visitation and center-based activities to promote peer interactions for children, opportunities for positive parent–child interaction, networking and social support for parents, and one-on-one support to parents in their life course development.

Of the 230 EHS program participants, a subsample of 43 mothers who had baseline and 14-month assessment data were included in the present analyses. Client characteristics at enrollment indicated approximately 63% of the participants were Latino, 27% were White, and 10% were Black. A majority of the clients were unemployed (72%), single (78%), and had not completed high school or obtained a GED (66%). Many lived at or near poverty; their average yearly gross income was $9,624. Spanish was the primary language spoken in 33% of the homes. Thirty-seven percent of clients were teenage mothers, with a mean age of 23 years. The average age of the focus child at enrollment was 5 months.

Preliminary analyses suggested that the only significant predictor of Pearlin Mastery (Pearlin, Lieberman, Menaghan, & Mullan., 1981) scores at intake was the level of mother's education ($\beta = 3.14$, $p < .05$). Although initially, income also significantly predicted Pearlin Mastery scores, once education was added to the model, the effect of income was no longer significant. Mastery at intake also significantly predicted parent outcomes at 14 months above and beyond the sociodemographic covariates. Mothers with higher scores on mastery at intake reported lower levels of parenting stress when their child was 14 months old ($\beta = -.75$, $p < .05$), lower levels of depression ($\beta = -20.59$, $p < .01$), and were more likely to have higher levels of efficacy ($\beta = .95$, $p < .05$). These results indicate that a sense of empowerment and control over one's life are important indicators of parent outcomes.

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Parent Involvement in Head Start: Parents' and Teachers' Perceptions

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The study purposes were to (a) describe parent–teacher interactions during parents' classroom volunteering, (b) identify parent volunteers' perceptions about their experience in Head Start, (c) identify teachers' perceptions about parents' involvement in their classrooms, (d) determine the relations between parent characteristics and their participation in Head Start, and (e) determine the relations between teacher and classroom characteristics and parents' participation in Head Start.

Parents and teachers from five Head Start programs participated. Volunteer logs were used to collect data on number of times parents volunteered and length each time ($n = 1{,}204$). A sample

of parents was interviewed at the end of the school year (n = 127; U.S.DHHS, 1998; Epstein & Salinas, 1993). Teachers responded to a questionnaire on parent involvement (n = 59; Epstein & Salinas). Parent–teacher interactions were observed using a checklist developed by the researchers (n = 85). Classrooms were observed to obtain an index of classroom quality (n = 43; ECERS-R; Harms, Clifford, & Cryer, 1998).

Parent–teacher interaction observations indicate that mostly, teachers were pleasant to the parents (99%) and planned with them what they would do during their volunteer time (74%). About half of the time (53%) teachers explained the class rules to parents or showed parents where to find classroom resources (52%). Only 31% of the time teachers gave reinforcement to parents more than once. Generally, teachers expressed their appreciation to parents at the end of their visit (76%) and encouraged them to come again (78%).

Parents reported work schedule as the major barrier to their participation in Head Start (50%); other barriers were not knowing other parents at Head Start (25%), lack of opportunities for participation (22%), need for child care (19%), transportation (15%), need of support from spouse (11%); and the school/training schedule (9%).

According to teachers' reports, 86% of parents attended parent–teacher conferences, 63% helped from home, 58% volunteered at least 1 hour, and 52% attended parent meetings. Regarding parent involvement strategies, teachers reported home visits (61%), reports of child progress (60%), and parent–teacher conferences (59%) as very effective.

MANOVA results showed a multivariate effect of parent employment on number of hours parents volunteered and parents' self-reports of their involvement, $F4, 188 = 5.33$; $p < .001$. Parents' satisfaction with Head Start, barriers to participation, and activities with their children at home were related to parents' reports of their involvement, $F(7, 102) = 5.12$; $p < .0001$, but were not related to number of hours volunteered. Regarding teacher and classroom characteristics, the MANOVA showed a multivariate effect of classroom quality on number of volunteers per classroom and total hours volunteered, $F(2, 30) = 3.41$; $p < .05$. This is attributable to the relation between classroom quality and number of volunteers. There were no associations between teacher and classroom characteristics and total hours of volunteer time.

These findings reflect the increase in low-income parents' participation in the workforce in recent years and its effect on parent involvement. The finding that classroom quality was the strongest predictor of parent involvement among a set of teacher and classroom characteristics indicates that high quality classrooms may have the conditions that encourage parent involvement. Also, the presence of many volunteers in the classroom may contribute to the classrooms' higher quality.

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Understanding the Family–School Connection: Neighborhood, Teacher, and Parent Determinants of Parent Involvement in Head Start

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Studying parent involvement is extremely important for understanding children's development. Among preschoolers, parent involvement is associated with enhanced academic achievement and motivation, verbal and motor skills, and adaptive skills (Marcon, 1999; Parker, et al., 1997). Eccles and Harold (1996) have developed an ecological model of the determinants of parent involvement. They assert that parent involvement is determined by parents' beliefs and teachers' beliefs/practices, which are affected, in turn, by parent, child, teacher, school, and neighborhood characteristics. Additional research is needed to test this model of parent involvement.

The current study addresses two specific questions: (a) How does a set of personal/contextual variables relate to parent involvement at school and at home? (b) Are parents more involved when their children's teachers hold more positive attitudes toward parent involvement? The participants were 154 caregivers of children enrolled in two Head Start centers and 21 teachers.

The About Being a Parent Scale (Wentzel, 1993) was used to assess parents' beliefs about their ability to influence their children's educational outcomes (Cronbach's alpha = .86). A 7-item scale developed by Conger et al. (1992) was used to assess parents' level of financial strain (Cronbach's alpha = .89). The Neighborhood Characteristics Questionnaire (NCQ) was used to assess parents' perceptions of their neighborhoods (Barnes McGuire, 1997). Three NCQ scales were used in this study: (a) Street Crime and Neighborhood Quality, (b) Local Social Networks, and (c) Disorder (alpha coefficients ranged from .72 to .85). Teachers' attitudes toward parent involvement were assessed using the Teacher Attitudes about Family and Community Involvement Scale, taken from the School and Family Partnership Survey (Epstein & Salinas, 1993; Cronbach's alpha = .72). Parent ratings were obtained using the Family Involvement Questionnaire (Fantuzzo, Tighe, & Childs, 2000), which yields three scales: (a) School-Based Involvement, (b) Home-Based Involvement, and (c) Home–School Conferencing (alpha coefficients > .80). Teacher ratings of parent involvement were obtained using a Q-sort technique. Teachers sorted parents into four categories based on their level of personal connection with the parents.

Canonical correlation showed a significant relationship between a set of personal/contextual variables and a set of parent involvement variables ($F = 1.67$, $p < .05$). After removing the first variate, subsequent F-tests were not significant. The significant variate showed that lower levels of parent involvement at school and at home were associated with lower parenting efficacy, higher economic stress, and lower levels of neighborhood social disorder. A one-way, between-subjects Analysis of Variance (ANOVA) found no significant relationship between teachers' attitudes and level of parent involvement.

The results of canonical correlation analysis support an ecological model of parent involvement. Lack of parent involvement was significantly related to lower levels of parenting efficacy and higher economic stress. Contrary to expectation, lower ratings of neighborhood social disorder were related to lower levels of involvement. No significant relationship was found between teacher attitudes toward parent involvement and parent ratings of their own involvement. This finding is unexpected, and may result from social desirability bias. Instead of assessing attitudes, it may be more fruitful to measure teacher behaviors related to parent involvement.

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Staff Conceptions of Relationships in Early Head Start

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The literature pertaining to infant–toddler programs has recently suggested a focus on supportive staff–family relationships. Child development and infant mental health theorists have been converging on a "relational perspective" to describe healthy and atypical processes in development (Elicker, 1997; Elicker & Fortner-Wood, 1995; Lyons-Ruth & Zeanah, 1993; Raikes, 1996; Sroufe, 1983). Birth-to-three practitioners have come to view staff–family relationships as a pivotal aspect of successful early intervention and child care programs (e.g., Bertacchi, 1996; Lally et al., 1995). However, there has been little systematic research examining the nature of staff–family relationships in the context of infant–toddler programs, including Early Head Start (EHS). We investigated the perspectives of EHS staff about their relationships with children and parents. Nineteen staff (8 home visitors and 11 center-based caregivers) from three Midwestern EHS programs took part in semistructured, in-depth interviews. Analyses focused on (a) how staff conceptualize relationships with children and parents, (b) how staff work with relationships, and (c) challenges encountered in relationships with children and parents. Analyses were completed using grounded theory and content analysis procedures recommended by Strauss & Corbin (1998) and Patton (1990).

Home visitors and center caregivers described similar aspects in their relationships with children including trust, security, comfort, consistency, having fun, and supporting children's development. Home visitors mentioned the importance of the child's "eagerness" when they

arrived for weekly visits. Center caregivers emphasized loving children, meeting basic needs, and teaching. Center staff described themselves as "substitute parents" or "grandparents." Most mentioned the importance of playing, having fun, talking, and listening with children, and getting to know them as individuals. Home visitors talked about approaching interactions with children carefully, not forcing themselves on children. Center caregivers emphasized physical care and affection ("loving them"), finding time for pleasant one-to-one interactions, and "being there" for children consistently to meet their needs.

EHS staff described their relationships with parents in terms of developing trust, providing support and encouragement, being a friend or being friendly, being a role model, and providing material and information resources. Center caregivers emphasized "working together" with the parent to develop trust about the care of the child. Building relationships with parents entails informal talking and listening, getting to know each other, and building trust and openness. Both center and home staff emphasized showing interest and concern for the parent as an individual. Center caregivers talked about the importance of individualizing care for the child according to the parents' wishes, and being consistent and reliable in their everyday dealings. Home visitors try to give parents more power or control in the relationship, and not "boss" or "judge" the parent.

EHS relationships are sometimes challenging. Staff discussed the ambivalence they feel about closeness in relationships, especially with parents. They perceive "professional limits" that should be maintained; however, these limits are not always clear. They struggle with not being judgmental about values and choices parents make for themselves and their children. Specific challenges for center caregivers include not feeling as though they know the parents very well, because of limited contact with parents. Home visitors sometimes feel they do not know children as well as parents, due to the adult focus and infrequency of home visits.

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Parenting Styles/Values/ Attitudes/Behaviors

Sex Role Expectations and Gender-Related Childrearing Goals of Urban, Low-Income, Single African American Mothers

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PRESENTERS: Jean Ispa, Elizabeth Sharp, Kathy Thornburg, Mark Allen Fine

Nine young, low-income, urban, single African American mothers participated in a 5-year case study project. Four were mothers of daughters, two were mothers of sons, and three had children of both sexes. Constant comparative analysis of responses to semistructured interviews revealed a number of patterns regarding sex role expectations and related childrearing goals.

Though all of the mothers believed that men and women should contribute equally to household labor, should be reliable, and should "be there" for their children, their personal experiences with men differed sharply from these ideals. All commented that one cannot depend on a man, that men lie, are disrespectful, and "come and go." These perceptions shaped their childrearing goals for both sons and daughters.

Mothers with sons tended to couch their childrearing aspirations in terms of counter examples—they wanted their sons to be different from most of the men they knew. Most expressed great concern that in adolescence, their sons would be swayed to join delinquent peer groups. Further, they hoped their sons would not treat women the way they (the mothers) had been treated by men. Reflecting these issues, all mothers of sons told us that they wanted their sons to bypass illegal activities, to "be his own person" (including having the strength to avoid negative peer groups), to be honest and responsible, to be good to others, and to "be respectful of women." All also mentioned valuing education. In response to probes regarding the division of household labor, mothers indicated beliefs that boys should learn how to cook and clean and should participate in these chores as much as girls. However, two added that these skills were important for boys because they might not get married. All but one noted that, while they would do what they could to insure these outcomes, ultimately they could not entirely control what would happen. "Boys are gonna be boys."

Mothers with daughters also included respectfulness, caring, responsibility, and educational achievement among their top childrearing goals. Their other goals, however, differed from those for boys. All six who had begun childbearing in adolescence worried that their daughters would do the same. One of their childrearing goals was therefore to shield their daughters from early sexual activity—though most acknowledged the difficulty of attaining this goal. Another strong theme involved all these mothers' intent to raise daughters to be independent, self-sufficient, and strong. Four also mentioned wanting their daughters to grow up to be assertive and to "be somebody"; three said it was important for them to value themselves. Mothers explained that girls should understand that they are likely to have to take care of themselves; they should not expect to have a man on whom they can depend.

Mothers' childrearing goals thus reflected fears based on their own experiences. Mothers wanted their boys to develop into dependable, respectful young men; they wanted their daugh-

ters to develop into independent, self-sufficient young women. However, they voiced doubts that their efforts can overcome the negative influences of their surroundings.

Maternal Teaching in the Twenty-First Century

Daniela Montalto, Nancy Busch-Rossnagel

PRESENTER: Daniela Montalto

As we move steadily into the 21st Century, empirical interest in identifying the determinants of positive parental teaching styles continues to flourish (Zigler & Hall, 2000). This pilot investigation was designed to identify the psychological process that accounts for the effects of maternal education on teaching style and, thus, its indirect effects on child development. The research (a) examines whether flexible/abstract thinking and perceived social support are related to levels of maternal education, and (b) tests how these variables correlate with maternal behavior and whether they mediate the effects of maternal education.

Participants consisted of 20 mother–child dyads participating in Head Start programs located in the Bronx, New York. Mothers were over the age of 18 (mean age = 32) and had children of preschool age (2–4 years old; mean age = 3.6 years). The sample was multiracial: Fifty percent were Latino, 30% were African American, and 10% were White. Maternal education varied: Twenty percent graduated high school, 20% had 3 years or less of college (no degree), 40% held a college degree (Associates or Bachelors), and 20% were either currently enrolled in graduate school or held a master's degree. Thirty percent of the mothers described themselves as married, while 70% were without partner. Mothers completed the Perceived Social Support from Family and Friends (PSS-FA/ PSS-FR) questionnaires (Procidano & Heller, 1983) and reported sociobiological information. Mother–child dyads were videotaped interacting with tinker toys on the Maternal Teaching Observation Task (MTOT; Laosa, 1980). Mothers were also administered the Tower of Hanoi, a disk-transfer task used to operationalize flexibility/abstract thinking (TOH; Simon, 1975).

Mean rate-per-minute scores revealed that the three teaching behaviors used most frequently by the mothers during the teaching task were inquiry, directives, and visual cues. Teaching behaviors did not differ significantly based on child's gender. Marital status did not influence maternal social support (friends/family). Mothers' of daughters, though, had greater family support (p = .035) than those of sons (p = .606). Pearson-Product Moment Correlations revealed that planning efficiency, an indicator of abstract/flexible thinking, was positively correlated with the use of Modeling and Visual cues. Mothers with high levels of planning efficiency also used praise (r = .223) and inquiry (r = .385) more frequently during the teaching tasks. Efficient planners used less verbal disapproval (r = -.36) and directives (r = -.43) during the interactions. Subsequent analyses revealed that mothers who scored high on planning efficiency and level of maternal education used praise and inquiry more frequently among their teaching behaviors. Similar patterns for perceived social support were not found.

Pilot data is limited due to the size and demographics of the sample studied. Despite these limitations, results indicate that abstract/flexible thinking may mediate the relationship between maternal education and maternal teaching behaviors. Results of a larger study would assist in directing future interventions aimed at promoting positive parenting among inner-city mothers. More substantive findings indicating that flexibility in thinking is related to maternal teaching behaviors would support incorporating more cognitive-behavioral techniques for problem solving as part of parenting education.

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Parental Corporal Punishment as a Predictor of Child Maladjustment: Race and Parental Responsiveness as Potential Moderators

Mary Ann Matta

PRESENTER: Mary Ann Matta

A blending of three theories of moral development in children provides a theoretical foundation relating to children's misbehavior, parents' resulting actions, and children's moral and behavioral well-being. According to Social Learning Theory (Bandura, 1986), Cognitive Developmental Theory (Kohlberg, 1969), and Hoffman's (1983) Theory of Moral Internalization, the affective environments created by parents can facilitate or undermine children's moral development.

Corporal punishment (CP) is defined as "the use of physical force with the intention of causing a child to experience pain, but not injury, for the purpose of correction or control of the child's behavior" (Straus & Donnelly, 1994, p. 4). CP is a widely practiced, socially accepted method through which parents attempt to discipline children. Proponents of CP cite a few studies indicating that, in retrospect, children perceive CP as fair and that CP may be effective in lowering rates of child misbehavior within certain demographic groups. Yet, the majority of research on CP indicates an inverse relation between CP and child well-being. Specifically, CP has been linked with childhood anxiety-depression, antisocial behavior, and difficulties in peer relationships.

Although a few studies hint that CP may be less harmful, or even beneficial, to African American children (e.g., Deater-Deckard, Dodge, Bates, & Pettit, 1996), most research indicates that CP is detrimental to children regardless of race (e.g., Michels, Pianta, & Reeve, 1993; McCabe, Clark, & Barnett, 1999). It has also been suggested that levels of parental responsiveness may attenuate the harmful consequences to children stemming from experiences with CP (McCord, 1991). Therefore, race and/or parental responsiveness may moderate associations between CP and child outcomes.

The purpose of the current study was to investigate whether CP is associated with childhood anxiety-depression, antisocial behavior, and difficulties in peer relationships in a sample of African American and European American children, and to test whether race and/or parental responsiveness moderate associations between CP and the above listed child outcomes.

The study utilized 838 participants from data collection year 1990 of the National Longitudinal Survey of Youth (NLSY; U.S. Department of Labor, Bureau of Labor Statistics, 1999). Participants were African American and European American children ages 3–8 and their mothers, representing a diverse range of socioeconomic strata and family structures. Correlation and regression analyses were computed to determine whether associations exist between parental use of CP (as measured by the frequency of parents' use) and child outcomes (as measured by the

Behavior Problems Index; Peterson & Zill, 1986). Parenting style was assessed through identification and factor analysis of parenting variables in the Home Observation for Measurement of the Environment (HOME) Inventory (Caldwell & Bradley, 1984).

Findings indicated that parental use of CP was associated with childhood anxiety-depression, antisocial behavior, and difficulties in peer relationships among both African American and European American children. Further, children whose parents used CP and were responsive towards them experienced higher levels of anxiety-depression. Thus, the study has important implications for maximizing children's positive gains within families and the larger social context.

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Expectations of Head Start Parents Regarding Curriculum for Children and Services for Families: A Comparison of European American and Puerto Rican Parents

Beena Achhpal, Jane A.Goldman

PRESENTERS: Beena Achhpal, Jane A. Goldman

Head Start and other successful intervention models emphasize the importance of understanding cultural differences in parents' beliefs about child rearing and the education of children. However, within the United States, data on the educational beliefs of ethnic minority parents whose children are involved in early intervention programs is limited. This poster focuses on similarities and differences between European American and Puerto Rican parents concerning their beliefs about (a) the educational and behavioral competencies they want their children to learn in Head Start, and (b) the importance of the different services for children and families offered by Head Start programs.

Participants were 60 parents (30 European American, 30 Puerto Rican) of Head Start children in northeast Connecticut. The two groups were similar in demographic characteristics. To assess parents' beliefs about the skills and behaviors they wanted their children to learn at Head Start, each parent completed a 16-item inventory rating the importance of skills/behaviors in eight developmental domains: (a) Social Skills with Adults, (b) Social Skills with Children, (c) Emotional-Affective Skills, (d) Pre-Academic Skills, (e) Autonomy, (f) Self-Help Skills, (g) Physical Skills, and (h) Creative Skills (Achhpal, 2000). Both groups of parents considered skills in all eight developmental domains to be important. However, even with this overall agreement, there also were significant differences in the ratings of the two groups. The European American parents placed more emphasis on wanting Head Start to reinforce skills that teach children Autonomy. In contrast, the Puerto Rican parents put more emphasis on formal instruction in Pre-Academic Skills and on helping children learn Social Skills with Adults. (Discriminant function analysis identified that ratings in these three areas significantly separated the two sets of parents, $p < .01$). For the other five competency areas, the parents were similar in the relative importance they placed on the skills. Both groups rated Emotional-Affective Skills and Social Skills with Children as very important, Self-Help Skills in the mid-range, and Creative Skills and Physical Skills as least important.

To assess parents' beliefs about the importance of different services for children and parents offered through Head Start, each parent completed a 10-item inventory listing services related to health care, nutrition, parent education, social services, and transportation (Achhpal, 2000). Parents rated how important each service was to them. Both groups considered all of these services of the Head Start program to be important. The only significant difference between the two groups was that providing meals and snacks to children was more important to the Puerto Rican parents. Both groups of parents consistently rated services for children as more important than services for parents.

These findings suggest that even when there is overall agreement between groups concerning the educational goals they have for their children, subtle differences also may exist. To maximize the effects of early childhood programs, it is important that educators and policy-makers recognize such subtle differences. These findings also suggest a need for more work to help parents recognize the importance of the parent/family components of the Head Start program, and to optimize their use of these services.

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Parenting in Context, Parenting as Context: Patterns of Parenting and Child Outcomes Among Low-Income Families

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PRESENTERS: Christy Brady-Smith, Rebecca M. Ryan

The present study examined patterns of parenting among low-income Black, White, and Latina mothers and their infant children, and differences in these patterns across ethnicity. Associations between parenting patterns and child, maternal, and family characteristics were also investigated. Finally, the relationship between parenting patterns and child outcomes at age 2 was examined.

Participants in the study (N = 1,399) were part of the Early Head Start (EHS) Research and Evaluation Project, a randomized, longitudinal, 17-site study of low-income families eligible for EHS (Love et al., 2002). Families were interviewed at baseline and when their children were ages 14 months and 24 months. EHS and control families were combined, with EHS status controlled in all analyses.

Sample characteristics at baseline were as follows: Forty-four percent were White, 33% Black, and 23% Latina; 45% of mothers had less than a high school degree; 33% were teenage (< 19) at their child's birth; 38% lived in deep poverty (< 50% of poverty line); 52% of the children stemmed from single-parent families; and 41% of the Latina mothers had minimal English skills.

Parenting measures at 14 months were assessed from a 10-minute child–parent videotaped free play interaction. Parent supportiveness (M = 3.9), intrusiveness (M = 2.5), negative regard (M = 1.5), and detachment (M = 1.6) were coded on a 7-point scale. Child cognitive and verbal development were assessed at age 2 using the Bayley Scales of Infant Development (BSID; Bayley, 1993; M = 89.2; range = 49–134) and the MacArthur Communicative Development Inventory (CDI; Fenson et al., 2000), a parent-report measure (M = 54.7; range = 0–100).

In the Black and White samples, four patterns of parenting emerged at 14 months, using Ward's method and K-means cluster analysis: Sensitive, Firm, Uninvolved, and Harsh. Three patterns emerged in the Latina sample: Sensitive, Firm, and Uninvolved. Across ethnic groups, Sensitive mothers scored highest on supportiveness; Firm mothers scored moderately on supportiveness and intrusiveness; Uninvolved mothers scored highest on detachment; Harsh mothers scored highest on intrusiveness and negative regard. Within clusters, mean scores on measures of parenting differed by race, with White mothers scoring higher on supportiveness and lower on intrusiveness and negative regard compared to Black and Latina mothers. Sensitive mothers were the most advantaged in terms of maternal and family characteristics, while Harsh and Uninvolved clusters were the least advantaged. Compared to Sensitive parenting, Harsh and Uninvolved parenting was related to lower child cognitive and verbal scores at age 2; the effect of Firm parenting varied across ethnic groups.

Overall patterns of parenting were similar across ethnicity, although mean parenting scores within cluster differed. For all three ethnic groups, Sensitive parenting had a positive effect on child cognitive and verbal outcomes at age 2. By examining parenting within context, this study identified common patterns of parenting that benefit children's cognitive outcomes while acknowledging that different levels of behavior across ethnicity may define those patterns.

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Urban Head Start Parents' Attitudes Toward Early Math

Kimberly Hope Glassman

PRESENTER: Kimberly Hope Glassman

Parental attitudes and beliefs about early math learning have been shown to influence the attitudes and achievements of young children (Carr, Jessup, & Fuller, 1999). Further, studies based on predominately White, middle-class samples have shown the effect of parents' gender-biased beliefs about math on girls' learning (Parsons, Adler, & Kaczala, 1982).

This study was designed to explore the relationship between achievement, gender, and parental beliefs about Head Start children's early math skills. The parents and guardians of 177 predominately African American children, who attended five Head Start centers in low-income neighborhoods, participated. Using a 4-point likert scale, parents recorded (a) their agreement or disagreement on a survey of beliefs about early math and (b) the frequency of math activities in the home on a survey of behavior. The first 28-item survey was designed to assess such domains as the importance of effort in children's learning of math, parents' expectations of the math skills necessary for kindergarten, and beliefs about how children learn early numeracy and math. The second 13-item survey assessed frequency of math activities carried out at home and communication with Head Start teachers. In addition, 75 children were administered a shortened version of the Test of Early Mathematical Ability: Second Edition (TEMA; Ginsburg & Baroody, 1990), designed to assess preschool math skills.

The surveys revealed that a large majority of parents did not agree with traditional beliefs about math learning. Most parents reported working on math skills with their children often. Additionally, very few had regular communication with Head Start teachers about their child's progress in math. *T*-tests revealed few significant differences between Head Start parents' responses about early math for daughters compared with sons. These results differed from many prior studies showing gender-biased responses to the same items by White, middle-class samples. Finally, a relationship existed between several survey items and children's TEMA performance. Specifically, the highest-scoring children had parents who believed more advanced math skills were necessary for kindergarten and who communicated more often with teachers. This study indicates that Head Start parents' beliefs about early math correspond with the child-centered philosophy of Head Start. Also, while the direction of the relationship is not clear, the significant relationships between parental attitudes and Head Start children's actual math achievement justifies further exploration. Finally, Head Start parents do not appear to hold the gender-biased attitudes toward early math found in studies on middle-class parents.

This survey, which requires further reliability testing, could benefit Head Start teachers and administration in understanding the influence of parental beliefs and the involvement of Head Start parents in early math learning.

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Socialization Values of Mexican American Head Start Parents: Associations With Acculturation and Child Gender

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Although ethnic-group differences in parenting practices have been well documented, only recently have child development researchers recognized the need to identify and describe the culturally-based value systems that may underlie these differences. Much of this more recent work has focused on the value dimension of individualism (independence and autonomy) versus collectivism (interdependence and social connectedness) as a framework for understanding differences between European American and ethnic minority cultural patterns (Greenfield, 1994; Harwood, 1992; Harwood, Miller, & Irizarry, 1995). However, there is considerable variability in the extent to which individuals within a given ethnic group hold values traditionally associated with their culture. One key source of such variation is level of acculturation (Delgado-Gaitan, 1994). It is also reasonable to believe that the child's gender might impact on parents' socialization values and goals such that independence might be valued more for males and interdependence for females (Whiting & Edwards, 1988). Accordingly, the aims of the present study were to (a) describe the culturally-based parenting values and goals of low-income, Mexican American mothers and fathers and (b) examine the interplay between acculturation and child gender in shaping parenting values and goals.

As part of a larger investigation on parental socialization of emotional competence, data were collected from 42 Mexican American two-parent families with a 3- to 4-year-old child (55%; mean age = 46 mos.) enrolled in the home-based Head Start program. The majority of parents was Spanish-speaking (83% of mothers; 81% of fathers) and was born in Mexico (81% of mothers and fathers).

In an individual interview, parents responded to two questions concerning desirable child characteristics: (a) "What are the qualities of your child that you are most proud of?" and (b) "What are the words that you would like someone to use to describe your child at this stage of his/her life?" and two questions pertaining to long-term socialization goals and values: (a) "How would you like someone to describe your child when he/she is an adult?" and (b) "What type of person do you want your child to become?" Level of acculturation was measured using a 12-item acculturation scale developed by Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, (1987).

Parents' interview responses were reliably coded into 9 broad content categories adapted from Harwood et al. (1995). Content analyses of the responses documented the diversity of values held by Mexican American parents, and revealed that individualistic, self-maximizing values (i.e., self-development, intellectual and career attainment), were endorsed to a similar or greater degree (34% of fathers' responses, 27% of mothers responses) as collectivist values of interpersonal competence (18% fathers, 29% mothers), obedience/respect (21% fathers, 13% mothers) and good citizenship (6% fathers, 12% mothers). Analyses also yielded new and somewhat unexpected findings regarding the interplay among acculturation, gender, and culturally based parenting values. Contrary to expectation, no significant relationship was found between parent acculturation level and parenting values. Also unexpected was the finding that parents, especially fathers, endorsed intellectual attainment more for daughters ($M = .17$) than for sons ($M = .12$, $p < .05$); whereas obedience/respect was emphasized more for sons ($M = .26$) than daughters ($M = .18$, $p < .05$). The basis for these differences in values requires further exploration in research with larger samples of families.

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Investigation of the Relationships Among Parenting Styles, Parent and Child Characteristics, and Head Start Children's School Readiness

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Recent national statistics indicate that certain demographic factors put a substantial number of young children at risk for poor performance on school readiness measures (U.S. Department of Education, 2000). For young children, successful resolution of developmentally salient challenges, such as the transition to school, is greatly influenced by the nature of the parent–child relationship (Atilli, 1989). Parenting behaviors that occur within this relationship can either enhance or hinder a child's negotiation of developmental tasks. Accordingly, effective early intervention efforts aimed at promoting children's readiness for school must focus on supporting positive parent–child relationships (U. S. DHHS, 1996).

More and more, research is emerging that discusses how sociocultural issues might affect parenting (McLoyd, 1990; Zayas & Solari, 1994). Poverty and residence in highly stressed urban areas pose significant risks to the job of parenting young children (Duncan, Brooks-Gunn, & Klebanov, 1994; Garbarino & Kostelny, 1993). This raises the question of how different social and cultural contexts affect the nature of adaptive child rearing and whether or not parenting styles are universal or distinctive to specific ethnic and cultural groups. Baumrind's (1971) typology of parenting has been widely used by family researchers to characterize distinct types of childrearing behaviors across diverse populations, leaving minority groups vulnerable to labels of deviance (i.e., parenting styles viewed as deficient; Spencer, 1990).

In response to the need for more information on intragroup variability, recent research with a sample of Head Start parents found three reliable dimensions of parenting style: (a) Active-Responsive, (b) Active-Restrictive, and (c) Passive-Permissive (Coolahan, McWayne, Fantuzzo, & Grim, 2002). The Active-Responsive and Active-Restrictive parenting dimensions corresponded with Baumrind's Authoritative and Authoritarian styles, respectively. The Passive-Permissive parenting dimension was conceptually similar to Baumrind's Neglecting parenting style, characterized by low warmth and low limit setting. These constructs were employed in the present study to examine within-group variations in parenting styles, determinants of parenting

styles, and relationships between parenting styles and child outcomes with African American Head Start children.

The present study included 209 sets of African American Head Start parents and children recruited from twelve Head Start classrooms in a large metropolitan city in the Northeast. Boys and girls were equally represented within the sample, and ranged in age from 42–65 months. The relationships between parenting, determinant, and school readiness variables (i.e., peer play interactions, classroom behavior, approaches to learning, and communication skills) were investigated. Results indicated that family and environmental stress was positively related to passive-permissive parenting. Feelings of social isolation were positively associated with both the Active-Restrictive and Passive-Permissive parenting styles. Single parents with less than a high school education were significantly more likely to engage in Passive-Permissive parenting, and single parents were more likely to employ an Active-Restrictive style, regardless of educational level. However, no significant relationships were found between parenting dimensions and child characteristics or outcomes. These findings raise questions regarding (a) the relationship between parenting style and school readiness constructs in general, as well as, more specifically, (b) to what degree, if any, these parenting constructs measure the most important parenting dimensions that contribute to children's school readiness competencies.

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Response Patterns of Mexican American Mothers on Measures of Childrearing Beliefs and Developmental Expectations

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PRESENTER: Thubi H. A. Kolobe

An assumption in early intervention is that parent education influences parenting practices and enhances child outcome. Early intervention studies suggest that this is inconsistently true. Differential child outcomes have been observed, particularly between children from majority and minority families (Brooks-Gunn, Berlin, & Fuligni, 2000). The question of what parental childrearing behaviors and practices contribute to optimal outcome, or environmental risk, in minority children remains unclear. Even less understood is how the nuances of culture influence parenting beliefs and behaviors in minority families. Cultural and intragroup variations are crucial for understanding different parenting behaviors and child outcomes among ethnic minorities (Garcia-Coll & Magnuson, 1999).

This presentation reports on the results of the response patterns of Mexican American mothers on a measure of childrearing expectations and behaviors. Semistructured interviews with 62 Mexican American mothers of 9- to 12-month-old infants were conducted by a bilingual interviewer using the Parenting Behavior Checklist (PBC; Fox, 1994). The PBC consists of three subscales that measure parents' developmental expectations (PBC-E), discipline strategies (PBC-D), and nurturing behaviors (PBC-N).

Rasch psychometric models (Wright & Masters, 1982) were used to examine response patterns of the mothers. Rasch models produce item calibrations that may be applied across diverse groups by specifying the dimensionality of responses. Several analyses were also conducted to test the stability of the item hierarchy and person measures across SES, levels of education (LED), and acculturation. These evaluations are important, as the degree to which item bias and person measures are stable, sets limits on the generalizability and utility of an assessment across cultures or groups (Andrich, 1988).

Rasch analysis of the response patterns of the entire group on the PBC-N subscale revealed that the mothers were less likely to endorse behaviors related to seeking advice about their children and parenting from books or friends, and more likely to support behaviors associated with engaging in play activities. Within-group differences revealed that mothers with high LED were likely to support engaging in make-believe type of activities and structured routines around bedtime compared to those with low LED. The PBC-E subscale revealed that mothers were more likely to expect their infants to show proper demeanor and less likely to expect expressive language. Response patterns on the PBC-D subscale showed less endorsement of physical punishment and more support for use of verbal means of disciplining. Differences were also observed in the rank order of the item endorsement across SES, LED, and acculturation (the Latino and Bicultural subgroups), but no item location differed by more than what could be accounted for by measurement error.

The results of this study expose the limitation of aggregate scores such as group means when interpreting parenting beliefs and behaviors of culturally diverse families. Differences in their scores may be at several levels—cultural, conceptual, or socioeconomic (Hui & Triandis, 1983; McLoyd, 1999). The next step is to compare the response patterns of Mexican American mothers with that of non-Latino mothers on whom the PBC is standardized, and to examine the relationship between the PBC and child outcome.

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Caregiver Interaction Style and Preschoolers' Development

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This investigation explores the association between caregiver interaction style and preschooler development in four urban Head Start programs. Responsive mothers tend to adapt their reactions to the changing competencies of their developing children (Beckwith, Rodning, & Cohen, 1992; Bornstein & Tamis-LeMonda, 1997; Tamis-LeMonda, Bornstein, Baumwell, & Damast, 1996). On the other hand, mothers who adapt little to their toddler's changing competencies and needs to follow their own intentions, negatively affect children's emerging feelings of autonomy (Smith, Landry, Miller-Loncar, & Swank, 1997).

Participants were 73 ethnically diverse, inner city Caregiver–child dyads. Caregivers were predominantly mothers. Dyads were videotaped for 10 minutes of unstructured free play with age-appropriate toys. Caregiver–child interactions were coded from the videotapes using a 41-item Caregiver-Child Interaction Scale. Caregivers were coded on 23 dimensions: (a) positive affect, (b) negative affect, (c) positive touch, (d) negative touch, (e) positive verbal reinforcement, (f) negative verbal reinforcement, (g) responsiveness to verbal nondistress, (h) responsiveness to nonverbal nondistress, (i) responsiveness to distress, (j) emotional attunement, (k) flexibility, (l) intrusiveness, (m) teasing, (n) participation with child, (o) activity level, (p) structuring, (q) consistency, (r) language use, (s) verbal style, (t) use of teaching loop, (u) achievement orientation, (v) inventiveness with toys, and (w) caregiver's sophistication of play.

These same dimensions were used to code the child with the following exceptions: (a) positive/negative reinforcement, (b) responsiveness to distress, (c) intrusiveness, (d) flexibility, (e) structuring, (f) use of teaching loop, and (g) achievement orientation. Additional codes used only for the child include (a) emotional regulation, (b) involvement with toys, and (c) persistence.

Factor Analysis of the Caregiver variables revealed a four-factor solution. The four Caregiver factors were (a) Responsive, (b) Intrusive, (c) Didactic, and (d) Negative. More specifically, Responsive caregivers were generally responsive to their children, expressed positive affect, used more and richer language, had a high activity level, were emotionally attuned to their children, displayed more pretend play and structured the interaction more than their non-Responsive counterparts. Intrusive caregivers were intrusive, inflexible, and also, structured the interaction. Didactic caregivers were achievement oriented, used teaching loops and positive reinforcement,

but lacked warmth. Negative caregivers teased and used negative verbal reinforcement and negative touch.

Correlations between the Caregiver factors and the child behavior variables revealed many interesting findings. The Responsive factor was positively correlated with child's language use and communication ability, child's participation with caregiver, child's responsiveness, positive affect, child's emotional attunement, child's activity level, child's persistence, and child's sophistication of play. The Didactic factor correlated positively with child's responsiveness, participation with caregiver, child's activity level, emotional attunement, and positive affect. The Intrusive caregiver factor correlated with child's positive affect only. There were no significant correlations between the Negative caregiver factor and any of the child variables.

This is an interesting pattern of findings. Most striking are the differences found between the correlations with the Didactic factor versus the Responsive factor and the child variables. Although both the Didactic factor and the Responsive factor yielded positive correlations with child participation, child responsiveness, activity level, and positive affect, only the Responsive factor yielded positive correlations with child persistence, language use, communication abilities and sophistication of play. Responsive caregiving, which respects children's bids for autonomy, fosters communication. Teaching without warmth is perhaps experienced as intrusive and forecloses rich communication. Refining the relations between responsive parenting and preschoolers' cognitive development will be crucial for better refining Head Start parent programs.

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Partnerships

School Based Mentoring: Generating Involvement and Dismantling Isolation In Urban Elementary Schools

Suellen Butler

PRESENTER: Suellen Butler

How do school-based mentoring programs dismantle a climate that puts urban elementary school children at risk of isolation? Which mentoring practices are most effective in shifting from a climate of isolation to a climate of involvement? Data gathered from five elementary school-based mentoring programs are used to address these questions. Study analysis is based on best practice as recognized and described by teachers and principals and by program observation conducted through site visit.

Three panels are used to organize and present research: (a) a panel of introduction, (b) a school climate panel, and (c) a report of study findings. The Introductory Panel enlists three questions to frame presentation: (a) What is school-based mentoring? (b) How is it distinguished from other types of mentoring programs? and (c) What are the core activities shared by school-based programs? Information presented in this panel draws distinction between school-based and other types of mentoring programs (Herra, Sipe, & McClanahan, 2000; Herra, Vong, & Gale, 2002). In addition, mentoring activities shared by the five school-based programs are listed and described.

Questions framing presentation on the School Climate Panel include (a) What factors generate a climate of isolation in urban elementary schools? (b) What are the building blocks for generating a school climate of involvement? and (c) How are shifts in levels of involvement facilitated? Panel information contrasts two different school climate models: (a) a climate of isolation linked to school size, teacher inexperience, and student class size; contrasted with (b) a climate of involvement based on Mandell's model (1984) describing negotiations conducted by children as they move from hidden meaning to publicly shared understandings. The four levels of model involvement (a) self-involvement, (b) involvement from afar, (c) coinvolvement, and (d) reciprocal involvement are presented in an overview figure as sets of traits.

The third panel reports Study Findings. Using the trait composites drawn from the involvement model permits a ranking of best mentoring practice described by teachers and principals. Three questions frame information on this panel: (a) Which mentoring activities yield the greatest levels of involvement? (b) How do teachers and principals compare in selection of mentoring activities that generate involvement? and (c) How effective is the allocation of mentoring program resources in achieving a climate of involvement? Information organized on this panel lists best practice reported by teachers and principals and their ranking on the basis of the involvement they generate. A comparison of the involvement potential for each best practice and its reported resource allocation as measured by staffing and scheduling assignments indicates the largest share of program resources (75%) are devoted to practices yielding coinvolvement. Mentoring practices generating reciprocal involvement receive far fewer re-

sources (25%) yet claim greater effectiveness in dismantling a climate of isolation.

Study findings suggest a more equitable balance be struck between support for activities benefiting individual children and those benefiting groups of children. Support for the later generates reciprocal relationships that dismantle isolation and seed an involvement initiative that transforms school climate.

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Health Promoting Early Childhood Centers in Australia: Building Capacity in the State of Queensland

Carla Patterson, Julie Appleton

PRESENTERS: Carla Patterson, Julie Appleton

In the last decade in Queensland, Australia there has been a continuous progression from working to meet the food, and nutrition and health needs, of young people in schools to addressing nutrition, and then broader health issues, in early childhood settings.

In 1995, the National Nutrition Education in Schools Project produced a curriculum development resource, *Food and Nutrition in Action,* (National Nutrition Education in Schools Project, 1996a) to assist teachers to undertake a holistic approach to nutrition education. This met a recognized need for school students to better understand personal nutrition. The curriculum aimed to develop health promoting attitudes and behavior in each student and recognized the importance of the whole school in helping achieve this. Its companion resource, *Health Promoting Schools in Action* (National Nutrition Education in Schools Project, 1996b), provided case studies to introduce schools to the concept of Health Promotion in schools.

The focus then turned to early intervention with the development of the early childhood resources, *There's more to food than eating* (Appleton, McCrea, & Patterson, 1999), and, *What is better food?* (Queensland Department of Health, 2001). Surveys of food practices in early childhood services in Queensland indicated that there was a health promoting approach to food provision and food learning in early childhood services; however, some areas could be improved, for example, communication with, and involvement of, families. Surveys of food provision in child care centers indicated that some children were not receiving all the daily nutrients required. Child-care staff were often required to provide nutrition information to families, and it was found they did not always have access to accurate, up to date information, especially in the area of infant nutrition.

In 2000, the Queensland University of Technology and Queensland Health piloted a Health Promotion in Early Childhood Settings project (Queensland University of Technology, 2002) that aimed to explore the application of a health promoting process in early childhood settings. Child-care centers used a consultative approach to identify health issues relevant to their situation. They then addressed these issues through the three areas of (a) curriculum, teaching, and learning; (b) organization, ethos, and environment; and (c) partnerships and services. Health issues addressed in this way included (a) staff stress, (b) food provision, (c) oral health,

(d) behavior management, (e) parenting issues, and (f) communication with families.

There is continued work in this area with interest from government and nongovernment agencies and 'health issue' organizations—for example, the antisun cancer foundation. Mental health agencies that have traditionally worked with adolescents are now responding to literature that describes the importance of early intervention and supporting broad health promotion initiatives in early childhood.

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Successful Partnerships: A Collaborative Treatment Outcome Study for Hard to Manage Head Start Preschoolers

Terri L. Shelton, Geneva Woodruff, Glenda Welch

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(Summary not available)

Learning to Live With Each Other: A Qualitative Analysis of 27 Head Start–Child-Care Partnerships in Three States

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PRESENTERS: David Fernie, Ruslan Slutsky, Rebecca Kantor, Dennis Sykes

(Summary not available)

Physical Health and Development

The Relationship Between Fine Motor Play and Fine Motor Skill

Deborah Marr

PRESENTER: Deborah Marr

The purpose of this study was to describe the relationship between free play choices and fine motor skill in children attending Head Start. To this end, the following research question was examined: Do 4-year-old children in Head Start with good and poor fine motor skills differ in the amount of time they participate in fine motor activities during indoor free play sessions?

This descriptive study compared 15 pairs of 4-year-old (prekindergarten) children in seven Head Start classrooms. Participants were included based on teacher rating of fine motor skills and scores on the fine motor portion of the Peabody Developmental Motor Scale-2 (PDMS-2; Folio & Fewel, 2000). Children with average or above average fine motor skill ratings and scores were matched on classroom, gender, and age with children receiving below average ratings and scores. Following the testing, the matched children were observed during indoor free play sessions on two different days.

In order to objectively determine the level of fine motor challenge inherent in an indoor free play activity, a panel of occupational therapy experts analyzed 67 specific indoor free play activities resulting in five levels of fine motor challenge: (a) high, (b) medium high, (c) medium low, (d) low, and (e) none. A fine motor challenge score was calculated for each child by multiplying the number of minutes engaged in each challenge level with an incremental weight factor. The weighted totals were then added together to form a fine motor challenge score. A t-test conducted on the fine motor challenge scores of both groups was not statistically significant ($t = -.06$, $p = .96$).

The findings do not reveal a significant difference in time spent in fine motor challenge activities between children with good and poor fine motor skills. In fact, both groups spent only 4% of their free play time in high fine motor challenge activities. This may not be a hindrance for children with good skills because they are functioning at age appropriate levels in fine motor development, indicating a readiness for future kindergarten challenges; however, children with poor fine motor skill are not engaging in activities during free play that could help them practice and develop the skills needed for kindergarten.

The categorization of free play activities may be a limitation in the present study. Occupational therapists served as the experts for categorizing the free play activities. Head Start teachers may categorize free play activities in other ways, producing somewhat different results. Early childhood educators may view play experiences differently, as they have the opportunity to see wider variations in the way children engage in free play activities.

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Child Nutrition: How Does an Urban Head Start Program Measure Up?

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PRESENTERS: Harriet S. Worobey, John Worobey

Head Start Performance Standards state, "foods served must be high in nutrients and low in fat, sugar and salt" (U.S. Department of Health and Human Services, 1996). A child's food intake is also comprised of meals and snacks eaten at home, but for children in full-day Head Start programs, one half to two thirds of their daily nutritional needs must be met at the center. The purpose of this study was to determine whether the children attending a Head Start Program would meet the Recommended Daily Allowances (RDA) or Daily Values (DV) as appropriate, and to suggest modifications if recommended values were not in line.

Parents/caregivers of children enrolled in full-day classes in an urban Head Start center were asked permission for their children to participate in a study on diet and health. The child's food intake was recorded over 2 days at the center and also at home by the parent. A research staff member recorded foods eaten at Head Start, while the parent recorded what the children ate while at home. Complete data were obtained for 18 children.

The daily nutrient intake for these children was generally acceptable, with overall energy intake generally at the recommended level. However, their diets, both at Head Start and at home, were problematic in two areas, namely sugar and sodium intake.

Calories from simple sugars should contribute no more than 10% of energy intake in the daily diet (Whitney & Rolfes, 1999). However, in this sample, simple sugars contributed 24% of their daily caloric intake. Indeed, 43% of the children's carbohydrate calories were from simple sugars, rather than from complex carbohydrates such as starch and fiber. Fifty-three percent of simple sugar intake was traced to meals or snacks at home. While the recommended DV for sodium is 2,400 mg, the children were far in excess at 5,536 mg. Lunch at the center was the primary culprit, accounting for 65% of the day's total. Menu items leading the way were hot dogs and canned baked beans.

Based on our results, we made recommendations to the center's food service staff to incorporate more fresh fruits, vegetables, and whole grains into the meals served at Head Start, while reducing canned fruits and vegetables, processed meats, and white bread. Recommendations for the parents at home included serving fresh fruits as snacks, instead of excess sweets.

Results with a new cohort of 24 children from the same Head Start classes 1 year later suggest that our recommendations were adopted by the food service personnel, as sodium intake was reduced by over 2,000 mg per day, down to 3,134 mg. However, simple sugars actually increased to 30% of total energy intake, but again, were due to excess sugared foods consumed at home. While the center staff succeeded in significantly reducing the sodium level of the meals that they serve, more opportunities need to be made to help Head Start centers serve more fresh produce and whole grain products. In addition, more provisions must be made for nutrition education of the home caregivers of Head Start children.

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Low Lead Exposure and Attention Regulation in Children From Head Start

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Over 12 million children under the age of 7 years are reported to possess potentially harmful levels of lead (Boivin & Giordani, 1995). For many years, lead was not considered harmful to the central nervous system (CNS) until the child exhibited symptoms of lead toxicity (Boivin & Giordani). More recently, public policy in the United States has deemed 10 (g/dl blood lead levels as safe, while others argue that there is no threshold below which lead does not have an effect on the CNS (Finkelstein, Markowitz, & Rosen, 1998; Schwartz, 1994).

The current study examined the effect of low lead exposure on attention regulation in 50 children attending Head Start. Attention regulation was examined using a parent–child interaction task previously used by Wertsch (Wertsch, McNamee, McLane, & Budwig, 1980; Wertsch & Hickman, 1987). Following Vygotsky (1978), Wertsch and his colleagues contended that before a child becomes an independent (self-regulated) problem solver, the parent serves as the planner, regulator, and monitor of the task. The study was designed to test the hypothesis that exposure to lead alters the way in which children develop the ability to self-regulate attention. Children completed a puzzle-matching task with their parents and a second puzzle 1 week later without assistance.

Children with low lead levels (LLL; greater than 10 (g/dl blood lead level) were compared with a control group of children (less than 6 (g/dl blood lead level). The puzzle-matching task was coded for several events, including both verbal and nonverbal parental assistance and the child's gazes to the model, copy, and puzzle pieces. Furthermore, sessions were divided into episodes, with each episode representing the movement of one puzzle piece.

Analyses controlling for age and IQ have yielded several significant findings concerning low lead exposure. Children with LLL differed from children in the control group on puzzle-matching performance during both the parent–child and the child-alone session. Children with LLL inserted significantly fewer correct pieces in both sessions, especially in the child-alone session. Secondly, differences were found in the attentional processes employed by children in the LLL and the control groups. Children with LLL demonstrated more variable gaze patterns from episode to episode. In other words, children with LLL exhibited less consistency in their attentional strategy than the control group. Finally, differences were found in how much a mature attentional strategy (looking at the model) benefited puzzle performance in terms of accuracy. While the proportion of gazes to the model was related to overall accuracy in puzzle matching for the control group, it was not related in the LLL group, suggesting that LLL children did not benefit from using an efficient strategy. Taken together, children in the LLL group were less regulated in their attention skills than children in the control group.

Overall, these findings are compelling, given that these children had relatively low levels of lead exposure. The results of this research demonstrate that even children with low amounts of lead exposure are at risk for attentional problems.

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Obesity Begins Early: The Latino Migrant Child

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PRESENTER: Diane L. Markowitz

Childhood obesity increases the likelihood that adolescents and young adults will develop Type 2 diabetes (Caprio & Tamborlane, 1999; Fagot-Campagna, 2000). To assess the prevalence of obesity and its cultural correlates, we weighed and measured 524 children between the ages of 2 and 17; of these, 216 were < 6 years of age, and most were enrolled in Head Start programs.

All were the children of Mexican or Guatemalan migrant agricultural laborers in the southern New Jersey region who spoke little or no English. We hypothesized that acquisition of some American habits would be correlated with physical variables, including height and body mass index (BMI). Questionnaires on personal history, diet, physical activity, and living conditions were administered to parents of 55 children in 33 homes by Spanish-speaking interviewers. The results were correlated with the anthropometric data.

Percentile means of BMI for age, and height for age, did not differ significantly between the aggregate sample and the Head Start subsample, but did differ from NCHS percentile means of 50 (aggregate sample BMI for age percentile mean = 72.6; Head Start moiety = 70.7). The height for age percentile means for the entire sample (38.3) and for the Head Start children (38.6) were significantly different from the NCHS mean of 50 ($p < .0001$ and $< .004$, respectively).

There was no significant difference between the total sample and the Head Start children in stunting (< 5th percentile of height for age), overweight (85th percentile of BMI for age), or obesity (95th percentile of BMI for age); all conditions were seen more frequently in both the aggregate and Head Start samples than in the NCHS sample (CDC growth charts, 2002).

Healthy, well-nourished populations do not differ significantly in mean height (Johnston & Markowitz, 1993). Thus, the short stature of the total sample may represent some mild to moderate malnutrition. Among the 55 children for whom both interview and anthropometric data are complete, stunting is associated with eating more of the daily meals at home (rather than in school, prob. > $\chi^2 = 0.0193$) and with being home alone when parents are absent (prob. > $\chi^2 = 0.0004$).

Those children who were cared for in the parents' absence by either an aunt or a grandmother, whose families had a private (rather than shared) kitchen or who regularly ate at American-style fast food restaurants were significantly more likely to be obese (prob. > $\chi^2 =$ 0.0032, 0.0306, and 0.0049, respectively). Children whose mothers had more years of schooling were less likely to be obese (prob. > $\chi^2 = 0.0380$).

Our samples' prevalence of obesity equals that of settled Mexican Americans (Himmelgreen, Perez-Escamilla, Peng, Martinez, & Wright, 2001), exceeds that of Mexicans (Burke, Williams, Haffner, Stern, & Villalpando, 2001) and is approximately double that seen in the general United States population (Rocchini, 2002). Most disturbingly, early presence of obesity in this sample may presage an increasing number of obese adults of this population in the future. Early

intervention—possibly through Head Start—to inhibit or reverse obesity (Rolland-Cachera, 1999) therefore offers the best opportunity to prevent Type 2 diabetes.

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Mother's Prenatal Care, Children's Health Status, and Source of Health Care Among Infants and Toddlers in Early Head Start: Findings From the National Evaluation

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Meeting the health care needs of Early Head Start (EHS) families is a challenge. Children in low-income families are at greater health risk than children in higher income families (Hofferth, 1998). This study used data from the national evaluation of EHS for a descriptive analysis of the health status and health care of pregnant women and the children participating in EHS. Research questions were (a) What was the prenatal status and pregnancy outcome of women who entered EHS while pregnant? (b) What are the health status and most frequently reported health problems of children while participating in EHS? (c) Do EHS children receive well-child care? (d) Where do they receive their health care?

The sample included 1,527 children, with 375 mothers pregnant at the time they enrolled in one of the 17 sites participating in the national evaluation. Demographic and prenatal information were collected from the Head Start Family Information System (HSFIS) completed at the time of enrollment. Parent Service Interviews (PSI) were conducted 6, 15, and 26 months after enrollment. Parents reported on their children's health status and health care at each PSI.

Of the 359 pregnant women for whom there are data, 51.1% were enrolled after 24 weeks of pregnancy, with 96.3% being in prenatal care and only 1.4% with third trimester entry into care.

At the time of enrollment 12.4% reported at least one complication of pregnancy ranging from fatigue to hypertension. At the 15-month PSI, 208 women reported on birth outcomes. The average birth weight was 7.2 lbs (*SD* = 1.2; range 2.9–10.9) with 6.8% low birth weight (< 5.5 lbs). Nineteen infants spent between 1 and 31 days in the neonatal intensive care unit (NICU).

There was no significant change in parents' report of their children's overall health status. At each of the three PSIs, more than two thirds of the children were reported by their parents to be in excellent or very good health. The most frequently reported health problems were recurrent ear infections (19.2%, 20.4%, and 15.5% at 6, 15, and 26 months respectively) and respiratory problems including asthma (10.7%, 10.9%, and 11.2% at the 6, 15, and 26 month PSIs).

Most (94% to 97% at each PSI) children were reported to have a regular health care provider. About two thirds of the parents reported obtaining health care for their children at a clinic, community health center, or through the health department, and about one third reported using an HMO or private physician. At each PSI, 43% to 52% of the children had been seen by a health care provider for an acute or chronic illness, and 5% to 7% had one or more emergency room visits for an accident/injury.

Women in the study who were pregnant reported receiving prenatal care, which has been associated with decreased fetal morbidity (McCormick & Seigel, 2001) and the proportion of low birth weight infants was lower than that reported nationally (CDC, 2002). Although children were reported to be healthy, some of them were affected by problems that could impact their growth and development.

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Tobacco Smoking Habits of Low-Income Women Raising Young Children

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Tobacco smoking is detrimental to the health of adults and children and imposes serious demands on local health care facilities and national health care expenditures. Adults, for example, who smoke over a lifetime are more likely to experience chronic disabilities and premature deaths, and young children early on are more likely to experience respiratory complications and sudden infant deaths (Brown, 2001; Gaffney, 2001; Scheibmeir & O'Connell, 1997). Many women who are smokers choose to quit during their pregnancy, but relapse soon after the birth of their infant. While smoking cessation programs minimize women and children's health risk, programs have failed to achieve substantial long-term abstinence (Bottorff, Johnson, Irwin, & Ratner, 2000; Ko & Schulken, 1998).

In this study, patterns of young children's exposure to second-hand tobacco smoke in low-income households and its effect on infant and toddler outcomes were examined in 197 pairs of

mothers and their children who were enrolled in one site participating in the Early Head Start Research and Evaluation Project—a 17-site national longitudinal study. Data were collected over multiple time periods by standardized questionnaires and observational tools in participants' homes.

Results revealed that while about one fourth of the children were raised in smoke-free environments, the majority of the children were exposed to second-hand smoke by their mothers and others who resided in the same household during prenatal and/or postnatal periods. Further results showed that while the mother's smoking habits had no relationship to her affective states and interactive practices, nor to her child's cognitive and language development, there were some interesting trends when examining adult smoking patterns and child health–illness parameters. In some cases, children who were exposed to smoke had more respiratory illnesses and ear infections than those who were raised in smoke-free environments. Practitioners may want to ascertain 'family' patterns of smoking tobacco over time and track child illnesses—supporting mothers who raise their children in a smoke-free environment and determining the best ways to encourage mothers and others residing in the same household to maintain a smoke-free environment.

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School Achievement/Academic Success

The Role of Emergent Literacy Domains in Reading Achievement of Former Head Start Children

Stacey A. Storch

PRESENTER: Stacey A. Storch

Research has demonstrated positive correlations and longitudinal continuity between individual differences in emergent literacy and later differences in reading ability. These differences are strongly linked to family income. Social class differences in language, phonological awareness, and print knowledge have been reported in preschool children, and related differences in reading outcomes occur in these same children in early elementary school (e.g., Adams, 1990; Bowey, 1995; Lonigan, Burgess, Anthony, & Barker, 1998; Raz & Bryant, 1990). Importantly, the relation between the skills with which children enter school and their later academic performance is strikingly stable (e.g., Baydar, Brooks-Gunn, & Furstenberg, 1993; Tramontana, Hooper, & Selzer, 1988). Given that children who start school behind in beginning reading skills tend to stay behind in reading over their academic careers, increasing attention is warranted on the emergent literacy knowledge and skills that children bring to first grade from prior experiences in their homes, preschool centers, and kindergartens.

This study employs structural equation modeling to map the relationship between the emergent literacy skills, language ability, and reading skills of 626 children from low-income families who have been followed from the time they were in Head Start through the fourth grade. Emergent literacy abilities, including print concepts, phonological awareness, and oral language skills, were assessed in preschool and kindergarten. Reading accuracy, reading comprehension, and oral language skills were examined in first through fourth grade.

Results demonstrate that individual differences in emergent literacy are causally and powerfully connected to individual differences in reading achievement in elementary school. The emergent literacy model presented here highlights the continuity between a range of prereading behaviors and later reading ability. The developmental precursors of reading skills are already organized into oral language and code-related domains during the preschool period. Knowledge of print and phonological awareness are closely connected within the domain of code-related skills and show strong continuity over time, while oral language operates within a separately organized domain, which shows even stronger developmental continuity. Although the oral language and code-related domains are connected during the preschool years, by the time children are involved in formal reading instruction in first and second grade, the influence of the oral language domain has waned and become indirect. The strong, direct correlates of early reading success from the kindergarten period are code-related skills. Later in the sequence of learning to read, however, as the task of reading goes beyond the decoding of individual words to understanding the meaning of text, oral language abilities begin to play a direct role once again. Reading comprehension is influenced by both decoding abilities and knowledge of spoken language.

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Children's Home Environments During the Transition To School: A Longitudinal Analysis

Elizabeth Votruba-Drzal

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One of the primary determinants of school readiness is the quality of cognitive stimulation children receive in their home environments prior to school entry. Children who come from rich and supportive home learning environments start school with a developmental advantage compared to their counterparts who lack these resources. Research has revealed that children's home environments are strong predictors of academic achievement in preschool and beyond (Dubow & Ippolito, 1994; Smith, Brooks-Gunn, & Klebanov, 1997; Linver, Brooks-Gunn, & Kohen, 1999; Ninio, 1990). Over the last 20 years a substantial literature has documented associations between both maternal education and income and cognitive stimulation in the home environment even after controlling for multiple child, family, and maternal characteristics (Garrett, Ng'andu, & Ferron, 1994; Miller & Davis, 1997; Baharudin & Luster 1998).

Despite the abundance of research linking income and maternal education to children's home learning environments, it is difficult to determine whether these relations are causal, since most of the existing literature relies on comparisons across individuals at a single point in time. Comparisons such as these may be biased because of unmeasured variables that are correlated with the independent and dependent variables in the regression equation. The regressions may therefore overstate the relationship between household income and cognitive stimulation in the home environment. Understanding whether or not these associations are causal is important to policy makers and researchers interested in designing policies to reduce disparities in school readiness. If relations between these variables are, as many have suggested, causal then one effective policy lever for improving school readiness for low-income children may be to increase parental education and income.

This analysis uses data from the 1986–1998 waves of the National Longitudinal Survey of Youth (NLSY; National Longitudinal Survey, All Cohorts, 2002) and the NLSY Child Supplement to provide a more rigorous test of causal relationships between income, maternal education, and cognitive stimulation in children's home environments. The influence of maternal education and income are examined in three sets of analyses, using five cohorts of children (n = 2,174) followed by the NLSY as they made the transition to school. Relations between income, maternal education, and scores on the cognitive stimulation subscale of the Home Observation for Measurement of the Environment Short Form (HOME-SF), a modification of

the HOME inventory (Caldwell & Bradley, 1984), are examined cross-sectionally at ages 3–4 and 7–8 and then longitudinally using a fixed effects model. Cognitive stimulation is measured using the cognitive subscale of the HOME-SF.

Comparisons between the coefficients from the cross sectional and fixed effects models show that the influence of income and maternal education are robust under the longitudinal fixed effects model specification. Specifically, increases in household income and maternal education are associated with improvements in children's home learning environments over time. Furthermore, the results suggest that the home environments of children in low-income households are particularly sensitive to income changes over time.

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Approaches Toward Learning and Academic Achievement in At-Risk Former Head Start Children

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Approaches toward learning is the least researched domain of school readiness, the components of which include (a) inhibition, (b) reference for challenge, (c) persistence, (d) curiosity, (e) initiative, and (f) problem solving flexibility. It encompasses the ways children engage their environment and respond in challenging and novel situations and learning activities.

Entering school is stressful, especially for children whose coping is already taxed by difficult circumstances. Disadvantaged children who succeed may thus be called resilient. Kraemer has suggested the classification of factors by whether they are malleable and whether risk changes when they are altered. Approaches toward learning may be a causal protective factor, which

being domain general, may be particularly well suited for effective and efficient interventions to promote resilience in the transition to school.

The National Education Goals Panel (NEGP; 1995) recommends a multimethod, multi-informant method of assessment be used to measure approaches toward learning with data collected at multiple times, from multiple sources, and utilizing multiple strategies. This has not yet been achieved. No child measures of this construct are currently available. This study used a structured task designed to measure problem solving flexibility to investigate the feasibility of developing a set of structured tasks for use in assessing approaches toward learning and explored its relationship with academic achievement.

A sample of 158 predominately African American subjects from Chapter I schools, two thirds of who were previously enrolled in Head Start, in the spring of kindergarten and first grade, were administered two subsets—one reading and one math—from (a) the Woodcock Johnson Tests of Achievement- Revised (WJR; Woodcock & Johnson, 1989; (b) the Peabody Picture Vocabulary Test-Revised (PPVT; Dunn & Dunn, 1981) measuring receptive vocabulary and used as an approximation of verbal IQ, an oddity task designed to measure problem solving flexibility; and (c) the prosocial items of the Social Skills Rating System (SSRS; Gresjam & Elliott, 1990) as an adult rating approaches toward learning.

The results of this study offer strong evidence of the importance of approaches toward learning in children's resilience in the transition into school and the possibility of measuring this construct using structured tasks. The problem solving flexibility task was significantly correlated with the Social Skills Rating System prosocial scale. Furthermore, in a hierarchical regression, the first grade flexibility task significantly added to the prediction of achievement after controlling for prior achievement, the PPVT, and the SSRS. This highlights the importance of child measures in addition to adult ratings.

Problem solving flexibility is only one of the components of approaches toward learning. Additional tasks may be developed to measure other aspects of this construct, improving predictive ability. The use of structured tasks may promote the ability to fulfill the mandate of the NEGP to measure approaches toward learning using a multimethod, multi-informant approach. It may also help tease apart the components of this construct, elucidating which are most critical in predicting achievement as well as which may be most affected by classroom and parenting practices, thus helping to guide intervention efforts.

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Predicting Improvement After First Grade Reading Difficulties: The Effects of Early Language, Emergent Literacy, and Behavior Skills

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Although the majority of children develop basic reading skills without significant problems, an estimated one in three children experience considerable difficulties in learning to read (Adams, 1990). Children from low-income families are at increased risk for early academic difficulties due to the relative paucity of their early experiences with literacy (Adams; Raz & Bryant, 1990). Children who have difficulty learning to read in the early elementary school years are at substantial risk for academic problems throughout their schooling, and are unlikely to catch up to their peers.

A number of studies have examined early predictors of academic success and failure by exploring the relationship between children's abilities in preschool and kindergarten and their later achievement in elementary school (e.g., Baydar, Brooks-Gunn, J., & Furstenberg, 1993; Tramontana, Hooper, & Selzer, 1988). Such studies yield a number of factors that are predictive of academic performance, such as phonological awareness, vocabulary skills, knowledge of conventions of print, verbal memory, and home variables (Scarborough, 1998). However, predictors of improvement or decline in relation to performance in first grade, a critical year when most children experience formal reading instruction for the first time, have not been studied. This study explores the relationship between behavioral, language, and literacy skills that are present in kindergarten and growth in children's reading scores from first grade to fourth grade.

Participants were 165 children who attended Head Start preschool and public elementary school on Long Island, New York. These children were selected for examination from a larger longitudinal sample based on their low performance in reading achievement at the end of first grade compared to national averages. Participants were assessed in kindergarten on a variety of measures, including measures of receptive vocabulary (Dunn & Dunn, 1981) and expressive vocabulary (Gardner, 1990), hyperactivity and social competence (Conners, 1969; Feagans & Farran, 1982), and emergent literacy (CTB, 1990). They were further assessed each spring from first through fourth grade on measures of reading achievement, tapping both decoding and comprehension. Using correlational analysis and one-way ANOVAs, we evaluated the role of children's kindergarten abilities in predicting the amount of change between their first grade and fourth grade reading performance.

Results indicated that of the 165 children who were failing in reading in first grade, 58% failed to improve by the end of fourth grade while 42% did improve by the end of fourth grade. In addition, children's reading ability in fourth grade seemed to be largely determined by their reading performance at the end of second grade. A variety of abilities measured in kindergarten correlated with growth from first to fourth grade, including oral language, emergent literacy skills, and behavioral skills.

Our results imply that interventions targeted at enhancing oral language skills and specific emergent literacy skills, such as linguistic awareness, can augment children's resources for recovery from poor early academic standing. Furthermore, children with strong asocial and hyperactive tendencies should receive additional support from an early age, as their capacity for academic improvement may be limited due to their maladaptive behavior patterns.

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Differential Effects of Early Risk and Early Intervention on Reading and Math Achievement

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Studies of family risk factors that predict children's success in school show that low SES and ethnic minority status are associated with poor progress (e.g., Pungello, Kupersmidt, Burchinal, & Patterson, 1996). Going beyond simply considering SES and ethnicity as predictors, the authors examined how, within a sample of children from poor, minority families, cumulative risk in early childhood and early educational intervention were related to long-term reading and math achievement.

The data were derived from a controlled trial of early educational intervention, the Abecedarian Project (Ramey & Campbell, 1991). The original study sample consisted of 111 infants, 57 randomly assigned to the intervention group and 54 to the control group. Due to missing data for some of the participants, the present study was based on 93 children, 47 (25 males, 22 females) who received the intensive early education, 46 (20 males, 26 females) from the comparison group. All families had low incomes; 99% were African American. Cumulative early environmental risk was based on prospective indications of mother's or father's absence from the home, frequent moves in early childhood, the primary caregiver having an unskilled job, and the caregiver having less than a high school education when children were 18, 30, 42, and 54 months old, summed across years. The early home environment was measured using the age-appropriate version of the Home Observation for Measurement of the Environment (HOME; Caldwell & Bradley, 1984) at 6, 18, 30, 42, 54, and 96 months of age. These scores were summed to create an index of the cognitive stimulus value of the early home environment. Academic achievement was measured by age-referenced standardized scores for Broad Reading and Broad Mathematics from the Woodcock-Johnson Psychoeducational Battery (Woodcock & Johnson, 1977) and the Woodcock-Johnson Psychoeducational Battery-Revised (1989) administered at ages 8, 12, 15, and 21 years of age. Mixed model HLM analyses tested how early risk (high and low risk groups) and early intervention (treated, control) predicted longitudinal

achievement scores. HOME scores were then added to the models to test if the relationship between early environmental risk and achievement was mediated by the home environment.

At each time point, individuals in the intervention group scored significantly higher on both reading and math. Reading scores remained stable over time relative to national norms, whereas math scores declined. Early environmental risk was also a significant predictor for both reading and math. For reading scores, this effect was modified by a significant treatment x risk interaction; low-risk individuals with early treatment significantly outscored high-risk individuals with treatment. For both reading and math scores, the quality of the early home environment mediated the effects of early risk; the effect for risk was reduced when HOME was added to the model. Thus, the results suggest that early risk affects academic achievement via its impact on the child's home environment.

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Academic Resilience Among Children Born to Low-Income Teenage Mothers: A Quantitative and Qualitative Analysis

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This study focused on family influences on the academic success of first-grade children born to low-income, adolescent mothers, a group identified by prior research as at risk for school failure (McLoyd, 1998). Ecological theory presumes that children's early learning is influenced by individual, cultural, and contextual variation (Belsky, 1984; National Educational Goals Panel, 1995). Thus, we identified characteristics of children's environments that might influence their academic achievement as themes within children's life histories.

The young mothers and their first-born children who participated in this study had been enrolled in a family support program for teenage mothers at birth. The teens were randomly assigned to one of two treatment groups with different levels of service; however, there were no differences in school achievement between these two groups. When the children were in first grade, their achievement levels were assessed with the Peabody Individual Achievement Test-Revised (Markwardt, 1989). Home visitors who had worked with the parents for 3 to 5 years were interviewed about their knowledge of families who had children in either the low-achieving or high-achieving quartile ($N = 27$). Children whose scores were in the top quartile of the total group ($N = 96$) were considered to be academically resilient; children with scores in the bottom quartile were considered to be at risk.

Themes, or protective factors, included maternal intelligence, maternal determination, the presence of a caring adult in the child's life, the lack of harsh physical punishment, child attractiveness, and an academically stimulating environment.

Life histories from interviews of the family's assigned home visitor provided case studies of academically resilient children. In addition to information from case studies, interview transcripts were coded and verified by comparisons with Tom Luster's or Marcia Vandenbelt's individual summaries (Luster, Bates, Vandenbelt, & Casady, 2001); disagreements were resolved by discussion. To determine frequencies of the various categories, dichotomous independent variables were cross-tabulated with assignment to bottom or top quartiles of academic achievement. This yielded frequencies that allowed us to perform odds ratios and significance tests, using Montanez's odds ratio program (2001). For analyses that contained a zero cell, a delta of 0.5 was added to all cells.

The data point to striking differences in the circumstances and experiences of the children who were the most and least successful students in first grade. Without exception, children who did not have a nurturing caregiver placed in the bottom quartile of academic achievement. All of the children who placed in the top quartile of academic achievement received adequate academic stimulation. Children whose mothers were described as intelligent were 7 times more likely to be in the high-achieving group. Children described as engaging, endearing, and attractive were 11 times more likely to be in the high-achieving group. In sum, maternal, child, and contextual characteristics were significantly related to children's rank in academic achievement.

Future directions for work with teen parents could include examining roles of the other adults in their lives, such as fathers or grandmothers.

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The Longitudinal Effects of Multiage Programming on Children in First and Second Grade

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Cromey (2000) compared kindergarten and first grade children in Multiage Programming MAP with those in traditional classrooms on a variety of cognitive and intellectual variables. Children in the MAP first grade classes were found to have higher levels of intellectual ability, as evidenced by scores on the Kaufman Brief Intelligence Test (Kaufman & Nadeen, 1990), and more advanced cognitive developmental levels, as evidenced by their performance on two Piagetian conservation tasks.

The current study follows participants from the previously discussed study over a period of 3 years to see if the differences found between the MAP and age-segregated classrooms endured. Additionally, we examined associated findings with MAP classes.

Second year data analysis indicated that the intellectual advantages of MAP were stable over time, but were less robust as former MAP students were promoted into more traditional, age-segregated settings. The difference between the MAP and age-segregated classrooms concerning cognitive developmental level (CDL) showed that accelerated gains in CDL by MAP children evened out over time. That is, as the participants, including those in control classrooms, got older, they were more likely to evidence concrete operational thinking. This finding remained stable through the 2nd year of this study, indicating that MAP does promote attaining concrete operational thought more quickly. As expected, second grade children in the traditional classrooms caught up to the children in the MAP classrooms by the final testing period.

Prior to this study, research comparing MAP to age-segregated classrooms has focused on achievement success and specific subject differences. Few if any studies have looked at overarching measures of cognitive developmental maturity and intelligence. The findings of this study have implications on how multiage classes should be taught and suggest that curriculum changes should be made to take advantage of the earlier attainment of concrete operational thought.

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Self-Regulation, Inhibition, and School Readiness: Risk and Resilience Among Young Children in Low-Income, Urban Communities

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Children in low-income communities may be at higher risk for being unprepared for formal schooling. However, not all are adversely affected by these risks. Rather, some demonstrate competence despite adversity, and child characteristics, such as temperament, may facilitate such resilience. Temperament consists of two systems, one reactive and the other active. Children may react to situations with inhibition or irritability, and they may actively suppress these responses via effortful control and attentional focusing, often called self-regulation (Rothbart & Bates, 1998). Recently, scholars have inquired about the role of self-regulation and reactive temperament in the adjustment to school (Henderson & Fox, 1998). However, little self-regulation research has been conducted among children from diverse backgrounds (Zeidner, Boekaerts, & Pintrich, 2000). Thus, the goal of this study is to examine the role of self-regulation and reactive temperament in the development of school readiness among ethnically diverse children in low-income, urban communities.

Temperament research has found a modest link between reactive temperament and behavior problems, but the literature has several shortcomings (Rothbart & Bates, 1998). First, most studies have assessed temperament using parent reports rather than observational measures. Second, the literature has focused on negative behaviors rather than positive outcomes, such as social competence and cognitive achievement. Lastly, many studies have not controlled for family characteristics that may also be related to children's adjustment.

In contrast to previous work, this study takes a multimethod approach in analyzing the effect of temperament on a range of child behaviors. The sample is a subset of preschool children (n = 510) from Welfare, Children, and Families: A Three City-Study, whose participants reside in low-income neighborhoods in Boston, Chicago, and San Antonio, Texas. Mothers reported on children's reactive temperament (Buss & Plomin, 1975), positive behaviors (Quint, Bos, & Polit, 1997), and internalizing and externalizing symptomatology using the Child Behavior Checklist (Achenbach, 1991; 1992). In addition, children's cognitive achievement was assessed using two subtests of the Woodcock-Johnson Psycho-Educational Battery-Revised (Woodcock & Mather, 1989, 1990). Finally, children's behaviors were videotaped and later coded during three self-regulation tasks (Kochanska, Murray, Jacques, Koenig, & Vandergeest, 1996) and an interaction with their mothers (Chase-Lansdale, Brooks-Gunn, & Zamsky, 1989).

Using these multimethod assessments, regressions examined the impact of both self-regulation and reactive temperament on cognitive achievement and social behaviors while controlling for child and family characteristics such as family structure, maternal education, and race. Overall, there were modest associations between temperament and children's development. Self-regulation was a key factor in children's school readiness. More regulated children had higher scores of cognitive achievement, greater persistence, and lower levels of noncompliance. Further, aspects of reactive temperament were predictive of more positive behaviors and less behavior problems. In sum, for children of diverse ethnicities living in low-income neighborhoods, self-regulation and reactive temperament may play important protective roles in both cognitive and social aspects of school readiness.

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Unraveling SES: The Explanatory Role of Maternal Education on Children's Academic Achievement in Grades 1 to 3

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Studies suggest that either directly or indirectly, household income influences children's development (Duncan, Brooks-Gunn, & Klebanov, 1994; Huston, 1999; Brooks-Gunn, Duncan, & Britto, 1999). However, the extent to which income matters in relation to other predictors of child functioning requires further investigation. This study examined whether maternal education explains part of the relationship between socioeconomic status (SES) and children's academic achievement during grades 1–3 among a sample of first-time mothers (N = 148) in economically disadvantaged families.

Occupational status codes (Nam & Powers, 1983) were used to assess SES at baseline (i.e., childbirth). These codes represent the median income and education level associated with the job classification. Maternal education was defined by completed years of schooling when the study child was 4 years old. Education was coded as a categorical variable where 1 = elementary school; 2 = grades 7–8; 3 = grade 9; 4 = grades 10–11; 5 = grade 12; 6 = vocational training; 7 = some college; 8 = bachelor's degree; 9 = some graduate work; and 10 = a professional degree. On average, the women in this sample completed grades 10–11 (M = 4.88, SD = 1.13). The outcome measure, academic achievement, was extracted from school records and was modeled as a latent variable comprised of average academic grades in English, math, and science during grades 1–3. Maternal age (M = 19.27, SD = 2.86) and IQ (M = 50.27, SD = 15.2) at baseline were used as covariates in our analyses. IQ was assessed with the revised version of the Peabody Picture Vocabulary Test (Dunn, Robertson, & Eisenberg, 1981). Minority status was not included as a covariate because it was unrelated to the other variables in the models.

To address the hypothesis, two structural equation models were fit to test for mediation. In the first model, the direct effect of SES on achievement was tested to confirm that the relationship was significant. The second model was used to determine whether SES significantly predicted maternal education and whether maternal education significantly predicted academic achievement. We expected the path between SES and achievement to decrease when maternal education, the hypothesized mediator, was included in the model (Baron & Kenny, 1986).

As predicted, in the nonmediating model, the direct path from SES to academic achievement was statistically significant ($B = .01$, $\beta = .24$, $p < .05$). Figure 1 shows that when maternal education was introduced in the second model, SES was positively related to family maternal education ($B = .03$, $\beta = .17$, $p < .10$), and maternal education was positively related to academic achievement ($B = .14$, $\beta = .30$, $p < .01$). In support of the mediation hypothesis, the path between SES and academic achievement was reduced to nonsignificance ($B = .01$, $\beta = .17$, $p = .11$). Moreover, maternal education accounted for 29% of the total effect of SES on children's scholastic performance. These findings suggest that SES is linked to children's scholastic performance, at least in part, through its influence on maternal education.

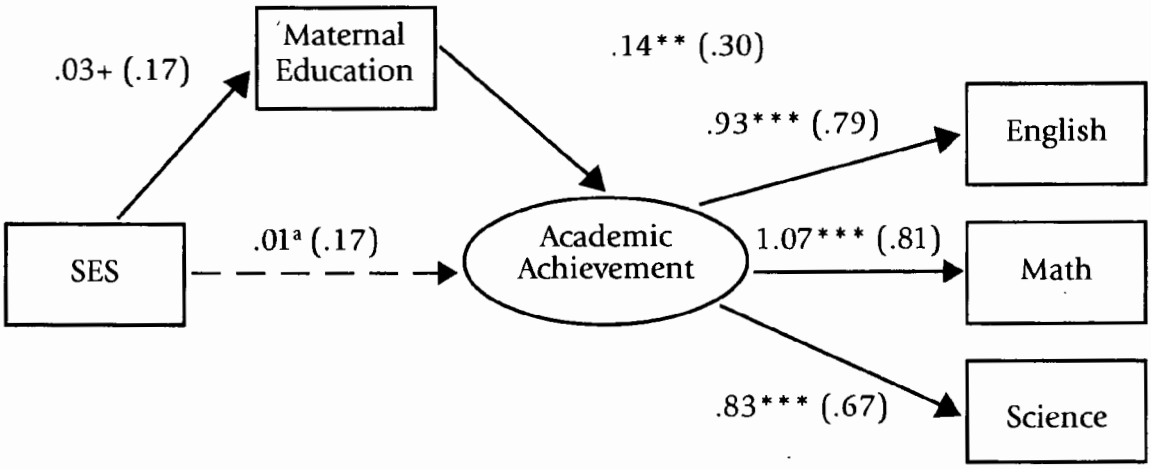

Figure 1. Path model depicting the role of maternal education in mediating the effects of SES on children's academic achievement ($N = 148$). Unstandardized regression coefficients are shown and standardized coefficients are displayed in parentheses. The dashed line represents a path that is not significant at $p < .10$. Maternal age and IQ were statistically controlled.

[a]$p > .10$.
+$p < .10$. **$p < .01$. ***$p < .001$.

There is a growing awareness that research examining the main effects of income on child functioning is of limited value if we do not consider the causal pathways through which income exerts its influence. Our results suggest that maternal education explained part of the relationship between SES at childbirth and children's academic achievement during early elementary school. Thus, improving maternal education may increase the likelihood of low-income children's academic success.

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Predicting Kindergarten Success for Head Start Children

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The current study utilizes data from the Early Childhood Longitudinal Study, Kindergarten Class of 1998–1999 (ECLS-K). Data from this study come from the Kindergarten–First Grade Public-Use dataset (ECLS, 2002). There are a total of 1,869 children from the ECLS-K sample verified to have attended a Head Start program prior to kindergarten. Racial and ethnic composition in this sample is representative of enrollment data provided by the Head Start Bureau (2001). English is the dominant home language (83.4%). However, 16.3% of the parent sample speaks only non-English language at home. Children are living mostly with biological parents (40.8%), although single-parent household with biological mother only is common (37.9%). For poverty status, 54.2% of families are living below poverty, and 45.8% are living at or above poverty.

This study compares six groups of children from the ECLS-K sample: (a) Head Start Children living below poverty level (HSP), (b) Head Start Children living at or above poverty (HS), (c) children living below poverty level who have never attended a Head Start or other center-based program (NCP), (d) children living at or above poverty who have never attended a Head Start or other center-based program (NC), (e) children living below poverty level who attended a non-Head Start center-based program (CP), and (f) children living at or above poverty level who attended a non-Head Start center-based program (C).

Cognitive measures used include (a) IRT-based scores that are criterion-referenced, (b) *t*-scores that are norm-referenced, and (c) proficiency probability scores that are criterion-referenced measures of proficiency in specific skills. Results are consistent across all measures on reading, mathematics, and general knowledge: C>NC>HS>CP>NCP>HS. Longitudinal follow-up on cognitive measures during spring kindergarten, fall first grade, and spring first grade for the six groups found a similar pattern. Children attending other center-based programs have higher scores than children attending no program or Head Start, regardless of the poverty status. Children attending Head Start do not perform better than children who have never attended a program.

A similar pattern is found on the five Social Rating Scales (SRS). On the teacher SRS, non-Head Start children at or above poverty level are similar on most scales whether they attend a center program or not; they have higher ratings than non-Head Start children at or above poverty level. For children below poverty level, Head Start children consistently have lower social skills ratings and higher internalizing and externalizing behavioral problems. Pattern of parent SRS is less consistent. Preliminary exploration of family variables found noted group differences in family characteristics such as neighborhood problems, family resources, and parental relationships.

The current study does not investigate Head Start program variables and, therefore, conclusions should not be made regarding Head Start program effectiveness. Cognitive measures at kindergarten and first grade indicate Head Start children do not perform better than children who attended other center programs or no program. Preliminary exploration indicates that there are differences in family characteristics; such variables are likely to have long-term impact in predicting children's academic success.

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Academic Achievement in the Context of Poverty: Family Stressors and Children's Math and Reading Achievement Over the Elementary School Years

Cynthia Esposito Lamy

PRESENTER: Cynthia Esposito Lamy

This paper examines the impact of family stressors in a context of poverty on children's math and reading achievement from kindergarten through sixth grade. Poverty can be thought of as a conglomerate of stressors that tend to combine and strengthen, creating a pervasive, tenacious situation of risk for children's development. This kind of entrenched, global risk has massive impact on children's outcomes (McLoyd, 1990b).

A comprehensive set of family characteristics, including maternal age, education, physical health and depression, family structure, number of children, parenting style, family involvement in school, and mobility are used to address the impact of family risk in the context of poverty on children. The sample is comprised of 198 families whose children attended Head Start during the 1991/2 and 1992/3 school years in a small, northeastern city.

Sameroff, Seifer, Baldwin, & Baldwin (1993) found that the number of stressors was a more important predictor of poor developmental outcomes than the type of stressor; however, many researchers have found that maternal education level or IQ alone account for a substantial portion of the variance in children's outcomes. Therefore, the current research examines the salience of the additive and cumulative models of family risk over the influence of single stressors. A family risk index is created by coding each family characteristic dichotomously (0 to indicate no risk or 1 to indicate risk) and then averaging across the ten risk status variables.

The literature provides evidence for and against the idea that family stressors affect children's achievement directly only during the first few years of elementary school (Bradley, Caldwell, & Rock, 1988; Reynolds, 1991; Teo, Carlson, Mathieu, Egeland, & Sroufe (1996). The current research examines the influence of family stressors measured during the kindergarten year on math and reading achievement from kindergarten through sixth grade, allowing 7 years to examine the strength of the relationship.

Family stressors in a context of poverty have been shown to have an affect on both math and reading achievement to some extent; however, a perusal of the current literature (Case, 1993; Gelman, 2000; Gallistel & Gelman, 1992 for math; Neumann, & Dickinson, 2001 for reading)

provides reason to suspect that family stressors may influence children's reading achievement more than children's math achievement because of the specificity of the domains, the difference in the amount of complexity between the development of early math and literacy skills, and the difference in the extent to which these skills are influenced by the family context. Therefore, the current research examines the influence of family stressors on math and reading separately.

Preliminary regression analyses indicate that there are moderate relationships between some individual family stressors and children's reading and math achievement, but that the relationships are stronger and more consistent for reading than for math achievement. Additionally, the family risk index is a stronger influence on children's reading than math achievement over the elementary school years. The most robust finding indicates a strong impact of parental nurturance on both reading and math consistently over the elementary school years, but the relationship is stronger for reading than for math.

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Florida's Coordinated Efforts for Program Self-Evaluation: A Research Partnership Model for Assessing Head Start Children's School Readiness

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Community agencies increasingly understand the need for program evaluation and research aimed at improving program quality. Simultaneously, there has been an increased interest in the concept of a "research partnership" to address these concerns. This model calls for collaboration among community agencies and local university researchers in which a shared research agenda is generated and implemented. Both the Head Start Bureau and the National Head Start Association have been at the forefront of this initiative.

Within this context, the Florida Head Start Research Committee was created as an official organization within the Florida Head Start Association representing Head Start programs that are current members of the Florida Head Start Association. The Research Committee was formed using the University–Community Partnership model endorsed by the Head Start Bureau and the National Head Start Association ((Lamb-Parker, Greenfield, Fantuzzo, Clark, & Coolihan, 2000).

Head Start's recent reauthorization has confirmed the importance of school readiness and child outcomes as a major goal of the program (U.S. Department of Health and Human Services, 1996; 2000). In addition, the Florida government has also begun a statewide initiatives focused on school readiness and child outcomes. The Florida Research Committee annually revisits its mission statement and goals and revised them in 2001 to address this national and state focus.

Some of the major accomplishments of the committee as it focused its resources on school readiness and child outcomes include (a) providing input to the state school readiness initiative (Greenfield & Nicholas, 2001), (b) developing a set of criteria to evaluate child assessment systems for use by Florida Head Start programs, (c) identifying an assessment system that might meet program needs—arranging statewide meetings to directly compare these assessment systems, (d) recommending a preferred system, (e) developing a training model to utilize in implementing the child assessment system, (f) evaluating implementation of assessment during the 2000–01 school year, and (g) obtaining regional and national funding to coordinate a statewide impact study to begin evaluating the role of Florida Head Start programs in readying children for school.

Having made major progress on school readiness and child assessment issues, the Research Committee revised its mission and goals to reflect broader concerns of family and community (May 2002). The committee will now begin to operate under the following mission statement: To conduct, support, and disseminate research of high quality that informs policy and practice and promotes successful children, strong families, and healthy communities.

Through a coordinated, statewide partnership research effort, the Florida Head Start Association has provided local Florida programs with resources and expertise on school readiness and child assessment issues. The Committee, through collaborative efforts, has impacted state initiatives, secured needed funding, and addressed issues of program quality using a large, statewide research dataset that draws from a common child assessment system. A hallmark of the committee's work has been a developing sense of trust among members, a common mission and set of goals, a working model in which decision making is shared among researchers and practitioners, and a forum in which every voice is respected and heard.

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The Role of Cognitive Inhibition in Head Start Children's School Achievement

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Head Start programs assess children's progress in eight school readiness domains, including the poorly understood "approaches to learning" (Kagan, Moore, & Bredekamp, 1995). Factors typically associated with approaches to learning such as persistence, curiosity, flexibility, inhibition, and inventiveness are important factors in learning, regardless of the domain or content area. Approaches to learning skills may be domain general as they are involved in all of the other seven readiness domains and appear to be malleable. Thus, improving Head Start children's approaches to learning has the potential to improve school readiness in all eight domains simultaneously.

Researchers have searched for reliable and valid means for assessing approaches to learning. Currently, all such assessments rely on adult raters. Adult ratings have advantages, but also disadvantages (Hecht & Greenfield, 2001). Moreover, reliable assessment relies on multiple informants and multiple ways of assessing child competence (Greenfield, Wasserstein, Gold, & Jorden, 1997).

The purpose of the present study was to evaluate a structured task to directly assess cognitive inhibition, one component of approaches to learning, and to determine its domain general role in predicting academic achievement. A sample of 431 Head Start children from a large, urban Head Start program was assessed each spring, from Head Start through third grade, on: The Peabody Picture Vocabulary Test-Revised (PPVT; Dunn & Dunn, 1981) measuring a child's receptive vocabulary and an Associative-Interference task, developed to assess cognitive inhibition. The Woodcock -Johnson Tests of Achievement-Revised (WJR; Woodcock & Johnson, 1989) was administered in the spring of third grade to assess reading (2 subtests) and math (2 subtests) achievement.

The PPVT and WJR use Item Response Theory (IRT), a statistical technique that converts raw scores into ability scores that are on an interval level of measurement (Wright & Stone, 1979). Ability scores have a major advantage for analyzing longitudinal data, since change in scale scores are directly comparable across the entire range of values. IRT analysis was applied to the cognitive inhibition data to create an interval level of measurement scale to directly compare the growth of cognitive inhibition and receptive vocabulary. Data from Head Start children followed longitudinally through third grade demonstrated differential growth in receptive vocabulary and cognitive inhibition over this age range.

The data also hint at the domain general role of cognitive inhibition. Receptive vocabulary ability accounts for a large amount of variance in reading ability, but much less variance in mathematics (part of test is in a narrative format), suggesting its domain specific role. On the other hand, cognitive inhibition accounted for equal amounts of variance both in math and reading ability, suggesting its domain general role in school readiness.

Data from this study strongly suggest the utility of developing structured tasks to assess other aspects of approaches to learning in addition to conducting further research on cognitive inhibition. Such research has the potential for determining the effectiveness of classroom interventions aimed at improving children's approaches to learning that could impact children's learning and development in all the school readiness domains.

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A New Look at the Relative Effects of Proximal Risk Factors on Economically Disadvantaged Children's Academic Performance

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Research has shown that SES, the home environment, family structure, maternal depression, and maternal age and education at childbirth are all key factors for children's development. However, much less is known about the relative contribution of these factors on children's achievement. This study assessed the amount of variance each factor explained in children's academic performance during elementary school. Based on previous studies (Smith, Brooks-Gunn, & Klebanov, 1997; Duncan, Brooks-Gunn, & Klebanov, 1994), we hypothesized that maternal education, household SES, and the quality of the home environment would be most predictive of children's scholastic achievement among a sample of economically disadvantaged families who were followed longitudinally. At baseline, these first-time mothers (N = 148) were randomly assigned to the comparison group of a nurse home visitation program.

Maternal age, race, and marital status at baseline were used as covariates in our analyses. The quality of the home environment was assessed by the Home Observation of Measurement (HOME; Caldwell & Bradley, 1984) when the study children were 10 (M = 33.6, SD = 6.93), 22 (M = 34.4, SD = 7.74), 34 (M = 38.6, SD = 7.27), and 48 (M = 39.14, SD = 6.03) months of age. The largest correlation between the HOME scores was below .7, and thus, these ratings are not collinear. The Center for Epidemiological Studies of Depression Scale (Radloff, 1977) was used to measure maternal depression when the study children were 4 years old (M = 34.5, SD = 9.92). The outcome measure, children's academic achievement, was comprised of average academic grades in English, math, and science during grades 1–6. These data were derived from school records and measured on a 0–4-point scale.

The effects of the proximal risk variables on children's grades are presented in Table 1. Between 25% and 27% of the variance in children's academic performance was explained by the entire set of risk factors. Contrary to our hypothesis, the effects of SES dropped out when maternal education was estimated in the same equation. Although a positive relationship was observed between maternal education and children's English (β = .21, SE = .04, $p < .05$) and science grades (β = .19, SE = .04, $p < .10$), when the complete model was estimated including the other risk factors, maternal education no longer significantly predicted children's grades. Consistent with our hypothesis, the quality of the early home environment (i.e., at 10 months) and near the time of kindergarten entry (i.e., at 48 months) was most predictive of children's

Table 1.
Simple Correlations, Standardized Regression Coefficients, and Total R^2 for Risk Factors and the Final Step of the Hierarchical Regression Predicting Children's Subject Performance in Grades 1–6.

	English					Math					Science				
Model/ Risk factor	*r*	Entry	Unique R^2	Last step	Total R^2	*r*	Entry	Unique R^2	Last step	Total R^2	*r*	Entry	Unique R^2	Last step	Total R^2
1. Maternal characteristics			.03		.09			.02		.07			.03		.09
Race	-.06	-.07		-.21+		-.10	-.11		-.24*		-.10	-.09		-.19+	
Age	.10	.13				.06	.08				.12	.13			
Marital	-.08	-.14				-.05	-.10				-.02	-.08			
2. Household resources			.08		.12			.04		.10			.07		.12
Education	.26**	.21*				.16+	.11				.24**	.19+			
SES	.20*	.12				.17+	.13				.21*	.14			
3. Home environment			.12		.24			.12		.22			.14		.23
10 months	.26**	.37**		.33**		.25**	.33**		.31*		.32**	.38**		.35**	
22 months	-.10	-.07				-.03	.03				-.01	-.04			
34 months	.14	.12				.14	.15				.20*	.15			
48 months	.15	-.27+		-.37*		.08	-.36*		-.42**		.25**	-.22		-.28+	
4. Depression	-.19*	-.19*	.04	-.18+	.27	-.24*	-.24*	.06	-.23*	.27	-.19*	-.19*	.04		.25

Note. Values in the Entry and Last Step columns are standardized regression coefficients. Values in the Total R^2 column reflect the cumulative proportion of the variance accounted for by the model at each step. SES = socioeconomic status.
$+p < .10$. $*p < .05$. $**p < .01$.

grades. Interestingly, the quality of home environment at 24 and 34 months was not related to children's achievement.

Maternal depression was associated with declines in children's math ($\beta = -.23$, $SE = .01$, $p < .05$) and English ($\beta = -.18$, $SE = .01$, $p < .10$) grades even after statistically controlling for the other factors. No relationship was observed between family structure (e.g., mothers' marital status) and mothers' age on children's achievement. However, mothers' race was negatively associated with children's grades such that, in this sample, children of color received lower grades.

These findings underscore the utility of assessing the differential effects of risk processes on children's development, such as the quality of the early home environment and maternal mental health in addition to studying the underlying mechanisms behind these relationships.

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Biological, Social, and Community Influences on the Elementary School Performance of Minority Head Start Children: Multilevel Approach

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PRESENTER: Virginia Rauh

Many American children live their lives burdened by biological and social conditions that severely limit their potential for successful school experiences. An extensive literature documents the impact of individual biological and socioeconomic risk factors on child school performance, and a growing literature addresses the academic effects of urban neighborhood conditions (e.g., Brooks-Gunn, Duncan, & Aber, 1997). At the individual level, the impact of biomedical and psychosocial influences on intellectual development may be cumulative (Dunst & Trivette, 1994), accounting for a significant proportion of the variance in school outcomes. As many as 20% of American children experience a major accumulation of risk, including poverty, single-parent households, and so forth (Gabarino, 2001). At the neighborhood level, socioeconomic conditions account for only 2–5% of the variation in educational outcomes, after adjustment for individual risk (e.g., Klebanov, Brooks-Gunn, Gordon, & Chase-Lansdale, 1997).

The purpose of this study was to determine the impact of individual and community level risks on school outcomes of children who attend Head Start. We studied a sample of 3,693 African American and Latino children who were born in New York City, participated in Head Start, and attended New York City public schools. The outcome was the third grade reading test score. Individual level risk factors were from birth certificates, and community level risks were from citywide U.S. Census data and other public-access data sets.

Multilevel regression analyses indicated that lower individual reading scores were significantly associated with (a) male gender, (b) low birth weight, (c) unmarried mother, (d) low maternal education, and (e) inadequate inter-pregnancy spacing. Controlling for individual-level risk, concentrated community poverty significantly lowered reading scores, and a high percentage of immigrants in the community significantly raised scores. There was also a significant cross-level effect: Boys benefited more than girls from the immigrant community effect. Results suggest that we can better identify children at future educational risk by exploring influences on school success at multiple levels, including the community.

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Stakeholder Beliefs Regarding the Definition, Assessment, and Development of School Readiness

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PRESENTER: Roberta Vitols

Popular press, legislators, parents, and educators considering children's development in the new millennium have focused on children's readiness for school and the impact of early care and education on readiness. In California, two statewide groups (a) the School Readiness Task Force and Advisory Committee and (b) the School Readiness Master Plan Work Group are dedicated to this issue. In addition, the Orange County Children and Families Commission (CFC; 2000), a state body funded by the passage of State Proposition 10 dedicated to the well-being of children from the prenatal period through age 5 years, has created a School Readiness Initiative (SRI). These groups agree that an effective conception of school readiness must encompass the socioemotional, cognitive, and physical development of the child (e.g., School Readiness Task Force, 2001). Research clearly demonstrates that both family and early-care environments contribute to children's development in these areas (e.g., NICHD, 2001).

Orange County's SRI has three goals: (a) develop a definition of children's school readiness incorporating the views of parents, elementary, and early-care and education (ECE) professionals, (b) identify methods to assess those child characteristics, and (c) specify early and primary education features that promote child development. To accomplish these goals, academicians, nonprofit agencies, and governmental committees collaborated on the Early Care and Education Needs Assessment (ECENA; Milburn, Gardner, Glaeser, & Dreyer, 2002), an unprecedented review of community perceptions of school readiness and ECE quality.

Data were collected through surveys, phone interviews, and focus groups with all stakeholders. All methods share some common items, assessing ideas about ECE quality, child assess-

ment, and school readiness (e.g., necessary skills and abilities at kindergarten entry). These shared scales are drawn from previous research, enabling not only comparison among the different groups within this study but also with data collected in other regions and years (e.g., Rimm-Kaufman, Pianta, & Cox, 2000).

Past research has indicated that parents place greater priority on kindergarten children's academic skills and knowledge than teachers do (e.g., West, Denton, & Germino-Hausken, 2000). The ECENA data support this finding, particularly among less educated parents. However, while parents value academic skills more than teachers, both groups see communication and social skills as the primary determinant of kindergarten success. Teachers report that they can teach curriculum, but have difficulty addressing social and attitudinal issues in classroom settings.

This suggests that school readiness literature for parents and ECE professionals should emphasize development of social skills. In contrast, Orange County school districts' current materials specify necessary knowledge (e.g., ability to count to 20) and fine motor skills. In most districts, current kindergarten assessments also evaluate primarily academic skills, encouraging parents' perception that early acquisition of academic skills is important. Instead, district practices and literature should be changed to correspond to primary teachers' goals. As a result, parents would be educated about the value of social skill development and therefore choose appropriate ECE experiences for their children.

Most child advocacy groups, like the National Association for the Education of Young Children (NAEYC), have cautioned against the use of standardized tests as an entrance requirement for kindergarten. Orange County ECE teachers almost unanimously agree with NAEYC's rejection of kindergarten screenings. However, the School Readiness Initiative is committed to the development of a school readiness assessment that evaluates intervention programs and identifies children at risk for school failure. Most primary teachers (70.9%) and parents (63.8%) support such exams to some degree, though there are significant differences among parents and teachers based on demographic groupings. These data indicate the importance of developing new strategies for evaluating social skills and attitudinal variables rather than relying on existing assessment measures, which emphasize academics. In addition, outreach to the ECE community is necessary to promote acceptance of assessment.

Parents, ECE teachers, and primary teachers generally agree that quality early care plays a valuable role in promoting school readiness. Primary teachers asserted that kindergarten children with past ECE experience outperformed their peers in all respects. These teachers believed that publicly funded prekindergarten experiences for children who were "screened" from kindergarten on the basis of poor test performance should be one of the highest funding priorities.

Because they emphasized social interaction, primary teachers endorsed a child-centered model of ECE. ECE professionals and college educated parents also endorsed this model, but less educated and immigrant parents preferred more adult direction. Parents with less education were also more likely to choose care arrangements primarily on the basis of the teachers' characteristics (e.g., demeanor, ethnicity) or the accessibility of the care setting. Unlike elementary schools, ECE settings are supported by parents and, therefore, highly influenced by parent goals and expectations. Schools serving less educated parents may therefore reflect these parents' emphasis on adult directed instruction in basic academic skills. This implies that children most at risk for poor school performance are least likely to receive ECE experiences that will develop the social skills teachers identify as necessary for academic success.

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A Collaborative Model For Head Start Community Assessment Development

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The Revised Head Start Performance Standards (U.S. Department of Health and Human Services, 1999) and the Head Start Reauthorization Act of 1998 (U.S. Department of Health and Human Services, 1998) sought to increase curricular quality and agency accountability, allow for expansion of Head Start services, and promote partnerships with community organizations and research efforts. Consequently, Head Start organizations nationwide are examining every aspect of their programming and management systems, seeking ways to preserve core values while improving strategic planning and collaboration with other service delivery organizations (Lamb-Parker, et al., 2001).

Simultaneously, major events occurring within the larger sociopolitical arena have influenced expectations and perceptions of early care and education (ECE) and family services. In particular, Orange County Head Start (OCHS) families have been impacted by both welfare reform and statewide school readiness activities. Head Start's strategic self-review and planning process is designed to facilitate response to changing societal goals and client needs through four activities: (a) creation of a planning calendar, (b) specification of program goals, (c) development of a program services plan, and (d) a triannual community needs assessment (CA). The CA is intended to describe children's environments as defined by the family and the community (particularly educational institutions). The results of the CA are the foundation for the other three strategic planning activities. Historically, Orange County's CA survey of parents' satisfaction with child care, community perceptions, and family needs has fulfilled the governmental mandate and identified service problems, but has not demonstrably aided in shaping agency plans.

Consequently, OCHS decided to revitalize the CA process through collaboration with academicians and researchers. The result was a methodologically robust survey, supplemented by the inclusion data from multiple other sources, producing a richer understanding of parents' perceptions and more specific information about how to address child and family needs. To allow OCHS to address the county's funding and legislative focus on school readiness, survey questions were added investigating perceptions of school readiness and child-care quality. The survey was designed using a collaborative model in which the content and format of the questions evolved through discussions among all interested groups. OCHS staff first worked

with the Center for Collaboration for Children (CCC) and the Social Sciences Resource Center (SSRC) to design a preliminary survey. The SSRC then worked with the OCHS teachers, administrators, and Parents' Policy Council to achieve a comprehensive approach to topic selection and item wording. The Policy Council also assisted the SSRC with translations into Spanish and Vietnamese. Finally, the SSRC trained OCHS center directors and family service workers at each site to administer the survey.

The partnerships successfully built trust and commitment to the project among key stakeholders, a key element in successful research within Head Start (Lambert, Abbott-Shim, & Oxford-Wright, 2001). Consequently, the survey was uniquely successful in identifying action goals for the upcoming year and in serving as the foundation for community partnerships.

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Thirty-Month Evaluation of a Boys and Girls Club, School, and Parent Intervention Program for Second Graders

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PRESENTER: Tena L. St. Pierre

(Summary not available)

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Social/Emotional Development

Social–Emotional and Behavioral Correlates of African American Preschoolers' Classroom Emotion Regulation

Maureen C. Smith

PRESENTER: Maureen C. Smith

Current research suggests that emotional regulation is related to children's peer acceptance and social competence. Peer acceptance has been linked to school participation, liking, and adjustment. Unfortunately, these processes have been understudied in ethnic minority populations. When assessing children's school adjustment it is important to be sensitive to cultural differences in the meaning of constructs such as emotion expression, aggression, and peer. That is, what may be considered competent or optimal behavior is, in part, derived from cultural norms and expectations.

This study examined three aspects of teacher-rated emotional regulation in a sample of African American preschoolers. It was hypothesized that children's emotional competence, peer acceptance, social–cognitive skills, and greater behavioral regulation would be consistently associated with teacher-rated classroom emotion regulation.

Study participants were 36 preschool-age African American children (M = 56.7 months, SD = 5.5; 56% female) from a range of low-income to middle-class families. Subjects were assessed multiple times at their preschool beginning mid-fall, interviewed by four familiar African American undergraduate assistants.

Children participated in sociometric tasks that produce positive and negative nominations (like most/like least; Bukowski & Hoza, 1989), mean ratings of liking (Asher, Singleton, Tinsley, & Hymel, 1979), and nominations of aggressive classmates (Price & Dodge, 1989). Children completed the Peabody Picture Vocabulary Test, (PPVT-R; Dunn & Dunn, 1981), the Preschool Interpersonal Problem-Solving (PIPS; Shure & Spivak, 1974), and participated in four tasks: (a) emotion knowledge (Reichenbach & Masters, 1983), (b) emotion regulation (Josephs, 1994), (c) behavioral regulation (Kochanska, Murray, Jacques, Koenig, & Vandegeest, 1996), and (d) a projective measure of guilt and empathy (Zhan-Waxler, Kochanska, Krupnick, & McKnew, 1990). Teachers rated three aspects of emotion regulation on the 24-item Emotion Regulation Checklist (Shields & Cicchetti, 1995): Modulation, Flexibility, and Organization.

None of the demographic variables (age, gender, SES, or PPVT) were correlated with the three teacher-rated emotion regulation variables. Modulation, Flexibility, and Organization were analyzed separately in stepwise regression models. Results indicated that children who are less well accepted by their peers and who make fewer relationship-concern responses are perceived to be better able to modulate their emotional experiences in the classroom. Children with greater ability to delay gratification were perceived by their teachers to be less flexible. Children perceived by their teachers to have greater organization received fewer positive peer nominations and made fewer relationship concern responses.

These analyses revealed some unexpected findings. Children perceived by their teachers to be better regulated emotionally, were less well accepted by their peers, engaged in less behavioral regulation, and were less likely to express concern over relationships. These findings suggest that behavior that is acceptable and competent from a teacher's perspective may not be behavior that leads to peer acceptance. These findings have implications for classroom management and practice because there is growing evidence that social-emotional competence in the classroom impacts classroom participation, which then predicts academic competence.

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Preschool Peer Play and Classroom Competencies and Needs in Urban Head Start Children

Heather L. Cohen, Yumiko Sekino, John Fantuzzo

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School readiness is an important national goal for early childhood education, particularly for children living in disadvantaged urban areas (U.S. Department of Education, 2000). An understanding of child characteristics that relate to school success is necessary to promote key competencies that prepare children for the transition to primary school. Prosocial peer play is one dimension of classroom competency that is related to school success (Birch & Ladd, 1996; Coolahan, Fantuzzo, Mendez, & McDermott, 2000; Fantuzzo & Hampton, 2000). Preschoolers' interactions with peers provide important socialization experiences that foster self-regulation such as taking turns, following directions, and working cooperatively, each of which plays a crucial role in children's academic success (Wentzel & Berndt, 1999).

The primary purpose of this study was to examine the relationships between preschool play and other relevant school readiness competencies. With a sample of 242 Head Start preschool children, dimensions of interactive peer play were examined concurrently with emotion regulation, autonomy, and language. Analyses revealed significant relationships between these classroom competences and interactive peer play. Children exhibiting high levels of peer play interaction were found to demonstrate more competent emotional-regulatory skills in the classroom as well as initiative and self-determination. Children engaged in interactive peer play were found to show higher receptive vocabulary skills, whereas children disconnected in the classroom peer play demonstrated lower skills attainment.

An additional sample of 746 Head Start children was used to determine how dimensions of interactive peer play assessed early in the preschool year were associated with end of the year classroom learning competencies and emotional and behavioral adjustment. Analyses indicated that early positive engagement in play was associated with lower levels of aggressive, shy, and withdrawn adjustment problems at the end of the year. Furthermore, children who successfully negotiated relationships with peers early in the year were observed to evidence greater cognitive, social, and movement/coordination abilities at the end of year. Disruptive and disconnected peer play behaviors were associated with negative emotional and behavioral adjustment outcomes. Children not engaged in the classroom learning process are demonstrating difficulty developing self-regulatory behavior that could facilitate their adjustment to the needs of the classroom environment.

The results of this study have implications for early intervention preschool programs and provide empirical evidence to support national mandates for quality early educational experiences for all children by emphasizing the importance of child-centered play in the development of early learning competencies. Findings also suggest that peer play is a valid context in which to observe and assess children's developmental capacities, and findings emphasize the importance of the play context in promoting productive peer-mediated learning experiences for vulnerable groups of young children.

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Social–Emotional Development, Classroom Relationships, and School Readiness in Head Start Children

Angela R. Taylor, Sandra Machida

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The child who begins school with a cognitive advantage and who has a tractable temperament is more likely to experience satisfactory school outcomes. This personal advantage benefits children directly by way of improved performance on schoolwork and indirectly by promoting better classroom behavioral adjustment and creating more positive teacher perceptions and expectations (Entwisle & Alexander, 1993). Accordingly, the present study examined a conceptual model positing that the child's cognitive ability at preschool entry has direct effects on subsequent school readiness as well as effects mediated via the impact of cognitive ability on behavioral adjustment.

Difficult temperament, on the other hand, is assumed to influence school readiness only indirectly by way of its influence on both behavioral adjustment and social relationships with classroom teachers and peers. In addition to these mediating influences, the present study explored the possible moderating role of classroom relationships in predicting classroom adjustment and school readiness.

Participants consisted of 150 children (55% male; 56% White, non-Latino; mean age = 53 months) from 13 Head Start classrooms in a semirural community in northern California. The lead teacher (N = 13; 62% White, non-Latino) and coteacher (N = 13; 54% White, non-Latino) from each classroom also participated.

During the fall, measures of children's cognitive–verbal ability (Peabody Picture Vocabulary Test-Revised; Dunn & Dunn, 1981), and temperament (Temperament Assessment Battery for Children, parent form; Martin, 1988) were administered. At midyear, lead teachers rated children's school behavioral competencies (Teachable Pupil Survey; Kornblau, 1982) and problem behaviors (Preschool Behavior Questionnaire; Behar, 1977); both lead and coteachers rated the quality of the teacher–child relationships (Student-Teacher Relationship Scale; Pianta & Steinberg, 1992); and children in each classroom completed a sociometric measure of peer preference. The Developmental Indicators for the Assessment of Learning-Revised (DIAL-R; Mardell-Czudnowski & Goldenberg, 1990) was administered in the spring, and the total standard score was used as an index of school readiness.

Path analysis results supported six of the seven hypothesized paths in our conceptual model, and the total model accounted for 40% of the variance in school readiness. As expected, child cognitive ability was associated with school readiness both directly and indirectly, via its relationship with behavioral adjustment. In addition, as hypothesized, difficult temperament was linked to school readiness only indirectly by way of its association with behavioral adjustment. However, contrary to expectation, there was no significant link between classroom relationship quality and school readiness.

Results of multiple regression analysis revealed a significant temperament x relationship interaction, $F(1, 85) = 93.67$, $p < .001$, indicating a moderating effect of classroom relationships. Difficult temperament was significantly related to behavioral adjustment for children low in relationship quality (Beta = -.37, $p < .05$), but was unrelated to behavioral adjustment for children high in relationship quality (Beta = -.02, *ns*).

These findings highlight the important roles of early behavioral adjustment and classroom relationships with teachers and peers in the development of school readiness skills in low-income children. Our findings also provide evidence that supportive classroom relationships may offset the negative effects of difficult temperament on behavioral adjustment in preschool, and potentially alter the pathway to lowered school readiness.

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More Than Academics: Teacher Beliefs and Practices to Nurture Young Children

Peggy Vaughan, Melissa King, Ellen Mayer, Holly Kreider, Rebecca Hencke

PRESENTER: Peggy Vaughan

Devoting time to nonacademic needs is particularly critical for teachers of disadvantaged children who may face persistent poverty, health, and safety concerns or family crises (Weiner, 2000; McLoyd, 1998; Cornille, Boroto, Barnes, & Hall, 1996). Educational research focuses on strategies that promote academic achievement, but teachers must also understand children in their social–emotional contexts to successfully support academic pathways (Alexander & Entwistle, 1996).

The School Transition Study (STS; Bronfenbrenner, 1979) examines the development of 390 ethnically diverse, low-income children from kindergarten through grade five. Surveys from 94 teachers and in-depth interviews with 28 case study teachers provide data on children's nonacademic needs, defined here as the social–emotional, behavioral, health, and family needs that manifest in the school environment. STS uses an ecological approach to understand low-income children's successful pathways, examining school, family, and community interrelationships that influence these pathways.

Relying primarily on in-depth teacher interview data, this poster (a) describes teachers' beliefs about low-income children's nonacademic needs, (b) categorizes teachers' conceptions of children's social–emotional needs in particular, and (c) illustrates teacher strategies to address nonacademic needs within teacher profiles.

The majority of teachers (70.8%), when surveyed about a variety of child, family, and school factors, believe that a child's home life can pose a moderate to serious problem in preparing their students to succeed academically. Teachers in urban schools, working with predominantly minority students, tend to believe that addressing students' nonacademic needs is a prerequisite to academic readiness and learning. Teachers in rural schools, however, tend to place equal emphasis on and intermesh academic and nonacademic needs, working with a conception of the whole child. However, class differences exist in rural schools, and some teachers describe a "help the disadvantaged" belief.

A substantial proportion of teachers (36.1%) reported providing parents with suggestions related to social-emotional needs. The in-depth interviews revealed some specific conceptions that teachers have about their students' social-emotional needs. While half of the 28 teachers described their students as emotionally stable or able to get along with everyone, social-emotional needs mentioned by at least 25 % of the teachers include (a) displaying poor social skills, (b) exhibiting low self-esteem, (c) switching off when angry or frustrated, and (d) needing constant attention.

Teachers exert their influence over children's social-emotional development via global, classroom, and individualized strategies. Teacher profiles particularly focus on social-emotional needs and illustrate teacher strategies such as (a) nurturing—providing individualized care, (b) communicating—with child and family during informal meetings or phone calls, (c) collaborating—making referrals to school personnel, (d) drawing the line—setting limits in cases requiring substantial nurturing, and (e) promoting emotional competence—acknowledging strengths in the context of social-emotional concerns. Factors mediating teacher strategies include perceptions of family circumstance and teachers' relational styles.

Teachers who address nonacademic needs have goals in mind such as promoting children's emotional safety and social competence, as well as children's learning and success. Teachers' front line roles and individualized practices in nurturing children deserve recognition, require further examination, and have implications for children's learning and success.

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Attachment as a Predictor of Kindergartners' Social-Emotional Success

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PRESENTERS: Michelle E. Schmidt, Elizabeth K. DeMulder

Forty-nine children (*M* age = 46.36 mths) participated in a study on the predictors of social-emotional competence in kindergarten. The study longitudinally examined relations among security of attachment with mother at age 3, stressful family conditions reported by mother at ages 3, 4, and 5, and social-emotional outcomes reported by mothers, kindergarten teachers, and peers at age 5. Security of attachment was measured using the Attachment Q-Set (Waters, 1990), and family stress was determined using the Life Experiences Survey (Sarson, 1978). At kindergarten age, mothers completed the Child Behavior Checklist/4-18 (Achenbach, 1981), teachers completed the Preschool Socioaffective Profile (LaFreniere, Dumas, Capuano, & Dubeau, 1992), and focal children's peers completed a sociometric task to determine peer popularity.

Results suggest that children who experience more family stress in their preschool years are more angry/aggressive and anxious/withdrawn and less socially competent in the kindergarten classroom than their peers who experience less family stress in those same years, and children who are rated as higher on security of attachment with mother at age 3 are less aggressive in the kindergarten classroom. Teachers report that boys are more aggressive and anxious in the kindergarten classroom than their female counterparts. Implications for education are discussed, as well as suggestions for prevention and intervention.

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Family–School Relationships During the Transition to Kindergarten: The Contribution of a Relationship-Enhancing Intervention

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PRESENTER: Sara E. Rimm-Kaufman

The National Center for Early Development and Learning (NCEDL) developed a relationship-building intervention targeting children from families with low incomes. This program was designed to enhance children's relationships during the transition to kindergarten by improving interactions between peers, preschool and kindergarten teachers, and families and schools (See Pianta, Kraft-Sayre, Rimm-Kaufman, Gercke, & Higgins, 2001).

This poster describes communication between families and teachers in preschool and kindergarten in context of the NCEDL intervention. Four questions were addressed: (a) What are the patterns of family–school contact over time? (b) How do family–school contacts differ between two preschool programs (each serving different populations with different priorities)? (c) How do characteristics of family–school contacts differ by grade and program? (d) What are key predictors of frequency of family–school contact in preschool and kindergarten?

Seventy-five child participants (31 female, 44 male; 20 White, 47 African American, 8 Other; 64 eligible for free/reduced lunch) were included. Each child was assigned to one of eight family workers for preschool and kindergarten, attended one of two preschool programs (school-based or center-based), and one of 12 elementary schools (34 kindergarten classrooms). This longitudinal study drew on two data sources: (a) family–school contact logs recorded by preschool and kindergarten teachers and family workers, and b) interviews of the families conducted twice each year.

Four findings emerged. First, preschool and kindergarten contact followed similar monthly patterns in the school-based preschool, but not the center-based preschool. Family–teacher contacts were most frequent in the fall in both grades. Second, contacts were more frequent in preschool than kindergarten, with more contacts in the school-based than center-based preschool. Notably, there were no differences in kindergarten contact as a function of the preschool attended, suggesting that program effects prevailed only during the preschool year. Third, in both preschool and kindergarten, the majority of family–school contact involved the children's mothers. Schools, rather than families, initiated two thirds of the contacts. Short contacts were

more prevalent in preschool; long contacts were more prevalent in kindergarten. Fourth, analyses were conducted to identify predictors of family–teacher contact in preschool and kindergarten. The first analysis addressed the contribution of family risk, preschool attended, preschool family worker contacts, preschool preacademic activities, and families' view of preschool staff as supportive. In addition to program effects, families' use of preacademic activities at home was inversely associated with more family–school contact in preschool, suggesting that the preschool played a compensatory role for families. The second analysis tested concurrent predictors of kindergarten contact (including family risk, district, kindergarten family worker contacts, kindergarten preacademic activities, families' view of kindergarten staff as supportive, and barriers to kindergarten contact). These variables were not associated with kindergarten family–teacher contact. A third analysis tested preschool predictors of kindergarten contact (including risk, preschool attended, preschool family worker contacts, preschool family–teacher contacts, preschool preacademic activities, and view of the preschool staff as supportive). Surprisingly, these variables were not predictive of kindergarten family–teacher contact. Thus, kindergarten policies and priorities (not measured) were more important predictors of family–school contact than demographic risk, preschool, and home experience.

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Intervention for Children and Television

Lawrence Rosenkoetter, Sharon Rosenkoetter, Rachel Ozretich

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Media researchers have convincingly demonstrated that one of the ways in which children learn to be aggressive is through their television viewing. Despite calls to reduce televised violence by our nation's preeminent health and education entities, television violence remains largely unabated. Given the nation's apparent inability to curtail the broadcast level of TV violence, it is especially important that we develop interventions that will help reduce the harmful effects of TV violence on children. Earlier classroom based interventions have been brief and yielded only modest results. The present study implemented an intervention consisting of 31 lessons (20 to 30 minutes each) over the course of an entire academic year. Children in grades 1 to 3 were chosen because they are young enough that their TV viewing patterns have not been permanently established, and yet they are old enough to participate in a discussion of TV. The intervention sessions were highly varied and among other techniques incorporated music, rap, puppets, role-play, and stories. Cumulatively, the lessons emphasized that (a) TV violence is fantasy, (b) violence does not solve problems, (c) violent TV characters are inappropriate heroes, and (d) children should carefully choose what TV programs they view.

Intervention participants (9 classrooms) as well as children from 4 control classrooms were interviewed at the beginning and end of the school year. As predicted, the children that received the intervention reported a reduction in their viewing of violent TV programs as well as their identification with violent TV characters. In addition, aggressive behaviors were assessed with the "guess who technique" in which participants nominated classmates who behaved in an aggressive manner. On the basis of before–after measures, intervention boys were judged by their classmates to behave in a less aggressive manner following the intervention. The impor-

tance of this research effort is that it provides compelling evidence that TV literacy programs in the schools can reduce the harmful effects of violent TV on young viewers. Future research efforts should explore the durability of these gains and the possibility that "booster" sessions might extend and strengthen the impact of the intervention.

Social–Emotional Learning: Teaching Conflict Resolution to Preschoolers

Marilyn Anita Vestal, Nancy Aaron Jones

PRESENTER: Marilyn Anita Vestal

A growing body of literature on social and emotional learning points to the advantage of early exposure (Stevahn, Johnson, Johnson, Oberle, & Wahl, 2000; Brenner & Salovey, 1997); however, empirical assessments of conflict resolution during preschool education are lacking (Leff, Power, Manz, Costigan, & Nabors, 2001; Vestal, 2001). Researchers have linked impaired problem solving in preschool children with a lack of social skills that undermine peer competence (Rudolph & Heller, 1997). Alternatively, skills for solving problems and resolving conflict reduce the risk of adjustment difficulties in children, including children from low-income and troubled families (Goodman & Gravitt, 1995).

This study focuses on a training intervention for Head Start teachers designed to build conflict resolution skills in the teachers and problem solving skills in the children in their classrooms. Self-transformation, environment-based changes, and a hands-on conflict resolution model, if internalized by the teachers, are expected to lead to changes in conflict resolution skills in the children of trained teachers. The goal of the study is to assess whether the children of trained teachers are better able to solve interpersonal problems than their peers whose teachers have not been trained.

Head Start teachers enrolled in a 40-hour college course on special topics in conflict resolution. They were exposed to conflict resolution strategies and were given a curriculum model to use in the classroom to promote problem solving in young children. To assess the effect, we wanted to determine whether the children in the trained teachers' classrooms (a) report more alternatives to interpersonal conflict situations and (b) report more prosocial and less forceful responses to conflict situations involving peers than children in classrooms of nontrained teachers.

Sixty-four children from 11 classrooms in Head Start Centers participated. Thirty-seven children were randomly selected from students in the classrooms of the six trained teachers, and 27 were matched control children from the classrooms of five untrained teachers. Gender was equally distributed between groups. Parental consent was required for child participation. All children were from lower-income backgrounds and were homogeneous in academic skills. All children were between 3 to 5 years of age and were racially similar to the entire Head Start program children in this community.

The main dependent variable for this study was the children's responses on the PIPS test (Shure, 1992). The PIPS test, which measures problem solving gains and childhood social competence, was designed to accompany the I Can Problem Solve (ICPS) program (Shure, 1990), which constituted the conflict resolution curriculum used by the teachers in their classrooms to train children. Analysis of variance was used to determine if differences existed between the experimental and control group children in their problem-solving responses on the PIPS.

Results confirmed earlier studies (Youngstrom et al., 2000) showing that children whose teachers were trained, and who exposed them to the conflict resolution curriculum, had a higher number of relevant solutions, suggesting they were able to think of more ways to solve the

interpersonal conflicts than did the children whose teachers were not trained and were not exposed to the conflict resolution curiculum, $F(1,62) = 4.08$, $p < .05$. A repeated-measures ANOVA compared the relevance ratio to the force ratio for the experimental and control groups. Results showed that children in the conflict resolution intervention did demonstrate lower force ratio scores and higher relevancy scores than children in the control group, $F(1,62) = 13.20$, $p < .05$. These findings suggest that preschool aged children can be taught to use cognitive processes to think of alternatives to force when confronted with an interpersonal conflict.

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"I Have Two First Teachers About Feelings": Preschoolers' Mothers and Teachers as Socializers of Emotional Competence

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One of preschoolers' key developmental tasks is to regulate emotions while interacting effectively with peers (Gottman & Mettetal, 1986). We consider that both emotional competence, as indexed here by emotion regulation, and social competence, indexed here by adults' ratings, are important contributors to preschoolers' well-being and school readiness, and serve as foundations for more long-term achievement and mental health (Denham, 1998).

Important adults in children's lives—parents, teachers, care providers—assist youngsters in developing such competencies, via several socialization mechanisms. In modeling, adults'

emotional expressiveness is related to both emotion regulation and social competence; they demonstrate to children the types, intensity, and range of emotions common in differing situations, and children come to adopt aspects of these expressive styles. Adult emotion coaches also more specifically teach young children about emotions, via their conversations and other didactic methods.

In this study, we assessed expressiveness patterns and coaching of both mothers and preschool teachers/caregivers, as they predicted the emotion regulation behaviors and social competence of 246 middle-SES, 4-year-old children (approximately one half boys; 58 female teachers). We expected teacher and maternal aspects of socialization of emotion to predict children's emotion regulation and social competence, with most of socialization of emotion techniques' contribution to variance being indirect, via emotion regulation.

Because of our interest in the children's ultimate social success (or lack thereof), we focused in this study on not the temporal or intensive process of emotion regulation, but the behavioral and emotional coping strategies adopted by children when faced with emotionally challenging experiences. Mothers and teachers reported on children's constructive, venting, and passive/avoidant emotion regulation strategies via questionnaire (Eisenberg, Fabes, Nyman, Bernzweig, & Pinuelas, 1994). Teachers and mothers reported on children's social competence (i.e., Sensitive Cooperation, Anger/Aggression, and Anxious Withdrawal) via LaFreniere and Dumas' SCBE-30 (1996). Regarding socialization of emotion, both mothers and teachers completed the Halberstadt Family Expressiveness Questionnaire to index modeling (Halberstadt, 1986; modified slightly to apply to classrooms), and Hyson and Lee's Emotion-Related Beliefs Questionnaire (1996) to index coaching (i.e., willingness to address the world of emotions and use language to explore it with preschoolers).

Findings showed that children's constructive emotion regulation strategies were marginally predicted by mothers' positive expressiveness; when mothers were more emotionally negative, children tended to use more venting strategies. Children's use of passive/avoidant strategies of emotion regulation was highly significantly predicted by a combination of both adults' devaluing of teaching about emotions, as well as maternal lack of negativity and teacher positivity. Finally, children's social competence was predicted by maternal positivity and teachers' teaching about emotion, as mediated by children's constructive, neither venting nor passive/avoidant, emotion regulation strategies. Thus, findings were largely in accord with hypotheses. It is noteworthy that mothers and teachers seemed to have unique roles in socialization of emotion that fit their special functions in children's lives. This study suggests a number of useful parent and teacher practices. Further research will include the third (contingency) aspect of socialization of emotion, as well as sociometric ratings of social competence, with more diverse samples.

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Reducing Young Children's Aggression Through Empathy Learning

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In light of many school shootings and increasing violent behaviors in children and teenagers, it is important to examine the processes underlying these negative behaviors. One of the developmental deficits found in aggressive children is lack of emotional/social competence. Young children who fail to use proper emotional cues to detect negative emotions and communicate with others are more likely to experience interpersonal conflicts. Although conflict and aggression occur frequently in classrooms and/or playgrounds in preschoolers, they are often overlooked by teachers and parents due to the age of young children (e.g., 3–4 years old). One main reason for researchers and educators to understand young children's emotional competence is to design prevention and intervention programs, and to teach conflict resolution strategies. However, research on how or whether preschoolers utilize the emotional understanding to resolve interpersonal conflict is limited. Therefore, the present study first examined preschoolers' emotional competence in their reactions to interpersonal conflict. It then served as a basis to formulate a developmentally appropriate intervention program to promote social and emotional competence in young children.

Sixty-seven preschoolers (40 boys) ranging from 38 months to 62 months (Mean age = 49.3 months, *SD* = 7.8 months) were recruited in a neighborhood day school. Data consisted of children's behavioral responses to conflict play situations and ratings from teachers' and parents' Social Competence Behavioral Check Evaluation (SCBE) designed by LaFreniere and Dumas (1995). A standard play paradigm was used in pretests and posttests. The second part of the study involved implementing an empathy-training program to the same group of children once a week for 9 weeks (a week short of our original plan due to the schedule of school). In the program, four basic emotions (a) happy, (b) sad, (c) angry, and (d) afraid faces were introduced in various contexts through puppet shows, storytelling, arts, crafts, and songs. Following the empathy-training program, the standard paradigm was used again to measure their ability to identify emotions and apply social skills learned from empathy training in structured and free play sessions outlined earlier. The long-term effectiveness of the empathy program is further documented 9 months after the empathy training was implemented.

MANOVAs showed that children in both age groups showed significant improvement for all types of emotional expressions. The follow-up data comparing children who went through empathy training with children who did not attend empathy training showed that the effectiveness of the training continued to help children to have a higher level of social competence 9 months after the empathy program was introduced. The immediate effectiveness of the empathy program showed that young children as young as 41 months old benefited from the program. They showed significantly more helping and sharing behaviors both immediately and 10 months following the empathy training. With increasing likelihood for children to be placed in nonfamily care, emotional and social training in a school context may become an important part to provide children with the necessary foundation for future interpersonal relationships.

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Staff Beliefs/Attitudes and Professional Training & Development

Family Service Delivery in Early Head Start: Perspectives of Professionals in Six States

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Early Head Start (EHS), a federally funded program for low-income families with infants and toddlers with and without developmental delays and expectant women, complements its predecessor, Head Start. By design, EHS programs collaborate with community partners to provide comprehensive services to families and children. This study obtained an understanding of family service delivery from the perspective of EHS staff representing 40 programs (Waves I-IV) in six Midwestern states, utilizing a survey method and phone interviews. The study examined three main issues related to EHS service delivery for families, including: (a) the extent to which EHS staff believe in and implement family-centered practice, (b) EHS staff perspectives on Family Partnership Agreements (FPAs), and (c) EHS staff perspectives on Individualized Family Service Plans (IFSPs).

In this study, 206 respondents from 40 EHS programs rated the extent to which they believed in and were able to implement family-centered practice. Overall, EHS staff highly rated all 18 indicators representing the six aspects of family-centered practice (Dunst, 1990). In particular, staff had high ratings on the importance of family–professional relationships and partnerships and a family focus, and on the implementation of family–professional relationships and partnerships and an individualized and responsive approach.

Staff shared their perspectives of and experiences with the development of FPAs and IFSPs. Overall, program-related challenges, needs, and suggestions regarding FPA development were in the areas of paperwork/format, time/scheduling, and program requirements/policy. Staff-related challenges, needs, strategies, and suggestions focused on relationship building and partnerships, information gathering and communication, and information sharing and preparing families for the FPA process. Family-related challenges and needs were family understanding of goal setting, family attitude, trust, and comfort level, and family life crises. Although common themes were found in staff responses to the IFSP process, some distinct issues emerged. Program-related challenges, needs, and suggestions were focused on paperwork/format and program support, whereas staff-related challenges, needs, strategies, and suggestions concentrated on collaboration, relationship building and partnership, and information sharing and preparing families for the IFSP process. Family-related challenges and needs were manifested in family understanding of the IFSP, family attitude, trust, and comfort level, and family involvement and follow up.

Results of the study showed that EHS staff face challenges when collaborating with community partners to provide comprehensive services to low-income expectant women, young children with and without developmental delays, and their families. EHS staff believed in the importance of family-centered practice while simultaneously voicing degrees of difficulty in implementation. The study results also indicated that FPA and IFSP processes have similarities as

well as differences. Common to both processes is the relationship-based model of service delivery in which staff establish relationships and partnerships with families and staff from other community agencies. Collaboration at three levels (e.g., between families and staff, among staff from different agencies, and between agencies) is the key to an effective family-centered IFSP process.

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Asthma Management Practices of Baltimore City Head Start Programs

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Asthma morbidity and mortality are disproportionately high among children aged 2–5 years representing minority racial and ethnic groups (Evans, Mullally, & Wilson, 1987; Halfon, Newacheck, Wood, & St. Peter, 1996), and results in lost school/work days, increased emergency room visits/hospitalizations, limited play, decreased quality of life for children/parents (Malveaus, Houlihan, & Diamond, 1993; Weiss & Wagener, 1990), and increased financial burdens. There is limited information on the impact of asthma education on these negative outcomes. The A+ Asthma Head Start randomized trial is a National Institutes of Health/National Heart, Lung and Blood Institute (NIH/NHLBI) funded collaborative study between Johns Hopkins University and Baltimore City Head Start (HS) designed to evaluate the efficacy of supplemental asthma training for a Family Services Coordinator (FSC), to enhance HS and family asthma management knowledge and skills. The purpose of this study was to identify the asthma management practices of HS before the A+ Asthma educational intervention.

To focus the study, 268 staff from 8 of 15 HSs were surveyed; of these, 84 teachers, 113 teacher's assistants (TAs), and 41 FSCs returned the completed survey directly to the researchers. To maintain confidentiality, participants were given unique ID numbers. Most staff (79%) worked in only one HS site. The participating staff were predominantly African American (79%), with 16% White, 4.5% Other, and 0.5% Unknown; ages ranged from 20 to 77 years, with a mean of 38 years, and 93.3% of respondents were female. Based on the survey findings,14% of respondents had been employed by HS for more than 10 years, 21% for 6–10 years, 45% for 1–5 years and 20% for less than 1 year. For highest educational preparation, 49% of responding staff had a high school diploma/GED or had participated in some high school, 49% had associate's degrees or higher, with 3% other.

Of the respondents, 19% had asthma, and 55% reported that a family member had asthma. Thirty percent of respondents felt they had better than average/very good asthma knowledge/skills, 31% felt their asthma knowledge/skills to be average, and 36% felt that they had some knowledge or none at all. Teachers were listed as the person responsible for giving asthma medications by 70% of the respondents, while 44% listed teacher's assistant (TA), 30% FSCs, 8% directors, and 6% office staff/secretaries. The children's medication was mainly kept in the classroom (45%), the main office (30%), or by the child independently (4%), with 11% not knowing, and 4% in some other place.

In regard to individualized asthma action plans, 33% reported a plan of action for all children with asthma, 9% had a plan for some children, 6% reported none, and 48% didn't know. The teacher (42%) was the person most often caring for a child having an asthma episode, while 3% reported TA care, 4% FSC care, 2% director or office staff care, 6% didn't know, 4% identified another person, and 40% didn't respond. An asthma episode was most often documented and kept by the teacher, according to 65% of study participants. Only 24% of respondents reported a nebulizer at their site, with 9% listing the director responsible when the child uses a nebulizer, 72% teacher, 52% TA, 50% FSC, 9% office staff/secretary, and 2% listed child. Of the respondents, 33% gave oral/inhaled asthma medications, 28% supervised nebulizer treatments, 13% handled asthma emergencies, 8% taught children and 8% taught parents about asthma, 32% talked to families about asthma, and 11% had no activities.

The study results imply a lack of a well-communicated policy for dealing with asthma and asthma emergencies. Study results indicate that communication about asthma is lacking between the child, parent, and HS staff, and also suggests that HS teachers, TAs, and FSCs need standard training in asthma management. Improvement of asthma management in HS should ideally impact asthma management in the community.

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Teacher Education in Early Literacy: The *HeadsUp! Reading* Evaluation

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This project evaluation offers the first-year results of *HeadsUp! Reading*, a new national, 44-hour distance learning course for the early childhood education community. HeadsUp! Reading is an innovative, interactive distance-learning college course designed to transform teachers' instructional practices to reflect current research and improve literacy outcomes for young children. The study evaluated the effects of this program on teacher knowledge and practice in three states. The results provide some early evidence that teachers learned new information and, according to their own assessments, enhanced their classroom practice as a result of course participation. Most respondents reported that they enjoyed the program, and would be likely to participate in future distance learning programs.

The primary purpose of the course was to strengthen the teachers' ability to improve children's literacy outcomes. The training was delivered via National Head Start Association's (NHSA) interactive satellite television network, augmented by learning and discussion support from a trained facilitator. Participants were drawn from early childhood program sites in Pennsylvania, Ohio, and Michigan, and included teachers, teacher assistants, child-care aides, consultant/trainers, and supervisors. Teacher knowledge was examined using both forced-choice

and performance-based items. Knowledge items were developed on the basis of the early literacy topics presented in the program. Participants' knowledge of children's book authors and titles was assessed using a checklist strategy developed by Stanovich and West (1989), while teacher practice and skills were measured with a checklist assessing classroom environment, activities, and interactions with children.

The data indicate that teachers' overall knowledge about early literacy development improved after the first seven sessions of *HeadsUp! Reading*. Teachers who reached this participatory milestone were more aware of the definitions of emergent literacy and general literacy. Significant gains in classroom practice were also evident, as teachers recognized the importance of book and writing areas to the classroom environment. Future evaluations are needed to determine whether these improvements are educationally significant, and whether they are linked to changes in classroom practice and activities with children. In addition, it will be critically important to ascertain whether the program may benefit children's developing literacy skills.

The work reported herein was funded by a Heinz Endowment grant to the National Head Start Association for the purpose of evaluating the first year of *HeadsUp! Reading*. Support was also provided by the Center for the Improvement of Early Reading Achievement, University of Michigan.

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Texas Head Start Coaching Grant Evaluation: Children's Early Literacy & Numeracy Outcomes

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The Arlington Independent School District received a Texas Head Start Coaching Grant to provide professional development for prekindergarten teachers. A model incorporating small-group sessions, follow-up coaching, and classroom resources was implemented. Targeted teachers participated in summer training, were coached weekly by mentors, and received classroom resources. Comparison teachers will receive a comparable intervention during the second year. Professional development focused on promoting children's early literacy and numeracy learning. Project evaluation focused on improved outcomes in student learning (Guskey, 1997; Guskey & Sparks, 1996).

Training topics included best practices, phonological and print awareness, written expression, language development, motivation to read, reading aloud, letter knowledge, and mathematics. Coaching by mentors supported implementation, and resources included manipulatives and 200 children's books per classroom. The adult subjects included 20 Target and 15 Comparison teachers. Selection was determined by availability for summer training rather than through randomization.

The student sample included 763 prekindergarten children with 17 different home languages. The students represent an ethnic composition of 53% Latino, 21% African American, 15% White, and 11% Asian. Children met eligibility requirements of Limited English Proficiency (26%) or low family income (74%) and attended half-day English as a Second Language (ESL) or bilingual classes.

The measures were administered in the fall and spring in the language of instruction, in either English or Spanish. The Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997) measured receptive vocabulary. The Expressive Vocabulary Test (EVT; Williams, 1997) measured expressive vocabulary in English only. The Developing Skills Checklist (DSC; CTB/McGraw-Hill, 1990) measured prereading and mathematical skills.

Analysis of covariance tests, using pretests as covariates, compared posttest means by comparison groups. Raw scores were converted to standard scores for comparisons with standardized norms and age equivalents. Children's receptive language evidenced average gains of 16 months during the 7-month intervention period. Expressive language showed average gains of 19–20 months. Mean fall ages were 4.7 years, but children demonstrated the language skills expected of toddlers, ages 2.3 to 2.6 years. Mean ages were 5.1 years at the spring testing time, but children's skills were comparable to preschoolers aged 3.10 to 3.11 years.

No age equivalents were available for the DSC scores since items measure typical skills for 4- to 5-year-olds. Normal curve equivalents (50 = norm) indicated that scores increased from 21 to 28 in Mathematical Concepts and Operations. Memory scores increased from 30 to 40 NCE, Auditory scores increased from 29 to 34 NCE, and Print Concepts scores increased from 25 to 35 NCE. Gains were significant in all subscales but remained below the norms for children their ages.

Target and Comparison group scores did not differ for the PPVT-III, EVT, or DSC. The professional development intervention for Target teachers did not result in significantly higher achievement of children in their classrooms. Some possible explanations may be related to non-randomized sampling, the training focus, variability in implementation, or the processes of teacher change over time. The second year of the project will extend the teacher training and measure implementation of classroom strategies. The first year findings supported the needs of at-risk children for programs that promote language development while introducing children to early literacy and numeracy.

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Jump Start: A Collaboration Between LSUHSC Occupational Therapy Program and Head Start

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Occupational therapy curricula emphasize experiential learning and exposure to "learning by doing." Often this learning takes place in the traditional hospital, clinic, or other medical setting. Louisiana State University Health Sciences Center felt a need to promote experiential learning in the community, thereby establishing a vehicle for enhancing student awareness of community strengths, needs, and priorities.

The local Head Start program was an ideal community setting to begin this venture. Occupational therapy students reviewed the literature to develop an understanding of the impact of socioeconomic status on child and family development. They found that consequences of children living in poverty were developmental delays, decreased cognitive functioning, academic failure, and an increase in emotional and behavioral problems (Bowman, & Wallace, 1990; McLoyd, 1998). Deficits such as these clearly hinder a child's school-readiness skills.

The students relied on their understanding of occupational therapy as a health care profession designed to assist individuals with participation in desired daily tasks or "occupations" that give one's life meaning. Applying this definition to a target population of children, the "occupation" would be learning and developing through play and developing school-readiness skills. (Case-Smith, Allen, & Pratt, 1996). Occupational therapy students had a background in child and family development, neurological and orthopedic factors contributing to health, therapeutic activity, clinical reasoning, clinical evaluation, and treatment concepts. Drawing on a developmental understanding of these areas, as well as an understanding of activity analysis and how activities might be broken down and sequenced to insure success, they were able to plan interventions to enhance skills that were deficient in the children enrolled in Head Start.

A priority for the occupational therapy students was to determine which Head Start children could benefit from their intervention. The students developed age-specific screening tools that would allow Head Start teachers to review the children's skills in perceptual/fine motor, prewriting, self-care, visual perception, cognition, social–emotional, and sensory processing tasks. Screening forms were simple checklists and included tasks typical of classroom or play activities for the assigned age group. Teachers were asked to indicate in which tasks children might have been performing below the classroom standard.

Head Start administrators supported the occupational therapy students in the distribution of the screening tools to 72 Head Start teachers. Teachers completed the screener on children in their respective classrooms. Return rate was 69% with 153 children reported to be performing below classroom standards. These children would receive further occupational therapy evaluation.

The occupational therapy students nicknamed their program "Jump Start," an appropriate name for a plan that has certainly created the impetus for further growth and development. Head Start administrators, teachers, and support personnel have been more than supportive and encouraging of the students and the university program.

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A Case Study to Train Head Start Staff for ESL Children and Their Families

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PRESENTER: Betty Ansin Smallwood

A 6-month case study trained Head Start staff for its growing English as a second language (ESL) population and evaluated its effectiveness. It found the project met its goals, given time and resource limitations. Outcomes were specific recommendations and a staff development model.

The setting was a Head Start program in Northern Virginia that spans 12 classrooms in four sites. It has an increasingly culturally and linguistically diverse program with over 40% of the children now speaking home languages other than English. In addition to Spanish speaking children from Central and South America, the multicultural population includes diverse languages and countries from Africa, the Mideast, the Indian subcontinent, and Eastern Europe. Because of this multilingualism, instruction is in English, yet adaptations for second language learners are needed. Despite this need, none of the teachers or aides had any formal training in second language acquisition or ESL.

This case study used formative and summative methods for evaluation, and used participant observation and reflective practice as research approaches. Insights from classroom observations and interviews were integrated into the in-service workshops and site-based training. Data included field notes, audio and videotapes, and evaluation instruments. The data were analyzed by thematic codes, which emerged into patterns. The final report to the funder reviewed and evaluated the project (Smallwood, 1998).

The final evaluation found this to be a successful project, given its short time span and limited resources and that it accomplished its goals, given these limitations. The classroom-based approach and participant observation model seemed particularly appropriate for the site-based training, and the full staff responded well to the inductive and interactive in-services. The ESL children seemed integrated into the Head Start program and appeared to be making good progress. However, one cannot expect staff untrained in ESL and busy with other obligations to fully absorb this complex field in 6 months.

One outcome was specific recommendations to improve the educational services for ESL children and families. They included the following: (a) continued training for the staff in ESL methods, cross-cultural communication, and home–school relationships with culturally and linguistically diverse families; (b) an increase in multicultural classroom materials, including children's literature; (c) a video, with instructional guide, of best practices for first and second language development in preschools; and (d) research to better understand bilingual language acquisition and emergent literacy of ESL children in Head Start.

Another major outcome was a staff development model that helps (a) preschool staff to become more knowledgeable, confident, and positive about multiculturalism, second language acquisition, and ESL and, in addition, (b) staff to use effective strategies for developing language and literacy skills. Other outcomes have been the refinement and dissemination of this model (Smallwood, 1999).

As the second language population continues to multiply in preschools, increased training and staff support become critical for Head Start programs (Tabors, 1996; 1997; 1998). This researcher agrees with Tabors: "Planning ways to effectively serve these [ESL] preschoolers is now a major challenge for preschool educators" (1997:3).

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Teachers' Learning in Professional Discourse

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Mounting evidence shows that many children from low-income families experience reading difficulties as early as kindergarten (Whitehurst & Lonigan, 1998) and that early literacy deficits are likely to translate into long-term literacy failure (Snow, Burns, & Griffin, 1998). A national study of Head Start indicates that these classrooms may provide only limited support for literacy development and that there is no evidence of significant growth in literacy among 4-year-olds attending these programs (Zill, Resnick, & McKey, 1999).

Providing a stronger preschool experience calls for improving teachers' abilities to support children's language and literacy learning. In response, the Education Development Center (EDC) has developed the Language Environment Enrichment Program (LEEP) and delivered it as an academic course for Head Start supervisor/teacher teams. During the sessions, these teams work to update their understanding of early literacy development so that they can implement effective strategies to foster it. Data analyses indicate sizable beneficial effects of LEEP on classroom environments and instruction and on children's reading and writing.

LEEP's design reflects principles of adult learning, especially joint involvement in activities grounded in teachers' work (Hawley & Valli, 1999). In order to deepen their thinking and build a community of practice steeped in reflectiveness (Lave & Wenger, 1991), practitioners work together in using new information from reading and lectures to analyze videotapes showing exemplary teaching and to critique their own classrooms. Much of the learning occurs in the discourse among teachers and the instructor. Understanding what teachers learn and how they learn it calls for scrutinizing the talk that is both the engine and the evidence of learning.

This poster presents findings from discourse analysis of LEEP interaction. Using an interactive sociolinguistic approach (Gumperz, 1982), linguists have examined 58 hours of videotape from the class, paying close attention to the details of talk in order to ground interpretation in the data. This involves looking not only at the propositional content of what people say but also at the interactive means through which they accomplish topic development, and, over the long run, develop individual professional identities and communities of practice. These include turn-taking, lexical and format tying, paralinguistic phenomena, and politeness. Such discourse features create involvement among speakers.

Involvement features are essential to creating complex, shared knowledge structures: When a class constructs an understanding of some concept, the fact that members closely track and

engage with each other's talk allows them to build on each other's propositions. A schematic rendition of propositional meaning constructed during one brief discussion demonstrates that group members created a response to the instructor's question that is more complex and complete than any one member's response and that they did so using interactive resources. The corresponding transcript shows the details.

This analysis illuminates the processes of teachers' learning that lead to observable changes in classroom practice and thus demonstrates the power of collaborative professional development. Teachers' talk in professional development venues is not icing on the cake for course delivery, but a major constituent of the course.

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Preparation of Minority Personnel in Head Start: A Collaborative Model between Communities and Higher Education

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One variable repeatedly shown to result in positive child outcomes is the specialized training and education of teachers (Burchinal, 1999; NICHD Early Child Care Research Network, 2000; Peisner-Feinberg & Burchinal, 1997; Whitebook, Howes, & Phillips, 1989). Because the field of early care and education encompasses many types of programs and teaching staff with dramatically varying levels of general and specialized education and training, the challenge of professional development, both at the preservice and inservice levels, becomes enormous.

The subject of this study was a grant-funded project designed to extend higher education programs in early childhood to underrepresented groups in New Mexico and bordering areas and to increase the cultural responsiveness of these programs. During the course of the project, the six participating institutions of higher education (IHE) provided new educational opportunities ranging from an entry-level course to the bachelor's degree.

The data presented here were generated via the external evaluation of the project. Content analysis of interview and focus group transcripts and field notes was performed using the constant comparative method (Strauss, 1987). The major foci for identifying themes and patterns within the data were on describing the process of change and on comparisons among the "lessons learned" during the change process.

The metaphor of bridge building aptly described the work across sites. Staff at the IHEs described efforts at relationship building as fundamental to their efforts. They described them-

selves as bridging professional fields, different institutions, and geographical regions. An important aspect of the bridge was that of decreasing insularity.

Local councils of community-based stakeholders were involved at each site. Their involvement in decision-making was important, yet also sometimes a source of tension. The contribution of community insiders to program work was cited by IHE staff as key to program effectiveness.

The process of bridge building was facilitated by opening new dialogue and relationships and also by consciously acknowledging issues of accountability and trust. The process of communicating with others, requiring precious time and effort, was mentioned across IHEs as an important lesson learned for effective change. Also important to bridge building was a sense of accountability.

Students spoke highly of training built upon local childrearing values and offered in their home language. Those participants who took coursework in their home language identified language as a highlight of their experience. In the words of one student, "The training that I participated in, I believe really, really supported our way of life on Navajo Nation, on the reservation, and we were able to relate to what was being taught and how we could use that. My previous training was, of course, off-reservation and with nonIndian instructors, and I just had to really blend in and take their philosophies and their learning as they presented it." Following up on this: "So before there wasn't really an attempt to reach you in terms of who you are?" The student responded, "Not who I was and where I came from, and not where I was going to go back to work with children. That was never really there."

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Head Start Teachers' Professional Development: Multiple Perspectives From a Head Start "Community of Learners"

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The purpose of this study research was to explore Head Start teachers' progress toward higher degrees, how they used technology, and the social support they received from their community of learners, faculty, and administrators using a sociocultural perspective. Our belief was that each community of learners/learning community (COL) would, through social interactions, construct their own norms, regulations, and expectations for how they do things.

The participants in this study (9 Head Start teachers, 2 contact people, 4 higher education faculty partners, and 2 technology people) became proficient in technology by working in

groups (communities of learners) where teachers (as students) worked together on college coursework and technology (online courses, web boards, web searches, e-mail, and so forth).

Existing research on communities of learners has tended to focus on traditional college students in traditional on-campus settings. This study, however, took a different approach in that it focused on nontraditional students (those not attending college via a campus). Head Start teachers and nontraditional students took college courses in a nontraditional way. Some courses were offered online as students came together as a part of a learning community working through the materials together. Throughout this distance learning process, the goal was that teachers would become more technologically proficient and would be able to carry those skills over to the classrooms in which they taught.

Technology and social support were two key elements that were made available to the Head Start teachers. Technology support provided to Head Start teachers included (a) computers to every COL member taking college classes, (b) e-mail setup and training, (c) Internet training and access, (d) training in Microsoft Windows and Word, (e) use of message boards (threading discussion) for further discussion and support, and (f) use of Galileo assessment system at work.

Some ways social support was provided to Head Start teachers included (a) library lending service (books for courses were provided at no cost); (b) monthly COL meetings where Head Start teachers had opportunities to engage and dialogue with each other, register for classes, and receive training; (c) the ability to e-mail each other with questions; (d) faculty coming to Head Start and offering courses on site; and (e) all course work paid for. Head Start teachers also mentored 4-year college students on how to work with children from low-income settings.

The supports discussed above enabled the Head Start teachers to become technology proficient and then use that proficiency to enhance their own teaching of young children. The technology piece also opened up to them a world of distance education. They were no longer bogged down with the dilemma of how to take courses while working fulltime. They could now enroll in distance learning courses that made enrolling back into college easier and more manageable for their busy lives.

Language and Literacy Training for Head Start Teachers

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Significant research has shown the importance of the development of language and literacy skills for young children's success in reading (Snow, Burns, & Griffin, 1998; Whitehurst & Lonigan, 2001). Unfortunately, as shown in the results of the 1998 National Assessment of Educational Progress (NAEP), many children, especially those from high-poverty homes, enter school without the necessary reading readiness skills (U.S. Department of Education, 1999). To help Head Start teachers support the language and literacy development of young children, Johns Hopkins University researchers developed and implemented a training program that guides teachers in creating a classroom rich in language and literacy experiences.

The purpose of this study was to evaluate the effects of this teacher-training program on the language and literacy skills of young children in Head Start Centers in Baltimore, MD. During a school year, teachers were trained in four modules: (a) book reading, (b) active listening and conversation strategies, (c) phonemic awareness, and (d) alphabet activities. During the training, university researchers explained the rationale for the modules, introduced explicit teaching strategies, and provided materials including books and center props that supported the imple-

mentation of the strategies presented in training. After the initial training, the researchers modeled the explicit strategies in the classroom. Teachers were then observed and provided with feedback on their teaching during an individual conference. The content of the training was detailed in an interactive training manual.

During the 2001–2002 school year, three intervention teachers and three control teachers were randomly assigned to either the treatment or control condition. Each classroom was observed using the Early Language and Literacy Classroom Observation (ELLCO; Dickinson & Smith, 1997), as well as observations of the following: (a) book reading, (b) questioning during book reading, (c) alphabet activities, (d) opportunities for children to speak and be heard, and (e) phonemic awareness activities. Ways in which book reading was integrated into the other activities were also observed. In addition to observational data, children were assessed on the Peabody Picture Vocabulary Test-III (PPVT-III; Dunn &Dunn, 1998), the Expressive One-Word Picture Vocabulary Test (EOWPVT; Brownell, 2000), and their knowledge of the alphabet. The results of this analysis indicate that children in the intervention groups scored significantly higher on the PPVT-III and the EOPWPVT than children in the control classrooms.

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Computer Training for Preschool Teachers: Impact on Computer Self-Efficacy, Values, and Anxiety

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What factors impede preschool teachers' use of computers in the classroom? Donohue, Borgh, and Dickson (1987) identified several barriers to effective computer use in preschools, including uninvolved staff, unclear curricular goals, lack of training, and logistical issues. Landerholm (1995) found that the majority of preschools in her study were still in the early stages of organizing their computer curriculum and providing training to teachers.

Our study examined teacher characteristics that influence the frequency of computer use in preschool classrooms. Research on elementary school teachers has focused on several measures, including prior experience and perceived past success (Gos, 1996; Kellenberger, 1996), com-

puter values (Kellenberger, 1996), anxiety (Bradley & Russell, 1997), and self-efficacy (Kellenberger, 1996). We also explored the effectiveness of a 3-hour computer workshop emphasizing social collaboration at the computer on enhancing teacher perceptions.

Thirty-eight Head Start teachers and day-care providers from eight programs in rural Western Pennsylvania participated in a computer workshop at a local college. All participants had computer access, and 86.8% felt they needed more training in using computers. Questionnaires were administered before and after the 3-hour workshop, which included the following: (a) classroom logistics, curricular goals, and software; (b) two preschools' (one Head Start classroom) experiences with case studies, social facilitation protocols, and video clips; and (c) a 45-minute "hands-on" computer session where teachers learned several preschool computer programs working with partners. Our measures focused on perceived past success (Kellenberger, 1996), computer self-efficacy (Landerholm, 1995), computer values (Landerholm, 1995; Kellenberger, 1996), and computer anxiety (Bradley & Russell, 1997).

We found that both quantity and quality of computer experience influenced outcomes. The more training individuals had, the more likely they were to rate their prior success with computers as high. Teachers with more years and types of training and higher prior success scores had higher computer self-efficacy and lower pretest computer anxiety. Frequency of computer use in the classroom, however, was related only to number of types of training and pretest computer anxiety. In addition, many pretest relationships were no longer found during the posttest, possibly due to the impact of the computer workshop. When examining sources of computer anxiety, teachers were most concerned about task demands and damaging the computer, rather than social anxiety related to computer use.

Paired t-tests were used to compare a change in pre versus postworkshop measures. Across time, participants showed higher levels of computer self-efficacy, $t(37) = 3.544$, $p < .001$; computer values, $t(37) = 2.303$, $p < .027$; and lower levels of computer anxiety, $t(37) = 2.954$, $p < .005$.

Our findings indicate that training for teachers should concentrate on reducing computer anxiety and providing a variety of learning opportunities. In addition, participants in our workshop showed increased computer self-efficacy and values and decreased anxiety. We attribute workshop effectiveness to our "hands-on" component, video clips, and social skills focus, an area where teachers already have a knowledge base. Future research should include a control group to fully evaluate this approach.

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Beyond the Child Development Associate Credential: A Collaborative Model of Educating Head Start Teachers to Work With Children and Families in the 21st Century

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Process Consultation in the Classroom: Developing Language and Literacy Facilitation Techniques

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Program Assessment and Professional Development: A University–Community Partnership

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Using Formative Research in a University–Community Partnership to Develop a Violence Intervention Program for Head Start Teachers and Staff

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Understanding Communities of Learners: Alternative Professional Development Pathways for Head Start Teachers

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Pediatrician Practices Regarding Early Education and Head Start Referral

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APPENDICES

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Cooperating Organizations

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American Academy of Pediatrics
American College of Preventive Medicine
American Educational Research Association
American Nurses Association
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PS031150