Toddlers in Early Head Start: A Portrait of 2-Year-Olds, Their Families, and the Programs Serving Them

February 2015

Baby FACES 2009

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ACKNOWLEDGMENTS

This report is the second in a series of three submissions that document the progress of children and their families through Early Head Start and provide insight about programs and their staff. We are grateful to the 89 programs that participated in this multiyear study, which places a not-insignificant burden on their staff. On-site coordinators at each program helped schedule visits that this year included in-home direct child assessments for 2-year-olds. Staff members completed interviews and answered questions about study families; program directors participated in interviews and made time in the program day for our work. We are most appreciative of their assistance. We also recognize the contributions of the parents of study children, who allowed us into their homes and participated in telephone interviews. Their cooperation was essential to us meeting our study goals.

An effort of this magnitude requires a strong team and the assistance of many people. We benefitted from the oversight, guidance, and vision of our former federal project officer, Rachel Chazan Cohen, who championed the study and shaped the work with an eye toward informing Early Head Start program improvement. We are also grateful for the leadership of our current federal project officer, Amy Madigan, who took the reins and led the project to its completion. We continued to rely on the expertise of our Technical Work Group (TWG); many of its members participated in discussions about early findings and enhanced our understanding of them. Our TWG included Catherine Ayoub, Lisa Berlin, Margaret (Peg) Burchinal, Jeanne Brooks-Gunn, Judy Carta, Michael Foster, Carol Hammer, Brenda Jones Harden, Judith Jerald, Ellen Kisker, Helen Raikes, Lori Roggman, and Tammy Mann. We were fortunate to have guidance from Angie Godfrey and her colleagues from the Office of Head Start about the needs of the national program.

We continued to work closely with developers of the instruments used in the study (including some of our TWG members), to inform our analyses. Those not already mentioned include Jane Squires, Kimberly Murphy, Thelma Harms, Barbara Pan (who we will miss dearly), Kathy Hirsch-Pasek, Robert Bradley, Joann Robinson, and Martha Staker. Finally, we are grateful to colleagues at Mathematica for their giving their expertise, time, and effort to the Baby FACES project; quite a few spanned more than one task. These contributors include Baby FACES coordinators Raquel af Ursin, Jessica Droz, Sean Harrington, Mindy Hu, Korantema Kaleem, Mustafa Menai, Jessy Nazario, Brian Roff, and Anne Self. Many contributors handled training, but we would especially like to thank Alison Ashenfelter, Eileen Bandel, and Jillian Stein for their dedication throughout the entire measures preparation, training, and field staff certification process. Cleo Jacobs Johnson oversaw the video coding effort, and the "four J's" (Jillian Stein, Joe Baker, Jessy Nazario, and Jessica Droz) served as gold standards and team leaders. Jillian Stein and Season Bedell led the service quality observation training and data collection, and Season Bedell, Richard Godwin, and Susan Golden served as coder supervisors at the Survey Operations Center. Joan Gutierrez and Irene Crawley made oversight of the field data collection effort and more than two dozen field staff look easy; Cicely Thomas, Mindy Lipson, and Premini Sabaratnam skillfully managed the program director interviews; Andrew McGuirk and Judy Cannon served as SAS programmers, managed variable construction, and conducted analyses; Andrew Frost led a group that handled all work in maintaining the sample management system, and all web and CAPI interview programming, and made things run so smoothly; and John Love provided thoughtful quality assurance.

The report benefitted from the editorial support of John Kennedy, and Linda Heath single-handedly formatted and produced it. While acknowledging our indebtedness to these many individuals, the authors take responsibility for any errors or omissions that remain.

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We would like to thank the following members of the Baby FACES Technical Work Group. The views expressed in this publication do not necessarily reflect the views of these members.

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*We are very sad to note that Michael Foster died before publication of this report.

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OVERVIEW

The Early Head Start Family and Child Experiences Survey (Baby FACES) is a descriptive study of Early Head Start programs designed to inform policy and practice at both national and local levels. In 2007, the Office of Planning, Research & Evaluation (OPRE) in the Administration for Children and Families (ACF), U.S. Department of Health and Human Services, contracted with Mathematica Policy Research and its partners to implement this six-year longitudinal study in 89 Early Head Start programs.

Baby FACES follows two cohorts of children through their time in Early Head Start, starting in 2009, the first wave of data collection. The Newborn Cohort includes 194 pregnant mothers and newborn children; and the1-year-old Cohort includes 782 children who were approximately 1 year old (ranging from 10 to 15 months) at the outset of the study. This Baby FACES report focuses on the second wave of data collection and the children from the 1-year-old Cohort (who were 2 in 2010), and presents findings on two broad topics:

1. **Describing Early Head Start program services and staff qualifications**

- Programs reported offering center days and home visits at or above levels recommended by the Office of Head Start (OHS). Weekly data on the services children receive throughout the year showed that children in the home-based option received on average about three visits per month, and those in the center-based option receive about 3.5 days per week.
- The majority of families receive at least one referral over the course of the year to access additional services. Programs also provide activities for parents such as group socializations and parenting workshops.
- Staff are well qualified, with 7 to 10 years of experience on average for teachers and home visitors, and more than 70 percent holding college degrees. Turnover of teachers and home visitors is relatively low (10 and 12 percent, respectively).
- Quality of home visits (Home Visitor Rating Scale-Adapted) and center-based care (Classroom Assessment Scoring System-Toddler) is in the mid-range. Home visit quality and emotional/behavioral aspects of center quality are positively related to the staff member having a Child Development Associate credential regardless of overall education level, and negatively related to depressive symptoms.

2. **Describing child and family outcomes at age 2**

- Children's health is on track, but according to parent reports, 2-year-olds are approaching same-age peers in general development. However, on other measures of language and social-emotional development there is not a clear picture. Although standardized measures show children have some catching up to do with their same-age peers, Early Head Start staff and parents appear to have divergent views of how children are doing in these domains.

Next Steps/Looking Ahead

This report sets the stage for a final report on 3-year-olds. This final report will include information collected in spring 2011 and 2012, and will cover all children who remain in the program through age 3. It will focus on models to understand relations among family and child characteristics, service uptake, and outcomes. A series of short reports and program-friendly briefs will address other topics of interest.

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EXECUTIVE SUMMARY

The Early Head Start Family and Child Experiences Survey (Baby FACES) is an ongoing study of Early Head Start programs designed to inform policy and practice at both national and local levels. In 2007, the Office of Planning, Research & Evaluation (OPRE) in the Administration for Children and Families (ACF), U.S. Department of Health and Human Services, contracted with Mathematica Policy Research and its partners to implement this six-year longitudinal study in 89 Early Head Start programs around the country. Baby FACES follows two cohorts of children through their time in Early Head Start, starting in 2009, the first wave of data collection. The Newborn Cohort includes 194 pregnant mothers and newborn children. The 1-year-old Cohort includes children who were approximately 1 year old (782 were ages 10 to 15 months). This report is the second of three submissions describing findings as we follow families and children throughout their experiences in Early Head Start. The first report provided in-depth information about the sample design, the measures used, and the baseline findings (Vogel et al. 2011). This report describes findings from the second wave of data collection and focuses primarily on children in the 1-year-old Cohort who were 2 years old in 2010. However, it also provides in the technical appendix information on the Newborn Cohort (when children were 1 year old). A subsequent report will describe children's experiences through age 3 and focus on the associations between receiving services at different levels of intensity and quality, and child and family outcomes.

Research questions for Baby FACES address three primary aims:

1. Describing Early Head Start and program services and staff
2. Describing the population served by the program
3. Relating program services to child and family outcomes

Because this report is only the second in a series of three, some questions will be answered only in the final report (short reports and research briefs that address particular topics are also planned). This report captures the first two aims and addresses the following questions using the spring 2010 data:

- What is Early Head Start? What are the program models employed, staff qualifications, and other important program features and characteristics?
- What specific services are delivered to families and what is their quality?
- What are the characteristics of the families Early Head Start serves in terms of their demographic, household, and family characteristics; their needs; and their risk factors?
- How are Early Head Start children and families faring over time?[1]
- How many children and families leave the program early? When do exits occur and what do families experience while they are enrolled?

We present in the appendices findings on the properties of the measures used in Baby FACES (Box 1 includes a brief summary of data sources). The rest of this summary highlights key findings from the spring 2010 data.

[1] This report describes children at age 2. The final age 3 report will take into account the longitudinal nature of the data.

Box 1. Overview of Baby FACES Data Sources at Age 2

Parent Interview. This telephone interview asked the person primarily responsible for the care of the study child about demographic characteristics, the person's service needs and use, and both the caregivers' well-being and that of the child. It also asked about the child's exposure to environmental health risks and environmental and routine supports for the child's growth and development. Parents were also asked to rate their children's development and behavior.

Direct Child Assessment and Home Observation. This assessment includes administration of the Preschool Language Scale-4 Auditory Comprehension subscale (Zimmerman et al. 2002) and measurement of height and weight. While in the home, the field assessor also observes the child's ability to focus on the tasks, the interactions between the child and parents, and the quality of the home environment using the Bayley Behavior Rating Scale (BRS; Bayley 2006), the Home Observation for Measurement of the Environment (HOME; Caldwell and Bradley 2003), and scales drawn from a study of neighborhoods in Chicago (Ross et al. 2008).

Parent Self-Administered Questionnaire. Parents were asked to rate their children's development and behavior using the Ages & Stages Questionnaires, Third Edition (ASQ-3; Squires et al. 2009), MacArthur-Bates Communicative Development Inventories (CDI; Fenson et al. 2000), and the Brief Infant Toddler Social Emotional Assessment (BITSEA; Briggs-Gowan and Carter 2006). They also rated the quality of their relationship with the children's home visitors or teachers.

Parent-Child and Assessor-Child Interaction. Children participated in two semistructured interaction activities that involve playing with two sets of toys. Parents interacted with children using the Two-Bag Task protocol, an adaptation of the parent-child interaction task used in the Early Head Start Research and Evaluation Project (EHSREP) and the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B). The field assessors interacted with children following the Early Communication Indicator (ECI) protocol (Greenwood et al. 2006).

Staff-Child Report. Home visitors and teachers of study children completed a child-specific rating of the characteristics and behavior of the families and children. Staff members also rated the quality of their relationship with the parents of study children.

Home Visitor/Teacher Interview. We interviewed either the child's home visitor or the child's teacher to determine his or her demographic characteristics, tenure working for the program, and well-being, as well as training and education experiences provided by the program and the work environment.

Classroom Quality Observation. Observers rated classrooms with the Classroom Assessment Scoring system-Toddler (CLASS-T; Pianta et al. 2010), which measures the quality of teacher-child interactions in center-based settings and includes two subscales: (1) Engaged Support for Learning and (2) Emotional and Behavioral Support.

Home Visit Quality Observation. Field assessors observed the home visitors who provided services to children in the study sample using the Home Visit Rating Scales-Adapted (HOVRS-A; Roggman et al. 2009) and a form that assessed the content and characteristics of the visit.

Program Director Interview. Through a semistructured telephone interview program, directors reported on their demographic characteristics, credentials, and training; program implementation; the work climate and staff benefits; family characteristics and needs; services offered; and staffing and turnover.

Family Services Tracking (FST). Early Head Start home visitors and teachers of study children completed a weekly service tracking form that detailed the number of service experiences (home visits or days in care) study children were offered and the number received.

What Are the Program Models Employed, Staff Qualifications, and Other Important Program Features and Characteristics?

Using data from program directors and staff in a representative sample of 89 Early Head Start programs, we report on several program characteristics. Program directors and other staff provided information on program services, supports for service continuity, and the duration and timing of extended program closure or conversion to a different service model during a program year (for example, during the summer). Program directors also reported on the types of data they maintain at

the staff, family, and child levels, and the format in which they store them. In addition, we collected data on staff characteristics.

Provision of Continuous Services Varies

Almost all programs have policies that support continuity of care and service delivery at the staff-family/child level. Nearly all programs that offer center-based care assign a specific teacher to each child (99 percent). In 68 percent of programs, children stay with the same teacher throughout their Early Head Start experience, either through looping or attending mixed-age classrooms.

Service continuity across a program year varies, with as many as one-quarter of programs closing for three or more weeks or changing service approach in the summer. About one-quarter of programs (26 percent) close for 3 or more consecutive weeks during the year, with closures ranging from 3 to 10 weeks. Not unexpectedly, most of these closures occur in the summer months (June through September). One-fifth of programs change their service delivery options in the summer and temporarily discontinue a given service option; in most cases, they change from center-based to another option or type of service (80 percent offer home-based, 7 percent offer group socializations, and 9 percent make other unspecified changes).

Programs Offer Core Child Development Services at Recommended Rates, but Uptake of Services by Families Varies Widely

The performance standards require a comprehensive package of services to support children's development. Depending on the service approach, programs are encouraged to offer a certain quantity of services per week as well as throughout the year and to tailor services to meet the diverse needs of enrolled families. Baby FACES offers a unique opportunity to examine the provision and take-up of services using data collected from a variety of sources. An innovation for this study, the family services tracking (FST) system, collected weekly data on the services children received throughout the year as reported by home visitors and center teachers. The analyses reported here from the FST focus on services received by children in the 1-year-old Cohort from July 2009 to June 2010, approximately the time from ages 1 to 2 (in the instances we use program director reports, these program attributes would also apply to children in the Newborn Cohort at age 1).

Early Head Start programs offer core child development services at a high rate of frequency. According to program director reports, all programs that provide home-based services offer families in the home-based program option weekly home visits and at least two group socializations per month. All programs providing center-based services offered four or five center days per week. Based on data from the FST, children in the home-based option are offered about one home visit per week for most of the year but slightly fewer in summer and winter. Children in the center-based option are offered four or five days for most of the year; in summer and winter, the average number of days offered drops to about three or four days per week.

Most families take up services at high frequencies, but rates vary by time of year. Data from the FST show that the average child in the home-based service option receives 37 home visits per year, and the average child in the center-based option attends 179 days per year. These rates varied somewhat by child and family characteristics. Take-up rates were lower in the winter, likely due to holidays or inclement weather.

Programs work to maintain families' active participation but have established thresholds for disenrollment based on nonattendance. Programs use a variety of strategies to reach out to

families with poor attendance. Most sites conduct a home visit or call parents to encourage attendance. Other strategies include sending a letter home or arranging a meeting at the center. Some programs also seek to identify and help with barriers to participation, including transportation, changing service options, or health issues. Most program directors (66 percent) reported having a policy in place for dealing with frequent absences. These policies typically include a set cutoff for the number of missed center days or home visits before a family's slot is considered vacant and they are no longer enrolled in the program.

Both directly and through referrals, programs connect families with a variety of additional services to support their needs. Programs provide activities for families such as group socializations in the home-based service option and parenting workshops in the center-based option. Fewer than half of families participate in these activities regularly, according to program directors. However, FST data for the 1-year-old Cohort show that a typical family in the home-based option attends an average of 11 group socializations over the observed period (a bit less frequently than once a month). Among center-based families, 80 percent participate in at least one parent education session during the year, and these participants attend 12 sessions, on average.

Programs provide referrals to help families access additional services. Seventy percent of families received at least one referral during the period from July 2009 to June 2010, according to the FST. On average, these families received six referrals during the year. Families who received a referral were less likely to be African American, and more likely to have a child who is a dual language learner, and a mother who is not employed.

Programs Used American Recovery and Reinvestment Act Funds to Expand

Baby FACES provide the unique opportunity to get a sense of how the 54 programs in the sample that received expansion funds under the American Recovery and Reinvestment Act (ARRA) used those funds.

Programs that received funding through ARRA added more than 4,000 program slots. These programs added nearly 2,200 center slots and 1,850 home visiting slots. About two-thirds of programs that received expansion funds added a new center or program site.

Access to Data to Inform Program Management Is an Area for Further Development

Programs vary in their storage of and access to data. Although all programs collect a range of data (for example, enrollment lists, treatment plans, and referrals), the mode of storage is mixed. Most store data in a combination of electronic and paper formats and use a database system to store attendance data. Paper storage is most common for progress reports (43 percent of programs), treatment plans (31 percent), referrals (27 percent), and information on staff training (24 percent); primary storage in electronic format is most common for enrollment lists (38 percent). Despite these systems, most programs (95 percent) indicated it would be very difficult to produce a list of enrolled children and their birthdates.

Staff Continuity, Diversity, and Credentials Are Program Strengths

Analyses of data from teachers, home visitors, and program directors create a profile of program staff strengths and challenges. These findings extend program director reports of staff characteristics overall by adding detail from reports of staff working with the families and children in the Newborn and 1-year-old Cohorts.

Programs have moderately low frontline staff turnover rates. In 2010, program directors reported that 12 percent of teachers and 11 percent of home visitors left the program in the past year. More than half of these teachers and home visitors (58 percent) left for personal reasons. Turnover at the leadership level in programs is high, with 43 percent of programs losing a coordinator or manager during that same period, and 17 percent losing a director. Nearly half (47 percent) of programs have unfilled full-time staff positions. On average, program directors report that they have about four unfilled full-time staff positions. Most commonly, programs have vacancies for teachers (61 percent), home visitors (37 percent), and managers/supervisors (15 percent).

Children have teachers and home visitors who are female and diverse in their racial/ethnic and linguistic backgrounds. Nearly all 2-year-olds have a teacher or home visitor who is female (100 and 99 percent, respectively). Although slightly more than half of children have teachers or home visitors who are white (54 and 56 percent, respectively), a sizable percentage receive services from an African American or Hispanic staff member. Overall, 39 percent of children receiving home-based services and 31 percent of those receiving center-based services have a home visitor or teacher speaking a language other than English.

English and Spanish are the languages most commonly spoken in classrooms and during home visits serving 2-year-olds. English is the language adults most often speak in classrooms (100 percent) and during home visits (97 percent). Following English, teachers and home visitors most frequently report Spanish as the language spoken in children's homes. Arabic and Asian languages are also spoken. Considering only Spanish-speaking home-based families, the home visitor for 95 percent speaks Spanish. Among center-based children from Spanish-speaking homes, for 97 percent of children, the teacher or another adult in the classroom speaks Spanish.

Children's teachers and home visitors are well-qualified and experienced. Many children have a teacher or home visitor with a college degree and experience working with infants and toddlers. In fact, 78 percent of those served in home-based options have a home visitor with an associate's degree or higher, and 72 percent of those in the center-based option have a teacher with at least an associate's degree. Children's teachers and home visitors have 7 and 10 years of experience, respectively, working with infants and toddlers. Teachers and home visitors of children also have relevant credentials and backgrounds in early childhood. Among teachers with at least an associate's degree, 63 percent report that their field of study included early childhood education or child development. Similarly, among home visitors with at least an associate's degree, 59 percent studied early childhood education. Of teachers who have not earned a college degree, 74 percent have a Child Development Associate (CDA) credential; similarly, of home visitors who have not earned a college degree, 79 percent have a CDA.

Children's teachers and home visitors participate in a number of professional development activities. Children in the center-based option have teachers who reported attending an average of 58 hours of staff training annually; those in the home-based option have home visitors who reported an average of 64 hours. More than 70 percent of children have a teacher or home visitor who receives both one-on-one and group supervision. Among center-based children, 40 percent have a teacher with an assigned mentor/coach, as do 38 percent of home-based children and families.

Children's teachers and home visitors report positive feelings about their current jobs and few mental health problems. Close to 90 percent of children have a teacher or home visitor who reports that he or she is very likely to stay in his or her current job. Fewer than 80 percent have a teacher or home visitor who reports no to low symptoms of depression. Two percent have a teacher or home visitor with severe symptoms of depression.

What Specific Services Are Delivered to Families and What Is Their Quality? [2]

Baby FACES documents service quality using observational measures of home visits and classrooms. As in the prior data collection round, the Home Visit Rating Scale-Adapted (HOVRS-A) and the Home Visiting Content and Characteristics Form document home visit quality. Given the timing of the age 2 data collection and overall design of the study, Baby FACES provided the unique opportunity to examine the newly developed measure of toddler classroom quality, the CLASS-T, in a national study. Thus, the CLASS-T was used to document classroom quality received by children in the 1-year-old Cohort (at age 2), replacing the Infant/Toddler Environment Rating Scales-Revised, which was used at baseline.[3]

Home visit and center-based care quality is in the midrange

Children and families receiving home visits experience a variety of activities. The largest proportion of home visit time is spent on child-focused activities (50 percent of time in a home visit), followed by staff-family relationship-building activities (17 percent), and parent-child and parent-family-focused activities (15 and 14 percent, respectively). The typical home visit includes time devoted to play (86 percent of home visits), provision of education and/or information (67 percent), goal-setting/planning (55 percent), and child/parent observations (50 percent). Modeling or facilitation of parent-child interactions is also common (44 percent). Home visits observed for the study lasted approximately 77 minutes, on average.

Most children and families primarily served by home visits receive visits of midrange quality. Families receive home visits scoring in the midrange (3- to 4-point) on the total HOVRS-A score (out of a possible score of 5). Scores below 3 fall in the minimal range of quality. Scores are highest (4 or higher) in the areas of Child Engagement and Relationship with the Family and lowest (less than 3) in Nonintrusiveness and Facilitation of Parent-Child Interaction. Scores in the area of Visitor Effectiveness are somewhat higher than those for Visitor Strategies. Home visit quality is positively related to home visitors' receipt of a CDA credential, regardless of home visitors' overall level of education. Quality is also negatively associated with the number of unfilled staff positions in the program and home visitors' risk of depression.

Children are in classrooms with group sizes and ratios within the performance standards and professional recommendations. The ratio of children to each adult is relatively low, averaging slightly fewer than three children per adult; the maximum allowed for this age range is four children per adult. Group sizes are considerably smaller than the maximum allowed (about six versus eight children).

Many children are in mixed-age classrooms. Approximately half of the classrooms observed are mixed-age and include children who are 12 months or younger and/or 36 months or older—that is, a mixed-age classroom in this context includes the study 2-year-olds and children who are younger than 1, or older children ages 3 and older, or both those who are younger than 1 and 3 and older. Within these mixed-age classrooms, the average age span between the youngest and oldest child is 21 months.

Most children in center-based programs are in classrooms of midrange quality. Overall, children are in classrooms scoring in the midrange on the CLASS-T (from 3 to 5 out of a possible score of 7). Scores are highest in the area of Emotional and Behavioral Support (5.3 on average), which includes Positive Climate, Teacher Sensitivity, Regard for Child Perspectives, and Behavioral Guidance; classrooms

[2] This question is partially addressed by the data on family service uptake presented under the first research question.

[3] Observations of classrooms serving 1-year-olds at baseline used the Infant-Toddler Environment Rating Scales-Revised (ITERS-R); see Vogel et al. (2011) for details.

were rated in the low range on Negative Climate, indicating that interactions characterized by negativity were infrequently observed. Scores are lowest in the area of Engaged Support for Learning (3.6 on average), which includes Facilitation of Learning and Development, Quality of Feedback, and Language Modeling. Aspects of classroom quality are positively related to teachers' job satisfaction, experience, and child development credentialing, and negatively related to teachers' depressive symptoms, and staff turnover.

Parents and staff have positive relationships with one another. Parents and staff endorse positive statements about their relationships at roughly similar rates. On average, parents agree or strongly agree with positive statements about the quality of relationships with their home visitors or teachers. Teachers and home visitors express similar positive attitudes about their relationships with children's parents. Relationship quality is not associated with observed quality of the home visits, but it is positively correlated with aspects of classroom quality.

What Are the Characteristics of the Families Early Head Start Serves in Terms of Their Demographic, Household, and Family Characteristics; Their Needs; and Their Risk Factors?

During spring 2010, we visited families of 2-year-olds in their homes and collected information on parenting and the home environment. Sources of information include direct child assessments, observations of the home environment, and video recordings of parent-child interactions. These interactions were video-recorded for later coding using two coding schemes: the Parent-Child Interaction Rating Scales for the Two-Bag Assessment (Mathematica Policy Research 2010) and an adaptation of the Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO; Roggman et al. 2009). As above, all information is for the 1-year-old Cohort at age 2.

Children's parents and home environments are supportive of development

Most children are read to or told stories at least daily. About 61 percent of parents read to their children more than once a day, and an additional 29 percent read about once daily. Comparatively, about 38 percent of parents tell stories to their children more than once a day; nearly the same proportion (39 percent) tell a story about once a day. More than half of all households (57 percent) have at least 25 books for the children, and nearly another quarter have 11 to 25 books for the children.

Most 2-year-olds' home environments are emotionally supportive and cognitively stimulating. Scores on the Home Observation for Measurement of the Environment (HOME) inventory (Caldwell and Bradley 2003) average nearly 25 out of 30, suggesting that 2-year-olds live in home environments that have adequate emotional support and cognitive and language stimulation.

Recordings of parent-child interactions show mid- to high-range levels of positive parenting behaviors and low levels of negative ones. According to observed ratings on the 7-point Parent-Child Interaction Rating Scales, parents of 2-year-old children received average scores of 4 (out of 7) on sensitivity, positive regard, stimulation of cognitive development, and relationship quality. Parental sensitivity, positive regard, and relationship quality were highly intercorrelated, and were combined into a single composite score (synchronicity), with comparable average ratings of 4. Conversely, negative parenting behaviors during the play-based assessment averaged 3 for negative regard, 4 for intrusiveness, 3 for detachment, and 3 for dissolution of boundaries. Compared with the EHSREP (ACF 2001) and the ECLS-B (Andreassen and Fletcher 2007), mean ratings on the positive dimensions of parenting are similar across the studies. Overall, ratings of parental positive regard and cognitive stimulation are slightly higher in Baby FACES than in EHSREP. Notably, negative parenting behaviors (negative regard, intrusiveness, and detachment) were observed to be somewhat higher in Baby FACES than in other studies.

We also assessed positive parenting behaviors using the PICCOLO, an observational instrument designed to measure developmentally appropriate parenting along four domains: affection, responsiveness, encouragement, and teaching. Average scores are similar to those reported in other studies with parents of children at this same age (Cook and Roggman 2009).

How Are Early Head Start Children Faring?

Parent and staff reports, direct child assessments, assessor ratings, and video-recorded interactions provide a more complete picture of children's development at age 2.

Children's physical development and health are on track, but other measures in other developmental domains do not provide a clear picture of development.

Most 2-year-olds in Early Head Start maintain physical well-being and have access to health care. Based on parents' reports, 80 percent of 2-year-olds have excellent or very good health; only 5 percent have fair or poor general health. On the 5-point rating scale for children's general health, which ranges from excellent (5) to poor (1), the mean of parent ratings is 4.2, suggesting that overall children's general health status is between excellent and very good. Based on direct measures of children's height and weight, the prevalence of obesity is 17 percent—the same result found in the nationally representative ECLS-B. In addition, about 16 percent of children are identified as at risk for obesity (similar to the 15 percent prevalence rate found in the ECLS-B); and 6 percent are underweight.

Parents reported that all of the 2-year-olds received some type of health services—including doctor or dentist visits, immunizations, and evaluation for disabilities—in the past year. Compared with 6 percent of children nationally who do not have a regular source of health care (Federal Interagency Forum on Child and Family Statistics 2010), only 1 percent of Early Head Start children lack a regular health care provider. Only 2 percent have not had a well-child checkup in the past year. Approximately 92 percent of 2-year-old children are reported as "completely up to date" with immunizations.

According to parents' reports, 2-year-old Early Head Start children are near their same-age peers in general development. As reported by parents on the ASQ-3, on average, toddlers are near their same-age peers nationally in each of the developmental areas. The average scores on the age-specific forms are approximately 50 of 60 in Communication, Gross Motor, and Personal-Social, and about 45 of 60 in Fine Motor and Problem Solving. The average ASQ-3 total score for 2-year-olds is 239 of 300. At age 2, Early Head Start children scored in line with the normative sample in Communication, Gross Motor, and Personal-Social. However, their scores are lower than the normative sample in Fine Motor and Problem Solving.

Children are continuing to develop their language development at age 2 but are not quite at national norms. Although parents reported better expressive language development in children on the CDI than did Early Head Start staff, compared with national norms and the ECLS-B, ratings by parents and staff indicate that children still have catching up to do with their same-aged peers. Two-year-old Early Head Start children score a little more than half a standard deviation below the national norms[4] on the English Preschool Language Scale-4 (PLS-4) Auditory Comprehension scale and on the Spanish PLS-4 Auditory Comprehension scale (91 and 90, respectively).

[4] The standard scores for the national normative sample have a mean of 100 and a standard deviation of 15.

Likewise, the expressive communication scores of 2-year-old children on the ECI, a child-interviewer interaction task, are a little more than one-half of a standard deviation below the standardized mean of 100.

Multiple data sources provide a mixed picture of children's social-emotional development. On the BITSEA, parents reported children as having more problem behaviors than did Early Head Start staff. Staff reports yield Problem scale scores that are comparable to the national norms, whereas parents' reports indicate that children's problem behaviors are higher than the national norms. Both parents' and staff reports yielded similar Competence scale scores which fell below national norms.

Children display positive behaviors in play interactions with their parents. On rating scales that range from 1 to 7, children displayed behaviors of about 4 on engagement, sustained attention, and enthusiasm. Overall, expressions of negativity were about 3. More than three-quarters of children received scores greater than or equal to 4 on engagement of parent (77 percent), sustained attention with objects during play (87 percent), and expressions of enthusiasm (80 percent). Only 24 percent of children displayed indicators of negativity at similarly high levels. Scores are similar to those reported in other large-scale studies with children at this same age (including the EHSREP and ECLS-B).

Assessors rate the majority of 2-year-old children as scoring above the cutoffs on the BRS. However, approximately one-quarter (26 percent) of children score in the nonoptimal range (10th percentile or lower) on Orientation/Engagement; 43 percent score in the nonoptimal range on Emotional Regulation. Compared with the national norms, assessors rate more Early Head Start children as falling into the nonoptimal range.

How Many Children and Families Leave the Program Early? When Do Exits Occur and What Do Families Experience While They Are Enrolled?

One way to assist programs in improving their retention of families is to document who leaves the program earlier than expected and determine whether that group differs from those who do not leave. The Baby FACES FST system and exit interview data provide an opportunity to analyze the pattern of service use and transition out of Early Head Start. This report provides an initial picture of the experiences of so-called early exiters (children and families in the 1-year-old Cohort who leave the Early Head Start program before spring 2010, the time of their second birthday).

Those who exit programs early are similar to those who stay on a range of service-use characteristics, but they are at higher demographic risk.

Overall, most children do not exit Early Head Start by age 2, but slightly more than one-fifth of children do leave early. Children in home- and center-based options exit at similar rates. Early exiters attended programs with characteristics similar to those attended by continuing participants. Exiters' programs, however, have smaller staff-child ratios (that is, there are slightly fewer staff per child). Early exiters and continuing participants experience similar levels of classroom and home visit quality. Staff members serving early exiters have similar levels of education, experience, and depressive symptoms as those serving continuing participants. Early exiters and continuing participants share similar program attendance rates and were similar developmentally at age 1. Continuing participants' staff members rate staff-parent relationships slightly but significantly better than exiters' providers.

Early exiters come from families facing more maternal risks. Early exiters and those who continue in the program do not differ in terms of gender, race/ethnicity, or dual language learner status. Early exiters did not differ from those who stayed in the program in whether they moved in the past year.

Early exiters come from families facing a higher number of maternal risks, with an average of 2.3 risks compared with 2.1 for continuing families. Among exiting families, 75 percent are receiving public assistance, compared with 68 percent of continuing families, and 31 percent of exiting mothers were teenage mothers, versus 21 percent of continuing mothers. Though early exiters are more likely to receive public assistance than continuing participants, the two groups do not differ in income-to-needs ratio.

Families often cited moving as their reason for leaving and most of exiting families were very satisfied with the program.[5] Families most commonly cited moving away from the program area as their reason for leaving the program (31 percent). The second most common reason, given by 12 percent of families, is being too busy to participate. In general, exiting families expressed high satisfaction with their Early Head Start programs. Seventy-four percent said they were very satisfied with their programs overall, and 97 percent reported that they were either very or somewhat satisfied. Despite the high levels of satisfaction reported, 8 percent of families cited inconvenient center hours or home visit times as their main reasons for leaving, and 7 percent desired a service option that was not available.

About one-quarter of early exiters move on to another Early Head Start or early childhood program. Among exiting families, 23 percent moved on to another early childhood program: 6 percent enrolled in another Early Head Start program, and 17 percent obtained services from a different early childhood program. The remaining 77 percent of families did not report using any formal program.[6] Many families report that Early Head Start helped them to find other child care arrangements. Seventeen percent of exiting families overall, and 33 percent of those reporting that their children are in another early childhood program, said that the Early Head Start program they left helped them find another program. Most of these families (88 percent) indicated that the Early Head Start program they left helped by providing referrals for or identifying other child care arrangements.

Next Steps/Looking Ahead

This report sets the stage for a final report on 3-year-olds to follow. That next report will include information collected in spring 2011 and 2012 and will cover all study children, from both cohorts, who remain in the program through age 3. It will focus on understanding and modeling the longitudinal aspects of the data to develop an understanding of relations among family and child characteristics, service uptake, and outcomes. A series of short reports and program-friendly four-page briefs will address other topics of interest, such as our efforts to measure program implementation.

[5] These data are from the exit interview, which in this round had low response rates (54 percent). The data are weighted to account for this low response, but the findings should be interpreted with caution.

[6] We asked exiting families if they were attending another Early Head Start program, and if they were attending any other day care center, preschool, or early childhood program. Seventy-seven percent of families answered no to both questions and are presumably not using any formal early childhood arrangement.

I. EARLY HEAD START RESEARCH AND THE BABY FACES STUDY

The Early Head Start Family and Child Experiences Survey (Baby FACES) is an ongoing study of Early Head Start programs designed to inform policy and practice at both national and local levels. In 2007, the Office of Planning, Research & Evaluation (OPRE) in the Administration for Children and Families (ACF), U.S. Department of Health and Human Services, contracted with Mathematica Policy Research and its partners to implement this six-year longitudinal study in 89 Early Head Start programs around the country. We are following through their time in Early Head Start two cohorts of children: one in which mothers were pregnant or children were newborns (less than 9 weeks old), and one in which children were approximately 1 year old in spring 2009 (our first wave of data collection). This report describes findings from the second wave of data collection, and focuses primarily on children who were 2 years old in 2010 (the largest of our two cohorts) but also provide in the technical appendix information on the Newborn Cohort (now children 1 year old). This chapter describes the history of and current context in which Early Head Start is operating, provides an overview of the study, highlights the baseline findings from the first report (Vogel et al. 2011), and describes new features of the data collection effort in this wave. The chapter ends with a road map to the report.

History of the Early Head Start Program

Early Head Start is a two-generation program that began in 1995 as a federal initiative for low-income pregnant women and families with infants and toddlers 3 years old or younger. From the initial 68 Early Head Start grantees funded in 1995, the program had by 2009 grown to more than 700 programs serving more than 60,000 children and families (Early Head Start National Resource Center 2010). The federal government allocated $1.1 billion for the expansion of Early Head Start through the American Reinvestment and Recovery Act of 2009 (ARRA), which added nearly 50,000 slots in fiscal year 2009–2010 (ACF 2010) and reversed prior polices that provided a flat funding stream without increases for inflation or the addition of new enrollment slots. As a result of the ARRA funding, about 1,000 programs now serve more than 150,000 children. The Baby FACES sample includes 54 ARRA expansion grantees.

Early Head Start programs provide a range of services, including child development services, child care, parenting education, case management, health care and referrals, and family support. In addition to delivering many services directly, programs also form partnerships with other community service providers.

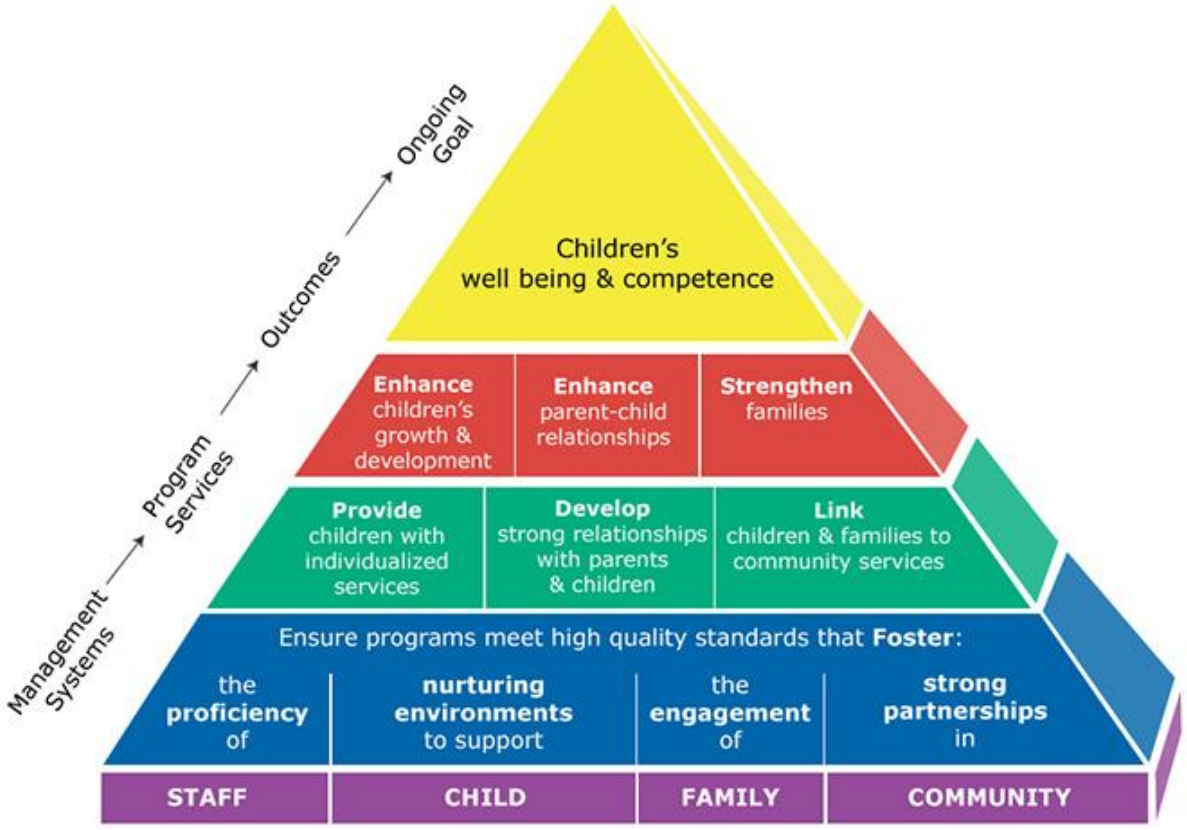
To ensure the quality of their offerings, Early Head Start programs adhere to two key institutional benchmarks. The Head Start Program Performance Standards (hereafter, "performance standards") are the rules and regulations that explicitly identify how programs can ensure high-quality services (for example, requirements specify child-to-adult ratios in child care centers, staff education, and the types of services that must be offered; ACF 1996). The Framework for Programs Serving Infants and Toddlers and Their Families is a conceptual model that describes the mechanisms by which high-quality programs are thought to affect children's outcomes. It is structured as a pyramid that rests on four cornerstones (community, staff, family, and child development) that the Advisory Committee on Services for Infants and Toddlers deemed essential for quality Early Head Start programs (ACF 1994). On this foundation, the framework builds four layers; management systems form the base that supports program services. These services bring about positive family and child outcomes and contribute to the goals of children's well-being and competence (Figure I.1).

The performance standards define five service-delivery options that programs can use based on the unique needs of families:

1. Home-based—families receive weekly home visits and at least two group socializations per month
2. Center-based—families receive center-based child care plus other activities
3. Combination—families receive both home visits and center-based experiences
4. Locally designed (requiring official approval from the Office of Head Start)
5. Family child care—families are served through family child care homes

A program can choose to deliver one option to all families or different combinations to different families, based on its determination of the best mix of services for meeting families' needs.

Figure I.1. Framework for Programs Serving Infants and Toddlers and Their Families



Source: Framework for Programs Serving Infants and Toddlers and Their Families. Head Start Approach to School Readiness. HHS/ACF/OHS. 2012.

The Early Head Start program has served as a national laboratory by incorporating ongoing research to inform program improvement, which has evolved along with the program. The initial research on Early Head Start began concurrent with the launch of the program in 1995, and Baby FACES is the latest in a series of subsequent descriptive studies that have informed the program's development.

Baby FACES Overview

Baby FACES is a longitudinal descriptive study of Early Head Start families, children, and programs. From a nationally representative sample of 89 programs, we selected for the study parents of children in two age cohorts in spring 2009: the Newborn Cohort, which included pregnant women and children up to 8 weeks old, and the 1-year-old Cohort, which included children aged 10 to 15 months. (Chapter II provides a more detailed presentation of the study design and sample.) For this first follow-up report, we gathered data when children were a year older (that is, one year after enrollment in the study, when children were ages 1 and 2 for the two cohorts, respectively). Because of the small size of the Newborn Cohort, in this report, we will be focusing on 2-year-olds.[7] As in the initial round of data collection, we gathered from program directors detailed information on program operations, services, management, and characteristics of staff and enrolled families. In addition to this overall program-level information, we also gathered targeted information on participant families from parent interviews; staff (home visitors or teachers) reports on children; individual interviews with teachers and home visitors about their characteristics, experience, and training; and observations of study children's classrooms and home visitors. New for this round is information on the development of 2-year-olds (in the 1-year-old Cohort) based on direct child assessments and video-recorded adult-child interactions conducted in the home. Additionally, we report for the first time on information provided weekly by program staff about the services received by families throughout the year (from roughly the end of the baseline data collection in summer 2009 through the end of the first follow-up data collection in summer 2010). Finally, we present findings from exit interviews conducted with parents of children who left the program before the spring 2010 data collection. Parents describe their characteristics, reasons for leaving, where they went, and their satisfaction with Early Head Start.

As noted above, the primary focus of this report is on the 1-year-old Cohort when children are age 2. The Newborn Cohort is small and the additional information participants contribute about the characteristics of this cohort when they are 1-year-olds in Early Head Start is similar to findings reported in the baseline report (Vogel et al. 2011). Therefore, for completeness, Appendix E includes information on all study children at 1 year old (combining cohorts), and separately by cohort at age 1.

Subsequent rounds of data collection are similar to this one, with in-home direct child assessments for children at ages 2 and 3; interviews with parents, staff, and program directors; observations of classrooms and home visits; and staff reports of weekly service use. We also conduct a final matriculation interview with parents of 1-year-old Cohort children who remain in Early Head Start until they are 3 years old, to gain information about their experiences with transition planning and their satisfaction with the program.

The study includes innovative approaches to measurement, including a unique way to measure language development of English/Spanish dual language learners, two coding approaches for assessing the quality of parent-child interactions, and a relatively new measure of children's communication with the assessor in a standardized play situation. We also use a new classroom observation measure, the Classroom Assessment Scoring System-Toddler (CLASS-T) version (Pianta, La Paro, and Hamre 2010a, 2010b).

[7] For completeness, we have included information on the Newborn Cohort at age 1 in the Technical Appendix.

Chapter II details all of these approaches, and Appendix C includes further information on scoring and analytic approaches to their use. Another advantage of the study is that baseline data collection occurred the year before the ARRA funding, and the current round of data collection occurred right around the time that programs receiving these funds were implementing their expansions (March through May 2010).

Key Baseline Findings

The baseline report, on the first wave of data collection, provided a comprehensive snapshot of programs, staff, families, and children from both cohorts as of spring 2009. Included here are highlights of each of these areas.

Program Features

Most programs offered both center- and home-based service options, and such programs reported that they considered both family needs and preferences in addition to the availability of slots when enrolling families into a specific option. Directors reported offering core child development services at frequencies consistent with the performance standards, and nearly all reported that they provided services to support family self-sufficiency and child and adult health needs. Almost all programs maintained a waiting list and used a point system to prioritize family enrollment.

Directors reported on the composition of enrolled families and indicated that the highest risk families were a low to moderate proportion of the total. Highest risk reflects an accumulation of risk factors, and most programs reported that their enrollment included much higher proportions of families with individual risk factors (primarily having a single-parent household).

Observations of program quality, both in terms of center- and home-based services, placed programs in the midrange on average. Child-to-adult ratios and group sizes in classrooms of 1-year-olds were within guidelines (2.4 and 5.3 children per adult, respectively). Parents and staff also reported positive relationships with one another, although this finding was uncorrelated with observed quality.

Staff Features

Program staff were well educated, and more than half of directors and assistant directors held a graduate or professional degree. Home visitors held bachelors' (BA) or associate (AA) degrees at a somewhat higher rate than teachers, although teachers were most likely to have enhanced their credentials since being hired. Overall, a few staff were without an AA and working toward one. Programs offered more hours of training than required by the performance standards; many also covered expenses for outside training, such as travel and registration fees. Teachers reported attending 48 hours of training annually, and home visitors reported 70 hours.

The teachers and home visitors of Baby FACES children reported positive feelings about their jobs and low levels of depression symptoms. Turnover of frontline staff was moderately low (about 16 percent for teachers and home visitors), but higher for management staff (44 percent).

Child and Family Features

In 2009, Baby FACES children were ethnically diverse, with roughly equal proportions of whites (35 percent) and Hispanics (37 percent). African Americans made up 17 percent of the sample. About half of the study children lived in homes without their biological fathers. Unemployment was high, affecting about one-third of fathers and half of mothers (a portion of mothers who were not employed or looking for work were in school or training; slightly more than one-third of mothers of 1-year-olds were neither

employed nor in school or training). Slightly more than half of fathers and about 60 percent of mothers had at least a high school diploma. Many families reported difficulties paying bills and many also reported having food-security concerns. About half the sample was in the lower-risk category on an aggregate measure of demographic risk; the other half was in the medium- or highest-risk groups. Hispanics and African Americans were more likely than whites to be at highest risk.

Despite challenges, children were doing relatively well in most of the domains we assessed. Rates of premature birth and low birth weight were in line with national rates, and about 80 percent of parents of 1-year-olds rated their child's health as very good or excellent. Nearly all children had had been examined by a physician in the six months before the interview, and 92 percent had some form of health insurance coverage.

Language development of 1-year-olds was in line with national norms in staff-reported vocabulary comprehension but lagged slightly in vocabulary production. Although dual language learners (DLLs) understood fewer English words than children from monolingual English-speaking homes, considering English and Spanish together, they knew more words.

Social-emotional development differed depending on whether reported by parents or staff (with parents reporting better social-emotional competence but more problem behaviors than staff); however, regardless of reporter, children were at national norms in social-emotional competence and problem behaviors. However, there were indications of elevated risk relative to norms on some developmental domains, according to parent reports on the Ages and Stages Questionnaires. These domains mainly involve fine motor skills and problem solving.

More than half of parents reported that their own physical and mental health was good, and more than 90 percent had health insurance. Rates of depression, parental stress, and dysfunctional interactions with their children were similar to or lower than those found in the Early Head Start Research and Evaluation Project (EHSREP) at 14 months. Reported rates of high-risk behaviors in pregnancy such as smoking, drinking, or substance abuse were much lower than national averages. Overall, parents reported high levels of social support and positive parenting relationships with the other biological parent, and low levels of conflict with others. Many families follow routines such as a regular dinner time and bedtime.

Road Map to the Report

Each chapter of this report includes information on key areas of the Early Head Start program and its families. Chapter II includes information about study design and methods. The remainder of the report is organized into two broad parts. Part I concerns the program, including program operations (Chapter III), program services received by families of 2-year-olds (Chapter IV), and information on staff characteristics and observed quality of services provided to 2-year-olds (Chapter V). Part II focuses on families of 2-year-olds, with information on key demographic characteristics of our sample (Chapter VI), outcomes for children at age 2 (Chapter VII), and the characteristics of participants who exit the program early[8] (Chapter VIII). Chapter IX includes a brief synthesis and plans for the next report (on children at age 3).

[8] We define "early exiters" as those who leave the Early Head Start program before their child's eligibility ends at age 3. The design of the study is such that once families leave the program, they also leave the Baby FACES study.

II. BABY FACES METHODOLOGICAL AND ANALYTIC APPROACHES

This chapter describes the study; outlines the overarching research questions and those specific to this report; and then describes our sample, measures, and approaches to analyses. Additional details about data collection procedures, assessor training, and analytic issues and our approaches to resolving them are available in the appendices in Volume II. For more specific and detailed information about the study design, see our baseline report and technical appendices (Vogel et al. 2011).

Expert Input Informed the Study

The Baby FACES team maintained close collaboration with multiple stakeholders to continue shaping the study in ways that are innovative and responsive to the policy, program, and research communities. As we describe in the baseline report, we continued to confer with the study's technical work group (TWG) and held a meeting in September 2010 to present baseline findings and solicit input for analysis of the current wave of data. In addition to the formal meeting, we held multiple informal conference calls to consult with various TWG members, outside experts, and instrument developers, particularly as we identified the measures to be used in the in-home direct child assessment. This report has benefited greatly from the exchange of ideas with and formal feedback from these experts.

As we described in Chapter I, the Office of Planning, Research & Evaluation (OPRE) and the Office of Head Start (OHS) will use information from Baby FACES to inform Early Head Start program planning at the national and local levels. The study provides information on program characteristics, implementation features, staff characteristics, and service quality. Further, it gathers detailed information on the characteristics of study families, their needs, and the services they receive, and it tracks children's development over time.

The current report focuses on research questions that describe Early Head Start programs and services and the populations they serve, primarily for children who are 2 years old in 2010. Future reports will analyze the data to answer research questions about children's developmental trajectories, using data on study children at age 3, and relating program services to child and family outcomes. We outline the research questions in Box II.1.

Box II.1 Baby FACES Research Questions

Describing Early Head Start and Program Services (Chapters III, IV, and V)

- What is Early Head Start? What are the program models employed, the qualifications of staff, and other important program features and characteristics?
- What is the overall status of program implementation and quality?
- What services do programs deliver to families?

Describing the Population Served (Chapters VI, VII, and VIII)

- What are the characteristics of the families that Early Head Start serves (including household and family demographics, needs, and risk factors)?
- How are Early Head Start children and families faring over time?[2]

Relating Program Services to Child and Family Outcomes[2]

- How are child and family needs and outcomes associated with services received over time? Are there relationships between program features and outcomes?
- What are the characteristics of and services for special populations and subgroups? Examples of subgroups include children with identified special needs, highest risk families, mothers with depression, dual language learners (DLLs), children of teen mothers, and mothers pregnant at program enrollment.
- What family and child characteristics are linked to services received? What characteristics are linked to outcomes?

[1] The data collection approach in this study requires that we present the program quality findings at the child level. As we describe further in Chapter V, we can make statements only about the quality of care received by children in the study; we cannot draw conclusions about the quality of care in programs overall. Thus, we are not reporting the average quality of a given program.

[2] This report does not address the longitudinal questions; they will be the focus of the final report.

Continued Focus on Comprehensive Data Collection from Multiple Reporters

In Box II.2 and Table II.1, respectively, we provide a brief overview of the data elements collected in this round and the specific measures used. We detail these measures in the chapters in which we report them and in the Technical Appendix.

Box II.2 Overview of Baby FACES Data Sources and Measurement Approach at Age 2

Parent Interview. The parent interview asked the person primarily responsible for the care of the study child (we describe below how we identified this child) about the demographic characteristics of the family and child, their service needs and use, and their well-being. It also asked about the child's exposure to environmental health risks and environmental and routine supports for the child's growth and development. Parents were also asked to rate their children's development and behavior on a few assessments. The interview was conducted by telephone.

Direct Child Assessment and Home Observation. Mathematica field staff conducted the child assessment home visits. The assessments included administration of the Preschool Language Scale-4 Auditory Comprehension subscale (Zimmerman et al. 2002) and measurement of height and weight. While in the home, the field assessor also observed the child's ability to focus on the tasks provided, the interactions between the child and parents, and the quality of the home environment as support for the child's safety and development (both internal and external). These observation measures included the Bayley Behavior Rating Scale (BRS; Bayley 2006), the Home Observation for Measurement of the Environment (HOME; Caldwell and Bradley 2003), and scales drawn from a study of neighborhoods in Chicago (Ross et al. 2008).

Parent Self-Administered Questionnaire. While Mathematica field staff conducted the child assessment, parents were asked to rate their child's development and behavior using the Ages & Stages Questionnaires, Third Edition (ASQ-3; Squires et al. 2009); the MacArthur-Bates Communicative Development Inventories (CDI; Fenson et al. 2000); and the Brief Infant Toddler Social Emotional Assessment (BITSEA; Briggs-Gowan and Carter 2006). They also rated the quality of their relationship with the child's home visitor or teacher.

Parent-Child and Assessor-Child Interaction. At age 2, children participated in two semistructured interaction activities, playing with two sets of toys. These interactions were video-recorded for later coding of target behaviors. First, the parent and child were asked to sit on a mat and play with the contents of two bags of toys (this activity is known as the Two-Bag Task, an adaptation of the parent-child interaction task used in the EHSREP and the Early Childhood Longitudinal Study-Birth Cohort [ECLS-B]). Second, the field assessor and the child played with another set of toys, with the assessor following a standardized protocol called the Early Communication Indicator (ECI; Greenwood et al. 2006).

Staff-Child Report. Home visitors and teachers of study children assigned a child-specific rating with details on the characteristics and behavior of the families and children. Staff members also rated the quality of their relationship with the parents of study children.

Home Visitor/Teacher Interview. We interviewed children's home visitors and teachers to determine their demographic characteristics, tenure working for the program, and well-being, as well as training and education experiences provided by the program and the work environment. (We interview only staff members working with study children at the time of each data collection wave; we do not follow staff members over time unless they are still working with one or more study children.)

Classroom Quality Observation. To assess the quality of center-based services that study children received, a Mathematica field staff member observed the quality of children's classrooms using a set of measures. These measures included the number of children in the classroom and adults caring for them as well as the quality of the materials and the interactions between children and their teachers. For 2-year-olds, observers used the CLASS-T (Pianta et al. 2010). It is important to note that these observations assess the quality of care received by only the study children and are not necessarily representative of the quality of care that all children in the program receive. As we describe below, we sampled programs and attempted to recruit into the study all children in our age-eligibility windows; we did not sample at the classroom or home-visitor level. This approach limits the ability to generalize from the findings the quality of care in the Early Head Start program overall.[1] If more than one study child was in the same classroom, we conducted only one observation.

Home Visit Quality Observation. Field assessors observed the home visitors who provided services to children in the study sample using the Home Visit Rating Scales-Adapted (HOVRS-A; Roggman et al. 2009) and a form that assessed the content and characteristics of the visit. The home visit observations had the same generalizability limitations as the classroom observations. We scheduled an observation of each home visitor who had a study child in his or her caseload but did not observe a home visit for each child in the home-visiting option.[2]

Program Director Interview. Through a semistructured telephone interview, program directors reported on their demographic characteristics, credentials, and training; program implementation; the work climate and staff benefits; family characteristics and needs; services offered; and staffing and turnover.

Family Service Tracking (FST). To capture the services received by families, Early Head Start home visitors and teachers of study children completed a weekly service tracking form that detailed the number of service experiences (home visits or days in care) that study children received.

[1]The data collection approach requires that we present the program quality findings at the child level. As we describe further in Chapter V, we can make statements only about the quality of care received by children in the study.

[2]Before deciding on this approach (observing one visit per home visitor rather than one visit per child), we consulted with Lori Roggman, PhD, a developer of the home visit observation tool we used, to better understand how much variability we might expect among home visitors. According to Roggman, home visitors tend not to vary much in their quality ratings over different families (personal communication, April 2009). That is, home visitors possess a given level of quality and adeptness at conducting a home visit; quality level is independent of the family they are visiting. Given the enormous constraints in scheduling observations of visits during the brief time we had on site, we opted to observe each home visitor only once and apply those ratings to all the study children on that home visitor's caseload, much as we did for observations of classrooms with more than one study child in attendance.

Table II.1. Key Measures Used in This Report

Program Characteristics and Implementation: Chapter 3	
Program Approach: Program Level	Program approach at the program level is based on director responses to questions regarding the types of services their programs offer (center-based, home-based, or combination) and, separately for each service option, the frequency of services offered.
Program Approach: Family Level	Program approach at the family level is based on information collected during interviews with parents. Parents were asked whether they receive center-based services, home-based services, family child care services, or another type of service. Parents also indicated the frequency of center attendance and home visits received.
Staff Characteristics and Program Quality: Chapter 5	
The Center for Epidemiologic Studies Depression Scale—Short Form (CESD-SF; Radloff 1977; Ross et al. 1983)	The CESD-SF is the short form of the full-version CESD, which is a self-administered screening tool used to identify symptoms of depression or psychological distress. The tool was used to measure depression symptoms in teachers and home visitors.
Parent-Caregiver Relationship Scale (PCRS; Elicker et al. 1997)	The PCRS measures the perceived relationship between the parent and the primary caregiver (that is, provider, teacher, or home visitor) of infants and toddlers. Items capture important dimensions of the parent-caregiver relationship, including trust and confidence, communication, respect/acceptance, caring, competence/ knowledge, partnership/collaboration, and shared values.
Staff Demographic Characteristics	The teacher and home visitor interviews included sections with items that broadly covered parent participation in the program, staff training and supervision, staff benefits and morale, languages spoken (by the staff member and by families in the classroom or caseload), racial/ethnic group membership, and education.
Classroom Assessment Scoring System, Toddler Version (CLASS-T; Pianta et al. 2010a, 2010b)	Classroom observations of 2-year-olds used the CLASS-T (Pianta et al. 2010a), an adaptation of the Pre-K CLASS (Pianta et al. 2008), which focuses on teacher-child interaction quality in toddler child care classrooms. The CLASS-T measures process quality along eight dimensions (Positive Climate, Negative Climate, Teacher Sensitivity, Regard for Child Perspectives, Behavior Guidance, Facilitation of Learning and Development, Quality of Feedback, and Language Modeling) within two domains: Emotional and Behavioral Support and Engaged Support for Learning. Dimensions are defined by observable indicators along a seven-point scale, with ratings reflecting scores in the low (1–2), mid (3–5), and high (6–7) ranges.
Child-Adult Ratio	Center-based classroom observations also included child-adult ratios and group sizes.
Home Visit Rating Scale-Adapted (HOVRS-A; Roggman et al. 2009), modified from the HOVRS (Roggman et al. 2006b)	Observations of home visits used the HOVRS-A, an adaptation of the HOVRS. The HOVRS-A consists of seven items measuring the quality of home visitor strategies and effectiveness at involving and engaging the family during home visits.
Home Visit Characteristics and Content (Boller et al. 2009)	During structured observations of home visits, field staff also collected data on the topics covered, activities, and structure of the home visit.
Family Characteristics, Parenting, and the Home Environment: Chapter 6	
Financial Difficulties (SIPP 1996)	Parents reported whether they encountered any of five financial difficulties, including not being able to pay rent and bills, having services disconnected, or being evicted.
Food Security (United States Food Security/Hunger Survey Module, USDA 2008)	Parents reported whether they encountered any of five food security difficulties, including not being able to afford balanced meals, relying on low-cost food, and being worried that food would run out.

Maternal Demographic Risk Index (ACF 2001)	The maternal demographic risk index captures the multiple dimensions of risk of poor developmental outcomes a child may face as a consequence of his or her mother's socioeconomic circumstances. The index comprises three risk groups (lower, medium, and highest). The index was constructed by summing the number of the following risk factors that the mother faced: (1) being a teenage mother, (2) having no high school credential, (3) receiving public assistance, (4) not being employed or in school or training, and (5) being a single mother.
Maternal and Family Characteristics	The parent interview included sections that broadly covered many aspects of the family and home environment, including family racial/ethnic membership, languages spoken in the home, program services received, parent and child health, family routines, income and housing, and income and needs.
Parent-Child Interaction Rating Scales for the Two-Bag Assessment: Parenting Behaviors	The Parent-Child Interaction Rating Scales for the Two-Bag Assessment consist of 12 scales that assess a range of child and parent behaviors. Each of eight parent behaviors is rated along a seven-point scale, ranging from a very low incidence of the behavior to a very high incidence of the behavior.
The Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO; Cook and Roggman, 2009; Roggman et al. 2009)	The PICCOLO is an observational instrument designed to measure positive parenting along four domains known to support children's early development: (1) affection, (2) responsiveness, (3) encouragement, and (4) teaching. Twenty-nine behaviors are rated on a three-point scale, ranging from "absent" (0) to "clearly evident" (2). Behaviors that are infrequently or "barely" observed are indicated by a score of 1. The domains of affection, responsiveness, and encouragement each comprise seven items; the teaching scale consists of eight items. In Baby FACES, scores for each item are collapsed into a binary scale in which ratings of "0" and "1" are combined and represented by values of 0, to reflect behaviors that are absent or infrequently observed; a behavior that is clearly evident and frequent in occurrence and/or intensity is represented by a value of 1
Exposure to Violence	Exposure to Violence measures how many violent incidents (out of four) a child has observed in his or her lifetime. Items come from the Infant-Toddler Social and Emotional Assessment (Carter and Briggs-Gowan 2000). The assessment asks parents, for example, whether a child has "seen violence in their neighborhood" or "seen someone hit, push, or kick a family member."
Home Observation for Measurement of the Environment (HOME; Caldwell and Bradley 1984)	The HOME measures the quality of stimulation and support available to a child in the home environment. Information needed to score the inventory is obtained through a combination of parent self-reports and assessor observation conducted in the home with the child's parent while the child is present. We used selected items from the Infant version of the HOME inventory, the internal environment items from the Early Childhood version of the HOME, and neighborhood rating items from the Project on Human Development in Chicago Neighborhood (PHDCN). We derived from this assessment five subscales, as well as the total score.
External Environment	External environment is a measure of the physical and social environment of the face-block where the family lives (defined as the section of street between two cross streets or, if there are no cross streets, approximately five housing units on either side of the sample member's home). Items in this subscale are based entirely on assessor observations of the neighborhood, and include, for example, general condition of most of the housing units, garbage in the street or on the sidewalk, volume of traffic, and people arguing or fighting in the street. The items are recoded as 1 (yes) or 0 (no), and then summed. Scores can range from 0 to 8.
Neighborhood Disorder	Neighborhood disorder measures the physical and social environment of the face-block where the family lives. Items in this subscale are based entirely on assessor observations of the neighborhood, as described above. The scale score is the mean of the item z-scores. Higher scores indicate higher levels of disorder.

The Confusion, Hubbub, and Order Scale (the CHAOS scale; Matheny et al. 1995)	The CHAOS scale is designed to assess the level of confusion and disorganization in the child's home environment. It was completed by parents in self-administered questionnaire. The scale consists of 15 statements, to each of which a parent or caregiver responds on a four-point scale ranging from 1 (very much like your own home) to 4 (not at all like your own home). A single scale score is derived from the CHAOS scale by summing the responses for the 15 items. Totals can range from 0 to 45. A higher score represents a more chaotic, disorganized, and hurried home.
The Center for Epidemiologic Studies Depression Scale—Short Form (CESD-SF; Radloff 1977; Ross et al. 1983)	The CESD-SF is the short form of the full-version CESD, which is a self-administered screening tool used to identify symptoms of depression or psychological distress. The tool was used in Baby FACES to measure depressive symptoms of mothers.
The Parenting Stress Index—Short Form (PSI-SF; Abidin 1995)	The PSI-SF measures the degree of stress in parent-child relationships. We included two subscales in Baby FACES: (1) the Parental Distress subscale measures the level of distress the parent is feeling in his or her role as a parent, and (2) the Parent-Child Dysfunctional Interaction subscale measures the parent's perception that the child does not meet expectations and that interactions with the child do not reinforce the parental role.
The Family Environment Scale, Family Conflict Subscale (FES; Moos 2002)	The FES was designed to measure the social and environmental characteristics of families. The Family Conflict subscale measures the extent to which the open expression of anger and aggression and conflict-filled interactions are characteristic of the family.
Two-Bag Task: Child Behaviors	The Parent-Child Interaction Rating Scales for the Two-Bag Assessment consist of 12 scales that assess a range of child and parent behaviors. Each of four child behaviors is rated along a seven-point scale, ranging from a very low incidence of the behavior to a very high incidence of the behavior.
Child Development: Chapter 7	
Preschool Language Scale—Fourth Edition (PLS-4; Zimmerman et al. 2002a, 2002b).	The PLS-4 is a direct child assessment used to evaluate receptive and expressive language skills, as well as understanding and use of grammatical rules for children from birth to 6 years of age. It is composed of two subscales: (1) Auditory Comprehension (AC) and (2) Expressive Communication (EC). We used the AC subscale for both of the English and Spanish editions of PLS-4 when children were 2.
Early Communication Indicator (ECI; Luze et al. 2001; Carta et al. 2010).	The ECI is a semistructured, play-based assessment designed to measure the expressive communication of infants and toddlers between the ages of 6 and 36 months along four key skill elements: (1) gestures, (2) vocalizations, (3) single-word utterances, and (4) multiple-word utterances. Assessors administered the ECI, which was video-recorded for later coding by staff at Mathematica.
MacArthur-Bates Communicative Development Inventories—Infant Short Form (CDI; Fenson et al. 2000)	The CDI is designed to assess children's early receptive and expressive language and communication skills through parent reporting. Two measures were derived from this form: (1) vocabulary comprehension and (2) vocabulary production.
Ages & Stages Questionnaires, Third Edition (ASQ-3; Squires et al. 2009)	The ASQ-3 is a parent-report tool for screening children from one month through 5-1/2 years of age for developmental delays in five key developmental areas: (1) communication, (2) gross motor, (3) fine motor, (4) personal-social, and (5) problem solving.
The Brief Infant Toddler Social Emotional Assessment (BITSEA; Briggs-Gowan and Carter 2006)	The BITSEA is the screener version of the longer ITSEA, which is designed to detect delays in the acquisition of social-emotional competencies as well as social-emotional and behavior problems in children 12 to 36 months old.
Bayley Behavioral Rating Scale (BRS) (Bayley 1993)	The BRS measures the child's behavior during child assessment. The BRS is one of the three component scales of the Bayley Scales of Infant Development—Second Edition (Bayley 1993). Baby FACES uses two subscales of the BRS: (1) Orientation/ Engagement, measuring the child's cooperation with the assessor during the assessment, positive affect, and interest in the test materials, and (2) Emotional Regulation, measuring the child's ability to change tasks and test materials, negative affect, and frustration with tasks during the assessment.

Characteristics of Early Exiters: Chapter 8	
Maternal Psychological Risk (ACF 2001)	This index of cumulative risk is based on (1) moderate or severe depressive symptoms, (2) reported parenting stress one standard deviation or higher than the sample mean on either the Parenting Stress subscale or the Parent-Child Dysfunctional Interaction subscale of the Parenting Stress Index, and (3) substance abuse problems, including parent reports of drug use in the past year or having ever had a drug or alcohol problem. Scores are classified as no risk (no risk factors), medium (one risk factor), and high (two or three risk factors).

Note: Each chapter presents additional information about the measures used in it. Appendix C describes the psychometric properties of each constructed variable.

Consent, Response Rates, and Attrition Are High

We selected a nationally representative sample of 89 programs, and within those programs, we recruited and attempted to enroll all children in two birth cohorts: newborns and 1-year-olds (their age at enrollment in the study in 2009). Volume II of the baseline report details the sampling and stratification process and the birthday windows that defined eligibility for the study. Table II.2 illustrates sample sizes and response rates for both waves of the study to date.

Consent and response rates to the various elements of the study were high at baseline and remained high in the current wave of data collection (Tables II.2 to II.5). However, attrition from the program also continues to be higher than expected, with 258 families leaving Early Head Start by spring 2010 (26 percent of the sample that was eligible and gave consent to be in the study).[9] Most exits from the program occurred in the summer of 2009. (We further detail the timing of exits in Chapter VIII and the Technical Appendix.)

Table II.2. Sample Eligibility, Consent, and Response Rates at Baseline, Spring 2009

Cohort	Eligible Children	Parental Consent Obtained (Percentage)	Parent Interview Completed (Percentage)	Teacher/ Home Visitor Interview Completed (Percentage)	Staff-Child Reports (SRCs) Completed (Percentage)	ITERS-R Completed (Percentage)	HOVRS-A Completed (Percentage)
Newborn	224	194 (86.6)	175 (90.2)	n.a.	185 (95.4)	n.a.	n.a.
1-Year-Old	883	782 (88.6)	719 (91.9)	n.a.	748 (95.7)	223 (94.9)	242 (89.3)
Total	**1,108**	**976 (88.1)**	**894 (91.2)**	**229 (93.1)**	**933 (95.5)**	**223 (94.9)**	**242 (89.3)**

Source: Spring 2009 Sample Management System.

Note: The percentages completed are based on the number of parents who consented to participate in the study.

n.a. = not applicable; ITERS-R = Infant Toddler Environment Rating Scale-Revised; HOVRS-A = Home Visitor Rating Scale-Adapted.

[9] Only families enrolled in Early Head Start are eligible to continue participation in Baby FACES.

Table II.3. Parent Interview and Child Assessment Response Rates, Spring 2010

Cohort	Study Children Who Remained Enrolled in EHS	Parent Interview Completed (Percentage)	Parent Self-Administered Questionnaire (Percentage)	Child Assessment (Percentage)	Exit Interview Completed (Percentage)
Newborn (at age 1)	135	108 (80.0)	n.a.	n.a.	36 (57.1)
1-year-old (at age 2)	600	475 (79.2)	537 (89.5)	547 (91.2)	102 (53.2)
Total	**735**	**583 (79.3)**	**537 (89.5)**	**547 (91.2)**	**138 (53.5)**

Source: Spring 2010 Sample Management System.

Note: In 2010, children in the Newborn Cohort were 1 year old, and children in the 1-year-old Cohort were 2. Percentage completed is based on the number of parents who gave consent and who remained enrolled in Early Head Start in spring 2010. Those eligible for the exit interviews are the 258 families who left the program between the end of the spring 2009 data collection and the beginning of the spring 2010 round.

Table II.4. Response Rates to Staff Interviews, Staff-Child Reports, and Observations

Cohort	Teacher/Home Visitor Interview Completed (Percentage)	Staff-Child Reports Completed (Percentage)	ITERS-R Completed (Percentage)	HOVRS-A Completed (Percentage)	CLASS-T Completed (Percentage)
Newborn (at age 1)	--	128 (94.8)	53 (98.1)	--	n.a.
1-Year-Old (at age 2)	--	575 (95.8)	n.a.	--	220 (98.6)
Total	**489 (97.9)**	**703 (95.6)**	**53 (98.1)**	**193 (83.2)**	**220 (98.6)**

Source: Spring 2010 Sample Management System.

Note: Cohort-specific response rates are not meaningful for teacher/home visitor interviews or for HOVRS-A observations, because teachers and home visitors were observed once, and each could have children from both cohorts in their classrooms or on their caseloads.

n.a. = not applicable; ITERS-R = Infant Toddler Environment Rating Scale-Revised; HOVRS-A = Home Visitor Rating Scale-Adapted; CLASS-T = Classroom Assessment Scoring System-Toddler Version.

Table II.5. Program Level Response Rates, Spring 2010

Instrument	Number (Percentage)
Program Director Interview	89 (100)
Program Director SAQ	83 (92.3)
Total	**89**

Source: Spring 2010 Sample Management System.

Note: We asked each of the 89 program directors to complete a self-administered questionnaire (SAQ) as well as a semistructured telephone interview.

Family Services Tracking Reports on Weekly Service Receipt

This report includes a new source of data since the baseline report—the family services tracking system (FST), which records the services each study family receives over time. Because of the longitudinal nature of the data, they are inherently more complex to analyze than the other instruments we collected, and we include more detail here. The form itself and procedures are simple: The staff member with primary responsibility for providing services to a study child completes a brief weekly report of the specific services the child received, including information on the following:

- Whether there was a change in the child's service type or teacher/home visitor
- Child attendance (the number of home visits completed and planned or offered each week and/or the number of center days completed and planned or offered each week)
- Receipt of supplementary services
  - Child screenings: developmental, health, on-site services
  - Referrals made for the child or another family member for health care, prenatal care, mental health care, disabilities services, Part C, Early Head Start child care partner,[10] child care provider, or other community service provider
  - Parent attendance at a prenatal education, parenting education, or other training session

The FST was introduced to programs on a rolling basis from April to September 2009. Because most programs had begun using the FST by July 2009,[11] the data we analyze for this report cover a 52-week period from July 2009 to June 2010. During this period, we received at least one report for 830 children (673 children from the 1-year-old Cohort and 157 children from the Newborn Cohort) of the 973 children with parental consent between the first two data collection points (spring 2009 through spring 2010).

FST data come from all 89 programs, but programs vary in the degree to which they completed and submitted reports. The percentage of study children within an individual program for which at least one report was submitted ranged from 4 percent (1 program) to 100 percent (30 programs). On average, programs submitted at least one report for 88 percent of study children enrolled in their program.

Staff filled out FST reports in varying degrees of completeness. At a minimum, an FST report contains the type of service the child received that week and identifies the child's teacher or home

[10] Early Head Start programs can provide Early Head Start services through a child care partner, or they can refer families to child care providers in the community. In the first instance, the child would be receiving Early Head Start child development services through the partner and the latter would not be.

[11] One program began using the FST in September 2009.

visitor that week. It usually provides attendance data, as well.[12] Supplementary services data were provided less often than attendance data.[13]

Staff were asked to complete FST reports for a given child/family in each week that the child was enrolled in Early Head Start. Thus, a child who did not leave his or her Early Head Start program (or left after June 2010, the end of the FST period) was eligible for 52 reports. On average, children were eligible for 45 weeks and received 32 reports (71 percent of reports submitted). Children who had not left their Early Head Start programs during the FST period (July 2009 through June 2010) were eligible for 52 weeks and had 38 reports submitted (73 percent), on average. Children who left during the FST period were eligible for an average of 23 weeks and had an average of 15 reports submitted (65 percent).[14]

The number of consecutive weeks for which we had missing reports for a child varied widely, ranging from 0 to 47 weeks between FST reports. Of the 806 children who received at least two FST reports, 285 (35 percent) had 0 gaps, 331 (41 percent) had gaps of 2 to 4 consecutive weeks, 102 (13 percent) had gaps of 5 to 9 consecutive weeks, and 88 (11 percent) had gaps of 10 or more weeks.

Several factors contributed to variation in the number of reports per child. As described above, fewer reports were filed for children who left their Early Head Start programs during the FST period. In addition, the number of FST reports received varies throughout the year. Figure II.1 shows that the number of eligible children increased initially as the FST was introduced to programs. After this initial period, the number of eligible children declined steadily due to exits from the program. The number of FST reports received each week also exhibited a declining trend overall, but dipped noticeably during the holiday season.[15]

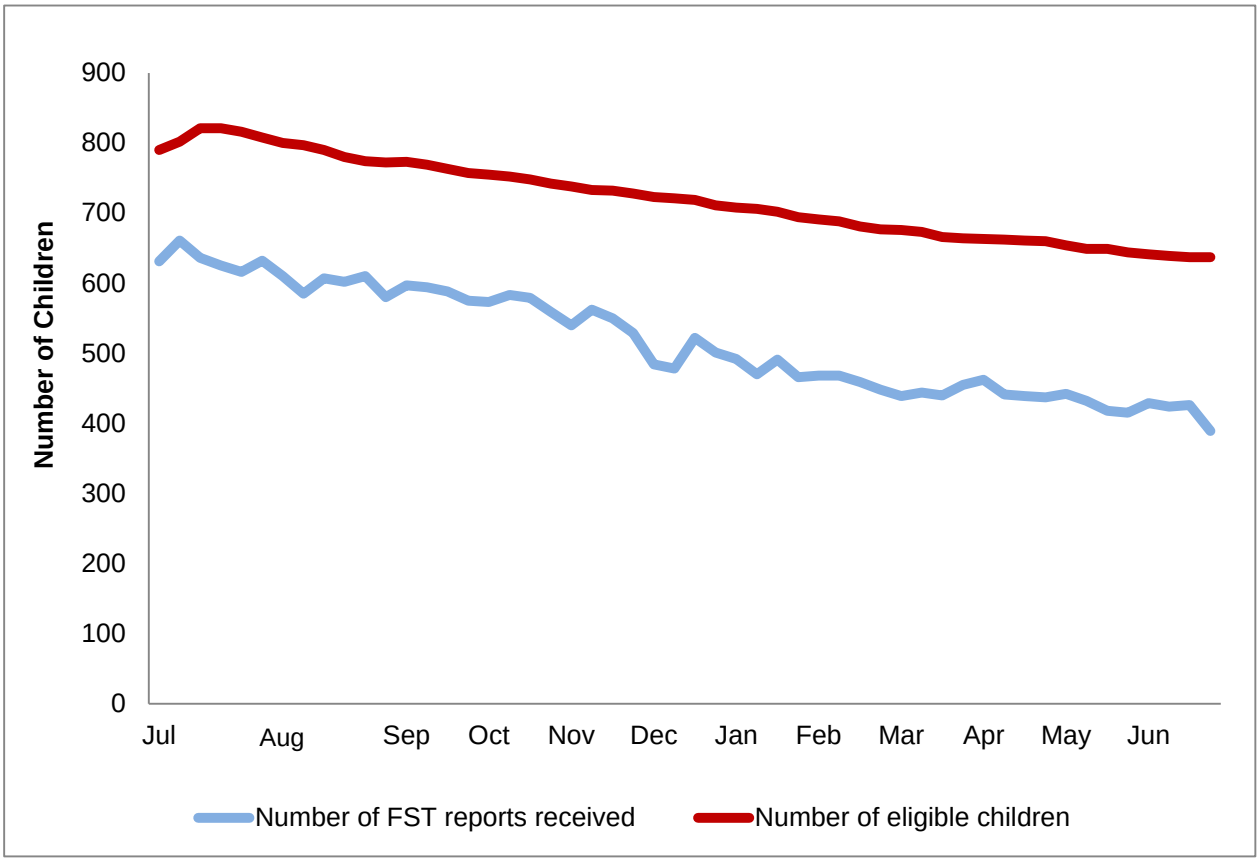
[12] On average, nearly all FST reports (97 percent) submitted for a child included attendance data. Eighty-three percent of FST reports included referral data, 61 percent included screening data, and 53 percent included parent education data.

[13] As one of several efforts to increase response rates to the FST, we did not require that staff complete the supplemental services section to submit a form for a given week. Appendix D describes other approaches we undertook to encourage high rates of response to the FST.

[14] These averages might reflect a lag between the week the children stopped attending their Early Head Start programs and the date of their formal disenrollment. The average number of weeks between the last FST report received and a child's exit date is six, which roughly corresponds to the disenrollment policies that directors report for number of consecutive absences (see the more detailed discussion in Chapter IV).

[15] Although programs are supposed to file FST reports when they are not operating, the prevalence of program closures over the summer and in December and January might contribute to lower FST response rates at those times (see Chapter III for a more detailed discussion).

Figure II.1. Number of Eligible Children and Number of FST Reports Received by Week



Source: Family Service Tracking Reports, July 2009 – June 2010.

Note: This figure contains data on the 832 children with at least one FST report during this period.

FST completion rates also varied by service option. We received more reports for children in home-based care, and fewer for children in center-based care. The pairwise correlation between the percentage of time a child spent in center-based care and the percentage of eligible FST reports received is -0.07 (p-value = 0.03), and the pairwise correlation between the proportion of time spent in home-based care and the percentage of reports received is 0.06 (p-value = 0.06).[16]

Demographics Are Similar to Baseline and Between Cohorts

At the time of the baseline data collection in 2009, we collected data from 683 parents of 1-year-olds and 174 parents of newborns on household demographics including income, household size and composition, parent and child ethnicity, and parent education and employment. The cohorts share similar baseline characteristics and the sample that remains in the study is similar to the full sample present at baseline. Although this report focuses on the characteristics of our older cohort at age 2, we present our between-cohort comparisons at baseline and in this follow-up wave to show their similarities. We highlight statistically significant differences in demographics between the two cohorts,

[16] The proportion of time spent in center-based care ranges from zero to one: zero for children receiving only home-based services and one for children receiving only center-based services. Children who change service type will have values between zero and one.

and differences between those who left Early Head Start and those who remain in our sample. Finally, we note any demographic differences between the current and the baseline samples by cohort. Overall, the sample presented in this report is similar to the sample in the baseline report.

In spring 2009, families in the Newborn Cohort shared characteristics similar to those in the 1-year-old Cohort, though there were some notable differences.[17] Children in the Newborn Cohort were less likely to have a father or father figure present in the home. A very small percentage of 1-year-olds lived with only a birth father (1 percent) or no biological parent (2 percent), whereas newborns lived with only a birth mother or both biological parents. Fewer newborns that did not live with their birth father had father figures present in their homes (5 percent versus 12 percent). Parents of newborns were younger and more likely to be teen parents—on average, two years younger than parents of 1-year-olds. A larger percentage of mothers (29 versus 18 percent) and fathers (19 versus 8 percent) of newborns were teenagers. Fathers of newborns were more likely to be of a minority race, as were their children. A larger percentage of fathers of newborns were African American (34 versus 22 percent), and fewer fathers were white (25 percent). Fewer newborn children were white (24 percent) compared with 1-year-old children. Economically, families with newborns had in general fewer resources. Households with newborns were more likely to have incomes below $10,000 and to have incomes between 0 and 50 percent of the federal poverty level. Fewer mothers of newborns (45 percent), as might be expected, had worked in the past 12 months.

In the year after the start of the study, a substantial number of families left Early Head Start, and we did not obtain complete information for some families on all instruments (see information on response rates, above). For the parent interview, specifically, 208 families in the 1-year-old Cohort and 66 families in the Newborn Cohort that had completed the 2009 parent interview survey did not complete the 2010 survey (30 and 38 percent, respectively). There are few significant differences between those who left the program and those who were retained. Those who left the program on average were more mobile than those who remained and had more maternal risk factors. Otherwise, the demographic description of the sample after attrition at baseline is largely similar to the original full sample. Chapter VIII details how families that remained in the program in 2010 differ from those who left in the prior year.[18]

A year after baseline, the picture of families participating in our study looks largely the same. However, there were a few significant differences between the two waves by cohort. Between baseline in spring 2009 and the follow-up in spring 2010, fewer children in the Newborn Cohort were living with both biological parents (from 48 to 44 percent). Mothers in both cohorts at follow-up were more likely to be advancing their education or job skills. Newborn Cohort mothers on average were more likely to be in job training during the follow-up interview than at baseline (12 versus 6 percent). More mothers in the 1-year-old Cohort on average were also taking classes at follow-up (32 versus 30 percent). A larger percentage of mothers in the 1-year-old Cohort also had a high school diploma or equivalent at follow-up (33 percent, compared with 31 percent at baseline). Chapter VI provides more information on families still in the study when their children turned 2 years old.

[17] All differences noted are significant at a 0.05 level.

[18] Chapter VIII defines someone who left Early Head Start or the study slightly different than we do here.

Data Collection Procedures and Field Training Were Rigorous

Our overall approach to training and data collection was rigorous and comprehensive. Training had three primary components. We report here on brief observations (including the CLASS-T, the ITERS-R, and the HOVRS-A), direct assessments of 2-year-olds, and coding of video-recorded parent-child and assessor-child interactions.[19] We organize observations by data type and source.

Training and Certification for Observations

The procedures for the ITERS-R and the HOVRS-A were similar to those employed in the baseline round of data collection (see Volume II of the baseline report). Field staff completed refresher training on the ITERS-R, then visited infant/toddler classrooms in small groups led by a gold standard trainer. Each observer conducted practice observations until he or she met the reliability standards established by the ITERS-R developer (80 percent agreement within one rating point with the developer-certified gold standard group leaders). Nineteen observers were certified to conduct ITERS-R observations. For the HOVRS-A, observers viewed video-recorded home visits and practiced coding each of the items separately. The observers were certified when they were able to code three videos with 80 percent exact agreement to the gold standard trainer for each of the subscales.

The CLASS-T was new for this wave of data collection and had not been widely used. Although our staff had experience with the prekindergarten version of the CLASS, two members traveled to the Frank Porter Graham Child Development Institute to meet with the CLASS-T developers and receive a preliminary training. These two Mathematica employees led planning of this aspect of the training and were responsible for overseeing it in the field. One of the measure authors and another staff member conducted the field training over two days. Field staff watched video clips, practiced coding, and discussed their answers. They then took a certification test with three videos. The reliability standard set by the measure developers is 80 percent agreement within one point with the master codes on three clips. Nineteen field staff reached this standard and were able to conduct CLASS-T visits in the field. Only staff who had achieved reliability and certification were allowed to conduct observations in the field.

During the field period, quality assurance staff (gold standards on the ITERS-R and HOVRS-A) observed a home visit and classroom for each of the field staff to ensure that they continued to be reliable. In the few cases in which an observer was deemed no longer reliable, a team leader conducted observations and worked with the observer until he or she once again achieved reliability.

Training and Certification for Child Assessments

Also new to the data collection in the first follow-up round were the direct assessments of 2-year-olds (the 1-year-old Cohort). Training consisted of question-by-question explanations on the Preschool Language Scale-Fourth Edition (PLS-4), instruction on the operation of the camera and tripod, and an explanation of the Two-Bag and Early Communication Indicator video-recorded play tasks. After five days of instruction and practice with targeted feedback, assessors had an opportunity to certify with a 2-year-old child. Project staff trained on the instruments observed each assessment, and each rated the performance of the field staff. Assessors who were not certified as reliable on the first try received feedback and had an opportunity to try again the next day with a different 2-year-old.

[19] Telephone interviewers completed the parent interview using computer-assisted telephone interviewing (CATI). The interviewers attended a two-day training session conducted by project staff on administration procedures, and Survey Operations Center supervisors monitored calls regularly.

After the training, assessors were provisionally certified to conduct the assessments. To achieve full certification, each assessor also had to record himself or herself administering the entire assessment to a 2-year-old child. Gold standards then reviewed the recording for final certification before sending the assessor into the field. Ultimately, a group of 31 field staff was certified to conduct assessments. Quality assurance observers visited each program site between the fourth and eighth weeks of data collection and observed each assessor conducting child assessments, providing feedback as necessary.

Video Coder Training and Certification

A second part of the assessment activities conducted with 2-year-olds was the Two-Bag Task, an eight-minute, semistructured free-play task administered to parents and children. Following the parent-child play assessment, the assessor and child engaged in a six-minute, play-based communication task (the ECI). Both assessments were video-recorded for subsequent coding by staff at Mathematica. Teams of coders used two coding schemes for the Two-Bag recordings (the Two-Bag Parent-Child Interaction Rating Scales and the PICCOLO; see Appendix C for details).

Members of the Mathematica coding team were trained by certified trainers with extensive experience coding the Two-Bag Task using the Parent-Child Interaction Rating Scales and the PICCOLO. For the former, coders were asked to independently code a video-recorded interaction coded a priori by the trainer, to serve as the certification video. The certification criterion required that coders achieve 91.67 percent agreement (exact or within one point) with the ratings assigned by the trainer. A second and third certification video was available to coders who did not certify on the initial certification video. Trainers followed a similar certification procedure for the PICCOLO. Specifically, coders were required to achieve 80 percent exact agreement with the gold standard scores across the four certification videos.

Following training and certification, two trained coding team leaders worked with a five- to eight-member team to establish and maintain inter-rater reliability throughout the coding period. For coding using the Parent-Child Interaction Rating Scales, inter-rater reliabilities between the team leaders and coding team members were established on the 12 seven-point scales to a criterion of 80 percent, allowing for a one-point difference in scores. Thereafter, the team conducted weekly inter-rater reliability checks on three to five randomly selected videos. A total of 55 videos (10.8 percent of the 511 codable videos) served as reliability videos.

For coding of the Two-Bag Task using the PICCOLO, inter-rater reliabilities between the team leaders and coders were established on the 29-item binary scale to a criterion of 80 percent exact agreement. Weekly inter-rater reliability checks were conducted on three to five randomly selected videos. A total of 53 videos (10.4 percent of the 509 codable videos) served as reliability videos.

Training on the ECI was conducted by two ECI expert consultants. Following the procedures described above, coders were required to become certified on two videos coded a priori by the developer. The certification criterion required that coders achieve 85 percent agreement with the gold standard ratings on each video. Coders were allowed to recode the videos as many times as necessary until meeting the certification criterion. Inter-rater reliabilities between the team leaders and coders were established to a criterion of 80 percent agreement. Thereafter, the team conducted weekly inter-rater reliability checks on three to five randomly selected videos. A total of 54 videos (10.4 percent of the 518 codable videos) served as reliability videos.

Approach to Weighting and Analysis

Similar to the baseline report, this report presents descriptive information on program, families, and children in our sample. Because we selected a nationally representative sample of programs and children in our two cohorts, we use weights so that our findings generalize to all Early Head Start programs and children who were enrolled in spring 2009 and continued to be enrolled in spring 2010. Because we are in our second round of data collection, we had to update our weights to reflect the fact that our current sample now consists of 1- and 2-year-olds who continued to be enrolled in Early Head Start in 2010. Therefore, we constructed new child-level weights, focusing on age levels, as well as weights for FST data and families that exited the program early. We constructed preliminary age-2 weights for 1-year-old Cohort children at age 2, because we based our main findings at age 2 on them. These weights will be finalized when we collect data on the Newborn Cohort at age 2 in spring 2011, enabling us to make statements about all 2-year-olds, regardless of cohort. Appendix A details the weighting procedures.

Child-Level Weights

Child-level weights are based on child-level data (such as staff child reports and child assessments) or staff-level data (such as staff interviews and observations). We first constructed a child-level base weight to predict a "complete," which indicates both parental consent and at least one parent interview. By applying a child base adjustment, we weighted up children with consent and with a parent interview to reflect all eligible children (by age and time). All children with a positive value for the base weight had demographic data from the parent interview that could then be used for nonresponse adjustments in the other child-level weights.

Next, to create weights for analyzing families that left the program early and the FST data, we required that the children have parental consent between the first two data collection points (spring 2009 through spring 2010). Of 1,106 eligible children (224 in the Newborn Cohort and 882 in the 1-year-old Cohort), 973 children (194 in the Newborn Cohort and 779 in the 1-year-old Cohort) met the consent criterion.

Early Exiter and FST Weights

We created a child-level weight for comparing children and families who exited the Early Head Start program during the first study year with those who remained. This weight adjusted for the program's probability of selection and participation in the study, and whether the child had parental consent.[20]

To construct the weight for exiters completing an exit interview, we started with the consent-adjusted weight described above and excluded those who had not exited the program or had recently exited.[21]

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[20] The consent-adjusted weight for the 973 children with parental consent sums to 6,215 (1,157 for the Newborn Cohort and 5,058 for the 1-year-old Cohort).

[21] The exit interview-adjusted weight for the 128 children with a completed exit interview (33 from the Newborn Cohort and 95 from the 1-year-old Cohort) sums to 1,354 (314 for the Newborn Cohort and 1,040 for the 1-year-old Cohort).

Finally, we constructed a weight for use with the FST data. Again, we started with the consent-adjusted weight, then adjusted for whether we received any FST data for the child during the year.[22]

Analytic Approach

The bulk of this report focuses on the experiences of 2-year-olds in our sample and their families. The Newborn Cohort at age 1 is small, and findings combining those children with baseline information on the 1-year-old Cohort (in other words, combining all 1-year-old children across cohorts) are similar to results presented in the previous report on the 1-year-old Cohort.[23] However, we report for the entire sample on services received over the course of the year, teacher and home visitor characteristics, and the quality of the services provided.

We approach reporting in two ways. Our main approach is to provide descriptive information such as means and standard errors (weighted as appropriate) for our sample and compared with normative or national-level data, as available. For most comparative analyses we use *t*-tests. For analysis of quality data (classroom and home visit) we use chi-squares to illustrate how quality relates to staff and program characteristics. For analysis of service use, we present means and standard deviations using multiple imputation to account for missing data. For analysis of predictors of early program exit, we construct multiple regression models using program, staff, and family and child characteristics. We do not present models that describe service use and relationships to outcomes; they will appear in our next report, which will assess children at age 3.

[22] The sum of the FST weights is 6,215 children (1,157 for the Newborn Cohort and 5,058 for the 1-year-old Cohort).

[23] For completeness, Appendix E provides information on all 1-year-olds overall and by cohort. We also present earlier in this chapter comparisons between cohorts at baseline.

III. PROGRAM CHARACTERISTICS

We continue to focus on characteristics of the Early Head Start programs in the Baby FACES sample in an ongoing effort to understand how they operate, what policies they follow, and how they provide services. We know from the Early Head Start Research and Evaluation Project (EHSREP) that all service approaches—center-based, home-based, and mixed—had positive impacts on children and families, but the impacts differed somewhat by program approach (ACF 2002a). Within the bounds of the performance standards, programs have latitude to determine the services they provide based on how they can best serve their communities. An advantage of a longitudinal study like Baby FACES is that it provides an opportunity to ask new questions in subsequent data collection waves as issues arise. Accordingly, to answer questions that came up in our analysis of the baseline data, in this wave of data collection, we spoke in-depth with program directors about somewhat different aspects of program operations than we had discussed in the first year. New topics include directors' plans for American Reinvestment and Recovery Act of 2009 (ARRA) funds (if they received them), a refinement of implementation measures, and other aspects of operations. Much of this chapter will focus on these new topics.

Increased Use of Multiple Approaches

As noted earlier, the approach that programs take to provide services has been linked to the types of effects of the program in the EHSREP. In the baseline year of the study, as we have seen in other work, most programs employed multiple approaches, providing families with more than one service option (71 percent multiple-approach, 15 percent center-only, and 14 percent home only; Vogel et al. 2011).[24] Although we did not expect large changes in approach over a year, we found that five additional programs reported being "multiple-approach" (offering both center- and home-based services), bringing the total proportion to 74 percent (Table III.1). The five new multiple-approach programs were home-based only in 2009 and all added center-based slots in 2010. Four of these five programs added center-based slots after receiving ARRA expansion funds. (The following sections further detail how ARRA expansion programs used these funds.)

Table III.1. Program Approach in Spring 2009 and 2010 (Weighted Percentage of Programs)

		Program Approach 2010		
		Center-Only	Home-Only	Multiple
Program Approach 2009	Center-Only	100 (0)		
	Home-Only		100 (0)	5.2 (2.54)
	Multiple			94.8 (2.54)
	Sample Size	**15**	**9**	**65**

Sources: Spring 2009 and 2010 Program Director Interview.

Note: Five home-only programs changed to multiple-approach by spring 2010

[24] Note that "multiple-approach" describes *programs* that offer more than one service option to families (usually both home- and center-based services); the "combination" option refers to *families* who receive both home- and center-based services concurrently.

Within multiple-approach programs, about half of families are in the home-based option (50 percent) and slightly fewer than half are in center-based (41 percent). Seven percent are in the combination option and receive both center-based care and home visits monthly or more often (Table III.2).

Table III.2. Weighted Proportion of Families in Each Service Option in Multiple-Approach Programs

Service Option	Weighted Percentage (Standard Error)
Center-based	41.4 (4.18)
Home-based	49.8 (2.95)
Combination (both center and home visits)[a]	7.0 (3.25)

Source: Spring 2010 Program Director Interview.

[a] Combination is defined at the family level as receiving weekly center-based services and home visits monthly or more often. Prior research (specifically the Survey of Early Head Start programs, or SEHSP) uses this definition (Vogel et al. 2006).

Few Programs Offer Family Child Care

In addition to center-based and home-based options, Early Head Start programs may provide child care services through the family child care option. Eleven percent of programs offer the family child care option, and among those programs, all reported offering multiple-approach services. Just 12 percent of their families receive the family child care option. Most of the families in these programs receive either center-based (42 percent) or home-based (41 percent) services, and 5 percent receive a combination of home- and center-based services.

Programs Operate Few Centers; Most Are Full-Day, Year-Round

Early Head Start programs offering center-based services vary greatly in the number of centers they either operate or partner with to provide services, but most programs have only a few. The number ranges from 1 to 21, but the average is only 3. More than half of programs operate 1 or 2 centers (56 percent). Fewer than 5 percent operate 10 or more centers.

Among programs that offer center-based services, three-quarters operate centers that are open all full-day and year-round; the remaining one-quarter operate at least one center that is open for only part of the day and/or part of the year. When we consider the percentage of all centers, 84 percent operate full-day and year-round; about 10 percent operate part-day, year-round; and 6 percent operate full-day but part of the year (Table III.3).[25]

[25] There is a chance that some centers operate part-day for part of the year because enrolled families are receiving the combination option. However, we cannot link the services provided at specific individual centers and the service options received by families enrolled at those centers.

Table III.3. Early Head Start Center Operating Schedules

	Mean/Percentage (Standard Error)
Percentage of centers that operate	
Full-day, year-round	83.8 (2.46)
Full-day, part-year	5.7 (1.42)
Part-day, year-round	10.3 (2.05)
Part-day, part-year	0.2 (0.15)
Mean hours of operation, full-day centers	9.2 (0.12)
Mean hours of operation, part-day centers	7.2 (0.44)
Sample Size	**267-273**

Source: Spring 2010 Program Director SAQ.

Note: Among programs that offer the center-based option. Because we asked program directors about all their centers, we can describe here schedules among all Early Head Start centers, not only those with the Baby FACES sample children.

The average number of hours full-day centers operate compared with part-day centers differs by only two hours. (This short span may be attributable to part-day centers offering morning and afternoon sessions, but we did not ask for verification.) Part-day centers are open an average of 7.3 hours, typically opening at 8 a.m. and closing at 3 p.m. Full-day centers are open an average of 9.2 hours, typically opening at 7:25 a.m. and closing at 4:35 p.m.

Extended Program Closures Are Relatively Uncommon

During the course of data collection in the baseline year, we learned that some programs close for several weeks at a time. To gain more information about the duration and timing of such closures, we added to the 2010 program director interview a question about closure policies. We learned that about one-quarter of programs (28 percent) close for three or more consecutive weeks during the year, with closures ranging from 3 to 10 weeks.[26] Not unexpectedly, most of these closures occur in the summer months (June through September), but some take place in December and January.

Programs that close for three weeks or more offer multiple-approach (76 percent) or center-based (24 percent) services; none are home-based-only programs. Because programs that offer center-based services may do so in more than one center, we asked program directors to report on closures for each of the centers they either partner with or operate. Among programs that do close, nearly half (45 percent) close all sites; just over half (55 percent) close only select sites (Table III.4).[27,]

[26] Although 18 programs indicated they close for three or more weeks, an additional 9 programs indicated they had a classroom or partnered with at least one center that did so.

[27] We can make statements at the center level as well as at the program level because program directors reported on all the centers they either operate or partner with. Because many programs operate more than one center and typically only a subset of centers are located in schools, it is perhaps more meaningful to discuss the proportion of centers in schools at the *center level*. Accordingly, about half of all centers that close for three or more weeks are located in schools (not shown).

Table III.4. Nature and Extent of Extended Program Closures, Weighted

	Percentage or Mean (Standard Error)	Sample Size
Program closes for three or more consecutive weeks	27.5 (5.35)	89
Mean weeks closed (among programs that close)	5.1 (0.36)	18
Closure is program-wide (among programs that close)	44.7 (12.58)	27
Closure is at a specific center (among programs that close)	55.3 (12.58)	27
Some or all centers located in a school	19.2 (4.56)	89
Center that closes is located in a school (among programs that close)	39.9 (12.42)	27
Sample Size	**18–89**	

Sources: Spring 2010 Program Director Interview and SAQ.

Another program feature that we first learned about during the baseline round of data collection is that some programs (20 programs, or 22 percent) change their service options in the summer. Most programs changing service options during the summer offer home-based services only, either changing from a center-based only option or moving from multiple-approach to home-based only (80 percent). Seven percent move from the center-based option to offering group socializations only; and 9 percent make unspecified changes (Table III.5). One home-based program (representing 4 percent of the sample) changes to a "limited home-based" option. Half of the programs that close for three or more weeks also change their service option during the summer; some of these centers are located in schools. Among the one-fifth of programs that have at least one center operating in a school, 66 percent close for three or more weeks, and 59 percent change options; 51 percent do both, meaning that at separate times, these programs close, and at others, they change their service option.

Table III.5. Nature of Changes to Approach in Summer

Primary Service Option	Summer Service Option	N	Percentage (Standard Error)
Center-based	Home visiting	15	72.4 (10.14)
Center-based	Group socializations	2	7.3 (5.80)
Home-based	"Limited home-based"	1	3.6 (3.58)
Multiple-approach	Home visiting and group socializations only	1	7.6 (7.55)
Multiple-approach	Other	1	9.2 (0.26)
Sample Size		20	

Source: Spring 2010 Program Director Interview.

N = number of programs that change.

Policies Support Continuity of Care and Transitions

It is well accepted that the quality of the relationship between infants and toddlers and their teachers predicts later cognitive and noncognitive outcomes (National Research Council and Institute of Medicine 2000; Parkian and Seibel 2002). One critical way to support relationships between infants and toddlers and their teachers is to ensure that these relationships continue throughout the child's participation in the program. Accordingly, Early Head Start places a high premium on continuity of care to enrolled children. Directors were nearly unanimous in reporting that each child in the center-

based option is assigned to a teacher (99 percent of programs' centers use this approach; Table III.6).[28] Minimizing turnover among staff is another way to support continuity of care. (Chapter V discusses the rates of staff turnover among both center-based teachers and home visitors, and Chapter IV describes the frequency at which children experience changes in teachers.)

Table III.6. Policies for Continuity of Care in Early Head Start Centers

	Percentage (Standard Error)
Assign a teacher to all children	99.2 (0.65)
Children stay with the same teacher throughout Early Head Start	67.8 (3.10)
Children change teachers as they get older[a]	23.2 (2.90)
Sample size	**266–282**

Source: Spring 2010 Program Director SAQ.

Note: Among programs that offer the center-based option. Because we asked program directors about all their centers, we can describe here policies among all Early Head Start centers, not only those with the Baby FACES sample children.

[a] Values do not add to 100, because 9 percent of programs selected the "other/specify" response (for example, one response was "children stay with the same teacher when possible.")

Another mechanism to support continuity of care is to allow children in center-based programs to remain with the same teacher throughout their enrollment, as opposed to changing to a new teacher each year or as they reach transitional ages. Most programs offering center-based services allow children to stay with the same teacher (this approach can be through looping, where groups of children approximately of the same age remain with the same teacher or, through mixed-age classrooms that serve children across the entire age span). In 68 percent of centers, children stay with the same teacher as they get older. For the other centers, the children move to a new teacher and classroom as they get older.

Programs Vary Widely in Their Use of Data

Programs have the potential to collect a variety of useful information that can inform their day-to-day operations, staff supervision, and implementation goals. All programs are required to complete an annual Program Information Report (PIR) that specifies the number of families and children enrolled in each program option and other basic information. We found—in discussing enrollment dates, children's birth dates, and so forth, to determine the eligibility of families for the study—that programs use a variety of methods to collect, store, and access data on the children and families they serve and the services provided. We asked directors a number of questions to better understand what kind of data their programs collect and how they store it.

Programs are unanimous (all are 100 percent) in reporting they collect all of the data types we asked about, including:

- Enrollment lists
- Characteristics of enrolled families

[28] We asked directors to report on the policies in each of the centers through which they provide Early Head Start services to enrolled children. Because policies can differ across centers affiliated with a given program, some analyses are reported at the center level rather than at the program level.

- Services provided
- Referrals provided
- Children's health and immunization status
- Staff participation in training and in-service
- Progress reports on individual children
- Attendance at the center (among programs offering center-based services)
- Home visits completed per family (among programs offering home-based services)
- Well-child visits
- Treatment plans for identified conditions

There is, however, much more variability in the form these data are stored. It is relatively rare across all the types of data we asked about for programs to report that they store the information primarily in an electronic format (ranging from 38 percent for enrollment lists to 10 percent for treatment plans for identified conditions). More commonly, programs store data in a mix of electronic and paper reports. A modest percentage of programs reported that they store each of the data elements primarily on paper. Paper storage is most common for progress reports (43 percent), treatment plans (31 percent), referrals (27 percent), and information on staff training (24 percent); it is least common for enrollment (2 percent) and immunization (4 percent).

Despite the prevalence of electronic storage of enrollment information, when asked to rate the difficulty of producing a report listing the dates when families first enrolled for services, only one program indicated it would not be difficult (1 percent); 95 percent said it would be very difficult, and 4 percent said it would be somewhat difficult.[29]

Because of this apparent disconnect between the data that programs collect and programs' ability to access them, and to develop ways to improve responses to the family services tracking data (described in Chapter IV), we asked additional questions about the process for recording attendance data. Most program directors reported that attendance data is recorded daily (53 percent) or weekly (24 percent). The remaining group indicated an either monthly or other schedule for record keeping. Nearly all programs indicated they use a database system to enter attendance data, although 11 percent do so on paper. (A few directors cited use of Excel, Promise, ChildPlus, and Genesis Earth; only ChildPlus was identified as being used by more than 10 percent of directors.)

ARRA Funds Program Expansion

ARRA provided funding for the first expansion of the Early Head Start program in the past decade. The fortuitous timing of the Baby FACES study and the fact that 54 programs[30] in the sample (61 percent) received ARRA funds enable us to begin to explore how the programs plan to use them.

[29] This program director rating is borne out by our experiences collecting these data for the study from program staff. Programs often needed several weeks to produce enrollment lists; the process of collecting dates of enrollment for the sample went on for the better part of two years.

[30] The values we present about programs in the Baby FACES sample that received ARRA funds are unweighted, because we do not expect their plans and experiences to necessarily generalize to all ARRA programs.

We asked about the types of expansion slots that programs planned to add and found that programs are most commonly choosing center-based slots. Ninety percent of sample programs receiving expansion funds added new center-based slots (the average is 44 slots, and the range is 2 to 174; Table III.7). The total number of center-based slots added among expansion programs in the Baby FACES sample is 2,195. Seventy-six percent added new home-based slots (the average is 40 slots, and the range is 10 to 140 new slots). The total number of new home-based slots added among expansion programs in the Baby FACES sample is 1,842.[31]

Table III.7. Programs that Received Expansion Funds and Changes Planned (Percentage Unless Otherwise Specified), Unweighted

Type of Change	Mean/Percentage (Standard Error)	Range
Programs receiving expansion funds	60.7 (5.21)	
Add home-based slots	75.6 (6.48)	
Mean number of new home-based slots	40.3 (5.62)	10–140
Add center-based slots	90.0 (4.29)	
Mean number of center-based slots	43.9 (5.96)	2–174
Add centers or program sites	66.7 (6.67)	
Mean number of new program centers or sites	1.6 (0.28)	1–8
Add new child care partner	38.1 (10.85)	
Mean number of new child care partners	1.6 (0.32)	1–3
Hire new home visitors	0.7 (0.06)	
Mean number of new home visitors	4.4 (0.53)	1–15
Hire new teachers	0.8 (0.05)	
Mean number of new teachers	10.9 (1.46)	1–51
Hire new managers	0.6 (0.08)	
Mean number of new managers	2.9 (0.25)	1–12
Hire new administration	0.3 (0.06)	
Mean number of new administrative staff	2.4 (0.61)	1–9
Sample Size	**8–89**	

Source: Spring 2010 Program Director Interview.

Note: Changes planned are among programs that received expansion funds and that offer each particular service option.

Sixty-seven percent of sample programs with expansion funds indicated they would be adding either a new center or program site as a result of receiving ARRA funding (the range is one to eight sites, with an average of two). Programs that were adding centers or program sites offered services in 2009 that were multiple-approach (74 percent), center-based (24 percent), and home-based (3 percent). There were limited instances of programs shifting to offer a new service option as a result of receiving ARRA funding. Among programs with a center-based approach that received expansion funds, only 2 percent added home-based slots. Similarly, among home-based approach programs that received ARRA funds, just 9 percent added center-based slots.

One question of interest is whether programs formulated new program goals in response to the expansion. (Two-thirds of directors of expansion programs in the Baby FACES sample report they did.) Directors most frequently cited objectives of increasing their work with teen parents and increasing family involvement. A relative few directors indicated programs would serve a different population (15 percent), geographic area (11 percent), or age group (4 percent) as a result of receiving ARRA expansion funds.

[31] Nationally, programs receiving ARRA funding increased the number of Early Head Start slots by 48,000.

Summary of Key Findings

- Programs have increased their use of multiple-approaches.
  - In 2010, 74 percent of programs are offering multiple approaches compared with 71 percent in 2009.
  - Family child care is available in 11 percent of programs, but most families within those programs are actually receiving center-based and/or home-based services, while only 12 percent of families receive family child care services.
- About 25 percent of programs close for three or more weeks during the year, mostly during the summer. Most offer full-day, year-round services.
  - Only center-based and multiple-approach programs reported extended closures. About half of centers that close are located in schools.
- One-fifth of programs change their service delivery options in the summer.
  - Most of the programs changing service options during the summer are center-based and change to offering home visits (72 percent) or group socializations (7 percent). Seven percent are multiple-approach but change to offering only home-based and group socializations; and 9 percent make unspecified changes.
- Programs support continuity of care.
  - Nearly all programs that offer center-based care assign a specific teacher to each child (99 percent).
  - In 68 percent of centers, children stay with the same teacher throughout their Early Head Start experience, either through looping or attending mixed-age classrooms.
- Programs are widely variable in their storage of and access to data.
  - Although all programs collect the types of data we asked about, the mode of storage is mixed. Most store data in a combination of electronic and paper formats. Although most programs use some sort of database system, all but two (95 percent) indicated it would be "very difficult" to produce a list of enrolled children and their birthdates.
- Baby FACES sampled programs that received ARRA funds added nearly 2,200 center slots and 1,850 home visiting slots. About two-thirds of programs that received expansion funds added a new center or program site.

IV. EARLY HEAD START PROGRAM SERVICES AND SERVICE USE PATTERNS

The performance standards require a comprehensive package of services to support children's development. Early Head Start programs must offer a certain quantity of services per week as well as throughout the year and are encouraged to tailor services to meet the diverse needs of enrolled families. Administrative data are available[32] about the frequency of services offered, as well as some information on program modes of service delivery and policies from Baby FACES program directors (see Chapter III). But until now, there have been no detailed data on the uptake of these services by families. For programs to have a positive effect on families, they must offer services and families must participate in them. To further understand how the program works and where to focus improvement efforts, it is important to investigate whether and how services received by individuals vary due to program, provider, family, and child characteristics. Baby FACES offers a unique opportunity to examine the provision and take-up of Early Head Start services using data collected from a variety of sources.

This chapter uses detailed information from program directors and providers to describe typical Early Head Start services and to identify factors associated with variation in service receipt. Drawing on information from the family services tracking (FST) system, which collected weekly data on the services sample children received throughout the year,[33] we focus on services received by children in the 1-year-old Cohort between July 2009 and June 2010, approximately the time between age 1 and 2. We begin by describing the services provided to families at the program level based on the program's design and information from program directors. We then examine the take-up of services based on families' reports as well as weekly data collected from teachers and home visitors from the FST. We describe the services that children and families received, on average, and present findings on how these services varied across the year and for various Early Head Start participants.

Core Child Development Services at Recommended Rates

At the program level, Early Head Start programs provide core child development services at a frequency that meets the performance standards (Table IV.1). Most programs that provide home-based services report offering weekly home visits to families in the home-based option. This approach was shared by programs offering only home-based services as well as multiple-approach programs. Nearly all programs providing center-based services (either center-based only or multiple-approach programs) offer five center days per week; a few multiple-approach programs offer four instead of five center days per week. The few multiple-approach programs (20 percent) that have some families receiving both center- and home-based services (the combination option) typically offer these families four or five center days per week and home visits once or twice per month (not shown). Very few families, however, participate in both types of services concurrently (Vogel et al. 2011; see also Chapter III).

[32] The Program Information Report (PIR) is a set of administrative data that each program must submit annually.

[33] This data collection is ongoing and will continue until the end of the study for children still enrolled in the program.

Table IV.1. Frequency of Program Provision of Core Child Development Services by Single and Multiple Approach

	Single-Approach Programs	Multiple-Approach Programs
Services Provided	Weighted Percentage of Programs (Standard Error)	Weighted Percentage of Programs (Standard Error)
Center-Based Option		
Four center days per week	0	4.3 (2.5)
Five center days per week	100	95.7 (2.5)
Sample size	**15**	**58**
Home-Based Services		
One home visit or more per week	100	96.0 (2.8)
Two group socializations per month	100	89.1 (4.0)
Sample size	**9**	**63–65**

Source: 2010 Program Director Interview.

Note: Percentages refer to services provided to families in the center- or home-based service options and exclude families in the combination service option.

In the FST, we asked staff to report on the number of days or visits offered to each family in the sample for a given week as well as each family's actual attendance or participation that week. We also asked program staff to report the reason for nonattendance, (which could have been due to a program-related issue, such as illness of the home visitor or program closure, or a family-related issue, such as illness or travel). In this way, we could ensure we did not infer attendance problems when there was in fact a holiday or other reason for a program closure. Annual averages of the number of offered home visits and center days from the FST data are somewhat lower than directors' reports on programs' design, in part because the FST takes these factors into account.[34] Table IV.2 shows that the average family in the home-based service option is offered home visits slightly less than once per week for an average total of about 47 visits in the year. This number of visits is within the Office of Head Start's recommended range of 32 (for an eight- or nine-month program) to 48 (for a program operating year-round). The average child in the center-based option is offered 4 center days per week and more than 200 center days for the year. This number is also within the recommended range of 128 to 170 for centers operating four days per week or 160 to 213 for centers operating five days per week.[35]

[34] The difference between program directors' reports and the FST may also be due to the fact that program directors report on all children in their program, while the FST reports only on sampled children. Additionally, FST data were collected for slightly less than one year of services, which could also account for the lower rate of services offered indicated by the FST compared with program director reports.

[35] The performance standards identify a minimum number of home visits and center days for programs operating for eight to nine months. We used these ratios to calculate minimum numbers for programs operating year-round.

Table IV.2. Core Child Development Services Offered and Received During the Year

	Weighted Means or Percentages (Standard Error)
Home-Based Option	
Home visits offered per week	0.9 (0.01)
Home visits received per week	0.7 (0.02)
Home visits offered for the year	48 (0.68)
Home visits received for the year	37 (1.11)
Ratio of home visits received to home visits offered	77.6 (2.10)
Sample Size	**240**
Center-Based Option	
Center days offered per week	4.0 (0.13)
Center days attended per week	3.4 (0.13)
Center days offered for the year	208 (6.90)
Center days attended for the year	179 (6.71)
Ratio of center days attended to center days offered	88.4 (5.93)
Sample Size	**238**

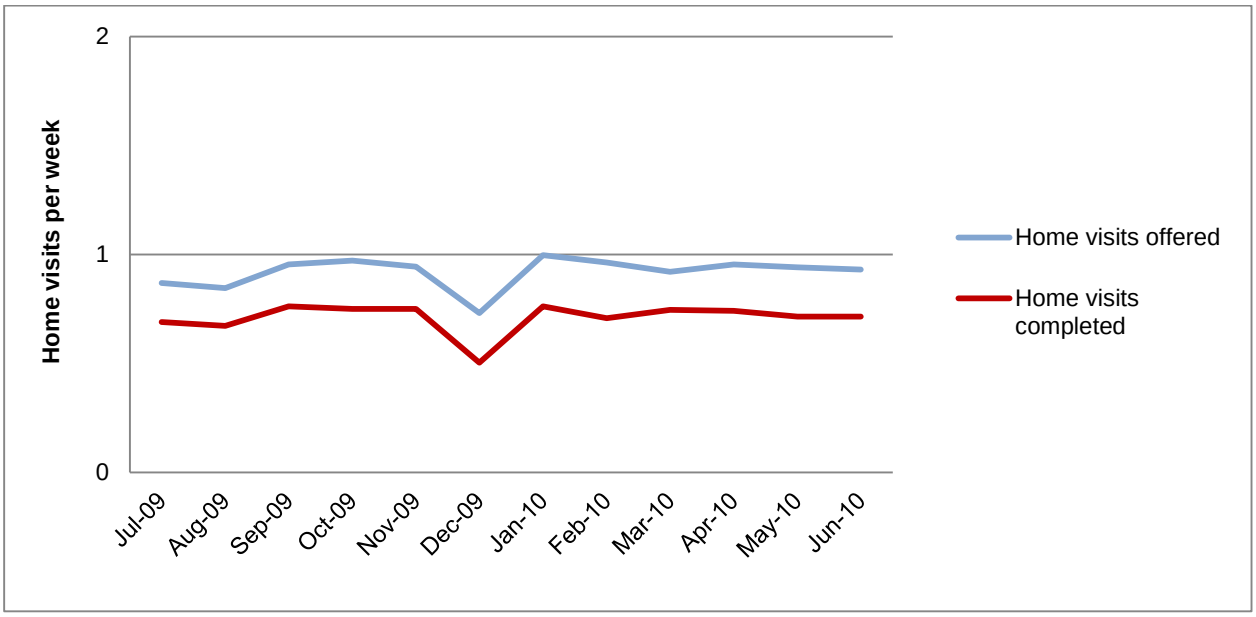
Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children from the 1-year old Cohort who did not change service options and did not exit the program during the year. Estimates calculated from multiply imputed data.

Program Offerings Vary Throughout the Year

The difference between the frequency with which services were offered weekly (based on FST data) and what might be expected based on program approach (reported by program directors) also reflects seasonal variation in service availability. A key advantage of the FST system is that it allows us to examine week-to-week variation in services that would otherwise be masked by aggregate yearly measures. Figures IV.1 and IV.2 show how the average number of offered home visits and center days vary throughout the year. The average family in the home-based option is offered about one home visit per week for most of the year but slightly fewer in summer and winter (Figure IV.1).

Figure IV.1. Number of Home Visits Offered and Completed per Week, Monthly Averages



Similarly, the average child in a center-based option is offered four to five center days for most of the year—except in summer and winter, when average offered days dropped to about three to four per week (Figure IV.2). These dips are not surprising, given that many programs scale back their operations in the summer and in the winter, as Chapter III reports.

Figure IV.2. Number of Center Days Offered and Attended per Week, Monthly Averages

Most Families Take Up Services at Recommended Frequencies

Rates of families' service take-up were measured through multiple sources. Parents reported on the frequency with which they received services, program directors reported on concerns about attendance, and FST data report weekly family and child participation in services. Overall, most families appear to have high rates of service take-up, although rates were somewhat lower based on FST data than other data sources.[36]

Based on parent reports, most Early Head Start participants in the home-based option reported that they typically received home visits about once a week or more (93 percent; Table IV.3). Parents of children in the center-based option reported that their children attended an average of 4.7 days per week.[37]

[36] As noted earlier in this chapter, differences between parents' reports, program directors' reports, and FST data may be due to a variety of factors. For example, program directors report on all children in their program, while parents and the FST report only on sampled children; FST data include children who exited the program before receiving a full year of services, and program director- and parent-reported data would not necessarily reflect this factor; FST data reflect seasonal variations in services (for example, closures during summer months) that program director or parent reports may not reflect. Although the Baby FACES sample is representative of all families of 1-year-olds who were enrolled in spring 2009, it is not necessarily representative of an individual program's enrollment.

[37] See Chapter III for a description of full-day, full-year programs.

Table IV.3. Core Child Development Services Received During the Year, Parent Reports

	Weighted Means or Percentages (Standard Error)
Home-Based Option	
A few times a year	0.2 (0.15)
About once a month	1.5 (1.01)
Two or three times a month	5.5 (2.06)
About once a week	89.5 (3.25)
Two or more times a week	3.4 (1.42)
Sample Size	**274**
Center-Based Option	
Center days attended per week	4.7 (0.65)
Sample Size	**225**

Source: Spring 2010 Parent Interview.

Note: Sample restricted to children from the 1-year old Cohort.

Consistent with reports from parents, few programs reported having pervasive issues related to attendance in center-based services. Most frequently, program directors (34 percent) reported they had attendance concerns about fewer than 10 percent of their families. Twenty-eight percent of directors had concerns about 10 to 19 percent of their families, and 9 percent of program directors reported having no concerns about attendance. Only 29 percent of program directors reported concerns about 20 percent or more of their families. On average, multiple-approach programs tended to have more families for which program directors had center attendance concerns (not shown).

Data from the FST provide a more fine-grained analysis of service receipt throughout the year and show a somewhat lower take-up rate than reported in aggregate by parents or directors. We calculated averages of services received based on weekly reports from teachers and home visitors and estimated that the average family in the home-based service option received 0.7 home visits per week. This finding suggests that families missed about one visit per month. The average child in the center-based option attended slightly more than three days per week (Table IV.2). Yearly figures for services received (Table IV.2) show that the average family in the home-based option received a total of 37 visits during the year; a child in the center-based option attended 179 days, on average.[38]

Take-Up of Core Services Varies by Time of Year

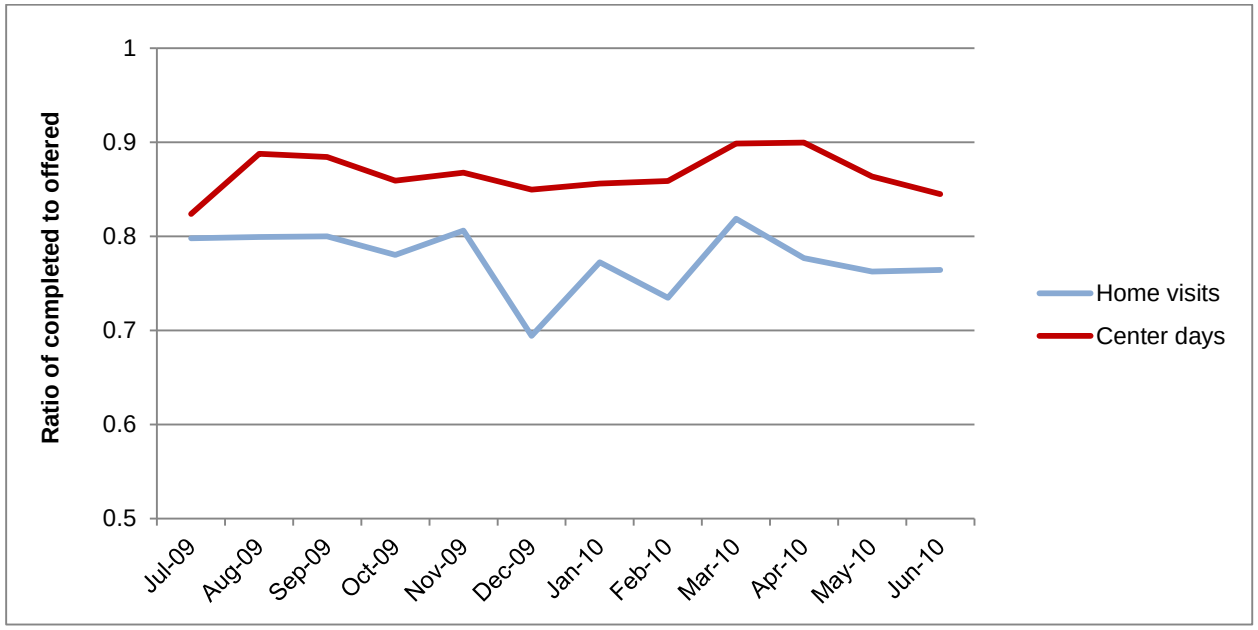
Figures IV.1 and IV.2 illustrate that take-up rates of core services varied throughout the year. In each month observed, the average number of home visits received or center days attended is slightly lower than the number of services offered (similar to the overall averages reported above). Home-based families took-up about one visit fewer per month than they were offered, whereas center-based children missed about two to three days per month.

Figure IV.3 shows monthly ratios of services received to services offered. We calculated these ratios to examine take-up relative to what is offered in a particular month. A ratio of 1 indicates an exact match between the number of services offered and take-up. Using this metric, we found that take-up rates were lower in winter months, indicating that lower participation levels during this season were not entirely due to a reduction in available services during the same period. Home-visit ratios were lower than center-day ratios throughout the year, partly because children in the center-based option could attend up to 20 or more days per month, whereas children in the home-based option were offered four visits per month. As a result, missing one home visit in a month had a larger impact

[38] Including holidays, there were a total of 261 weekdays in the FST reporting period (July 1, 2009 through June 30, 2010).

on the resulting ratio than missing one center day. This difference in denominator between center- and home-based services is also likely behind the more dramatic dip in home visits in the winter months.[39] Nevertheless, ratios for both home visits and center days were quite high throughout the year. Center-day ratios were consistently at or above 0.85 (except in July, when it was 0.82). Home-visit ratios ranged from 0.69 (December) to 0.81 (March).

Figure IV.3. Ratio of Completed to Offered Home Visits/Center Days per Week, Monthly Averages



Take-Up of Core Services Does Not Vary Substantially by Child and Family Characteristics

The average Early Head Start participant has a relatively high rate of take-up of services that varies relatively little by child and family characteristics. Among families in the home-based option, we do not observe any significant differences in the average number of home visits received by child characteristics such as gender or race/ethnicity. We did find that children from households in which only English is spoken received fewer home visits than children from households in which languages other than English are spoken. Families with mothers who are not employed, in school, or training receive significantly more home visits than families with mothers who are employed or in school or training, perhaps due to fewer scheduling conflicts. Table IV.4 gives the average number of home visits received over the course of the year by selected family and child characteristics.

[39] For example, missing one home visit in a month results in missing 25 percent of the visits (assuming four weeks and one visit per week), whereas a child would have to miss five center days in a month (assuming five days per week for four weeks) to have the equivalent amount of missed services.

Table IV.4. Number of Home Visits Received by Selected Child and Family Characteristics

	Weighted Means (Standard Error)
Child Characteristics	
Male	37.8 (1.34)
Female	36.0 (1.22)
Race/Ethnicity[a]	
White	36.2 (1.61)
African American	34.9 (2.76)
Hispanic	37.8 (1.52)
Other	37.8 (1.67)
Dual language learner	38.7^{+} (1.31)
Not a dual language learner	35.6^{+} (1.40)
Child was born prematurely	37.6 (2.11)
Child was not born prematurely	36.8 (1.13)
Child in excellent or very good health	36.9 (1.12)
Child in fair or poor health	37.1 (2.00)
Child diagnosed with any disabilities	34.5 (4.73)
Child has not been diagnosed with any disabilities	37.1 (1.10)
Parent/Household Characteristics	
Single-parent household	37.6 (1.19)
Both biological parents in household	35.9 (1.52)
Household income-to-needs ratio greater than one	36.6 (1.69)
Household income-to-needs ratio less than or equal to one	37.2 (1.27)
Mother has no high school credential	37.7 (1.15)
Mother has a high school credential	36.4 (1.45)
Mother not employed, in school, or in training	38.6* (1.23)
Mother is employed, in school, or in training	35.6* (1.36)
Mother had a child as a teenager	36.2 (1.48)
Mother did not have a child as a teenager	37.6 (1.22)
Parent ever had a drinking or drug problem	38.6 (2.34)
Parent has no history of alcohol or drug abuse	36.8 (1.17)
Sample size	**240**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children from the 1-year old Cohort who did not change service options and did not exit the program during the year. Estimates calculated from multiply imputed data.

[a] No significant differences among races/ethnicities.

$^{+}$ $p < 0.10$; *$p < 0.05$.

For children in the center-based option, dual language learners attended significantly fewer center days than children who spoke only English. We observe no significant differences in other child characteristics. Table IV.5 gives the average number of center days attended over the course of the year by selected family and child characteristics.

Table IV.5. Number of Center Days Attended by Selected Child and Family Characteristics

	Weighted Means (Standard Error)
Child Characteristics	
Male	179.5 (7.13)
Female	178.7 (7.55)
Race/Ethnicity[a]	
White	185.5 (8.21)
African American	190.0 (7.52)
Hispanic	160.3 (10.99)
Other	183.6 (16.52)
Dual language learner	160.8[+] (12.40)
Not a dual language learner	186.6[+] (5.82)
Child was born prematurely	173.3 (13.97)
Child was not born prematurely	179.5 (6.89)
Child in excellent or very good health	182.8 (6.42)
Child in fair or poor health	169.7 (11.13)
Child diagnosed with any disabilities	188.8 (20.42)
Child has not been diagnosed with any disabilities	178.4 (6.81)
Parent/Household Characteristics	
Single-parent household	170.9 (8.79)
Both biological parents in household	182.9 (7.17)
Household income-to-needs ratio greater than one	183.1 (7.86)
Household income-to-needs ratio less than or equal to one	175.8 (7.26)
Mother has no high school credential	175.5 (8.72)
Mother has a high school credential	181.1 (6.71)
Mother not employed, in school, or in training	166.2 (12.56)
Mother is employed, in school, or in training	181.7 (6.96)
Mother had a child as a teenager	181.0 (6.32)
Mother did not have a child as a teenager	176.8 (10.27)
Parent ever had a drinking or drug problem	193.6 (10.10)
Parent has no history of alcohol or drug abuse	177.3 (7.13)
Sample size	**238**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children from the 1-year old Cohort who did not change service options and did not exit the program during the year. Estimates calculated from multiply imputed data.

[a] Average center attendance between whites and Hispanics is significantly different at the 10 percent level. We also observe significant differences between African Americans and Hispanics at the 5 percent level.

[+] $p < 0.10$

Programs Have Strategies in Place to Support Families' Participation

To maintain families' active participation in Early Head Start, programs establish strategies for reaching out to families who consistently miss home visits or center days. Most programs directors (66 percent) reported having a policy in place for dealing with frequent absences. These policies typically include a set cutoff for the number of missed center days or home visits before a family's slot is considered vacant and they are no longer enrolled in the program. The choice of cutoff varies considerably (Table IV.6). Programs offering home-based services typically remove from enrollment families who miss two to four consecutive home visits. Most programs offering center-based services also use consecutive absences as criteria for disenrollment, but the number of days varies more widely, from 3 to 30 consecutive absences. Most commonly, about one-third of directors reported that they remove a child from enrollment after 6 to 10 consecutive center days missed.

Table IV.6. Program Attendance and Disenrollment Policies

	Weighted Percentage of Programs (Standard Error)
Policy in Place for Dealing with Absences	65.5 (5.9)
Sample Size	**89**
Number of Home Visits Missed Before Disenrollment[a]	
2–4 consecutive	71.5 (8.82)
5–6 consecutive	15.8 (7.28)
2 visits in a month	4.3 (4.24)
4–6 visits in two months	5.6 (3.86)
4 visits in a year	2.8 (2.79)
Sample Size	**29**
Number of Center Days Missed Before Disenrollment[b]	
3–5 consecutive	19.2 (7.02)
6–10 consecutive	32.9 (9.58)
15–30 consecutive	20.9(8.72)
3–5 days in one month	11.1 (7.46)
10 days in six months	3.3 (3.29)
20 days in nine months	2.8 (2.79)
5–10 days in a year	9.8 (6.75)
Sample Size	**30**

Source: 2010 Program Director Interview.

[a] Among home-based or multiple-approach programs with a policy in place.

[b] Among center-based or multiple-approach programs with a policy in place.

Programs use a variety of strategies to reach out to families with poor attendance. Most programs conduct a home visit or call parents to encourage attendance. Other strategies include sending a letter home or arranging a meeting at the center. Some programs also seek to identify and help with barriers to participation, including transportation, changing service options, or health issues.

Families Do Not Commonly Change Service Option

Using FST data, we investigated the frequency of service changes that occurred at the family-level from July 2009 to June 2010 for children in the 1-year-old Cohort who were enrolled in multiple-approach programs (73 percent of the sample).[40] Many multiple-approach programs allow families to change from one option to another due to evolving family needs and preferences, availability of slots, changes in parent employment, ages of children, and changes in pregnancy status (Vogel et al. 2011). Service option was relatively stable for families over the year, as most children in multiple-approach programs did not experience a change in service type (Table IV.7). Only 5 percent of children experienced one service change, and fewer than 1 percent experienced more than one change.

[40] Multiple-approach programs are those whose directors report offering both center- and home-based services in spring 2009. Fifteen children in single-approach programs were reported to have changed services at some point during the year, but they are not included in this analysis.

Table IV.7. Number of Service Changes

	Weighted Percentage of Children (Standard Error)
0	94.2 (1.22)
1	5.0 (1.06)
2	0.7 (0.49)
3	0.2 (0.16)
Sample size	**456**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children in the 1-year-old Cohort in multiple-approach programs.

For the children in multiple-approach programs who experienced a service change, the most common pattern was a one-time switch from home-based to center-based services (53 percent of families; Table IV.8). This one-time switch occurred when children were 18.5 months old, on average. Fifteen percent of children who changed service type switched from home-based to a combination of center- and home-based services. Children who were initially in the home-based service option were more likely to change service types than children who received center-based services. However, we also observed some changes among children who were initially in center-based programs: 9 percent of children who experienced a change switched from center- to home-based services, and 6 percent switched from center-based services to a combination option.

Table IV.8. Types of Service Changes

Service Pattern	Weighted Percentage of Children (Standard Error)
Home- to center-based	53.0 (13.07)
Home-based to combination	15.4 (12.13)
Center-home-center (two changes)	11.6 (7.78)
Center- to home-based	9.2 (5.74)
Center-based to combination	6.3 (4.47)
Home-center-home-center (three changes)	2.8 (2.67)
Combination to center-based	1.7 (1.64)
Sample Size	**30**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children in the 1-year-old Cohort in multiple-approach programs who experienced at least one service change during the year.

Service changes tended to occur at different times of the year depending on the type of change. Changes to center-based care happened most often in late summer and early fall. In contrast, changes to the home-based option were most likely to occur in winter and spring. These data corroborate information from program directors noted in Chapter III, indicating that some programs do not offer center-based care in the summer and instead provide home-based services.

Children in programs that offer multiple service options who changed service type appear to be similar to those who did not (Table IV.9). Children who experienced at least one service change are more likely to be male and less likely to be of a race/ethnicity other than white, African American, or Hispanic. Otherwise, we did not find statistically significant differences between those who did and those who did not experience a service change.

Table IV.9. Differences Between Children Who Experience One or More Service Change and Those Who Experience No Service Changes

	Children Experiencing One or More Service Change	Children Experiencing No Service Changes
	Weighted Mean (Standard Error)	Weighted Mean (Standard Error)
Child Characteristics		
Male	0.8 (0.08)**	0.5 (0.03)**
Race/ethnicity		
White	0.4 (0.10)	0.4 (0.04)
African American	0.3 (0.09)	0.1 (0.03)
Hispanic	0.3 (0.00)	0.4 (0.05)
Other	0.0 (0.03)**	0.1 (0.02)**
Dual language learner	0.4 (0.10)	0.4 (0.05)
Child was born prematurely	0.1 (0.07)	0.1 (0.02)
Child in excellent or very good health	0.8 (0.12)	0.7 (0.03)
Child diagnosed with any disabilities	0.2 (0.08)	0.0 (0.02)
Exited during FST period	0.2 (0.07)	0.2 (0.02)
Original Service Type		
Center-based care	0.4 (0.12)	0.4 (0.05)
Home-based care	0.6 (0.12)	0.5 (0.05)
Parent/Household Characteristics		
Number of children in the household	2.7 (0.41)	2.5 (0.09)
Number of adults in the household	1.8 (0.24)	1.9 (0.09)
Both biological parents in household	0.5 (0.09)	0.5 (0.04)
Household income as percentage of poverty level	2.1 (1.12)	1.3 (0.23)
Mother has no high school credential	0.4 (0.13)	0.4 (0.03)
Mother not employed, in school, or in training	0.2 (0.09)	0.3 (0.03)
Teenage mother	0.5 (0.09)	0.5 (0.03)
Parent ever had a drinking or drug problem	0.1 (0.05)	0.1 (0.03)
Sample Size	**30**	**426**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children in the 1-year-old Cohort in multiple-approach programs. Estimates calculated from multiply imputed data.

**$p < 0.01$.

Home Visitor Changes Are Less Common Than Teacher Changes

The performance standards emphasize the importance of continuity of care to foster supportive relationships between children and their teachers. Clearly, having the same home visitor also helps cultivate the relationship between the visitor and the family to facilitate effective service delivery. Using FST data, we are able to track how frequently such changes occur.

Changes in teacher or home visitor occurred even among children who did not experience a change in service option during the year, although most children (73 percent) did not change providers during the period we observed. Eighteen percent experienced one staff change, and only 9 percent experienced two or more staff changes (Table IV.10).[41]

Table IV.10. Number of Provider Changes Overall

Number of Provider Changes	Weighted Percentage of Children (Standard Error)
All 1-year-old Cohort Children	
0	73.1 (2.91)
1	17.9 (2.10)
2	5.2 (1.19)
3	2.2 (0.71)
4	1.4 (0.60)
5	0.2 (0.15)
Sample size	**673**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Additionally, rates of provider changes differ by service option. Although 38 percent of children in the center-based option experience a teacher change, only 10 percent of children in home-based option experience a home visitor change (Table IV.11).

Table IV.11. Number of Provider Changes by Service Option

Number of Provider Changes	Weighted Percentage of Children (Standard Error)
Children in the center-based service option	
0	62.4 (4.31)
1	25.8 (3.80)
2	6.2 (1.73)
3	3.1 (1.27)
4	2.0 (1.10)
5	0.5 (0.34)
Sample Size	**298**
Children in the home-based service option	
0	89.7 (2.36)
1	7.4 (1.80)
2	1.0 (0.56)
3	1.1 (0.84)
4	0.8 (0.75)
Sample Size	**325**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children who did not change service option.

[41] The proportions are similar when we restrict the sample to children in multiple-approach programs. Seventy-six percent experience zero staff changes, 15 percent experience one, and 9 percent experience two or more staff changes.

Programs Provide a Variety of Additional Services to Support Families' Needs

Early Head Start programs are charged with providing comprehensive services to families in addition to the core child and family development services that are a cornerstone of their service approach. In keeping with their mission, directors reported that they provide a variety of services, including screenings, activities for families, and referrals to community partners (Vogel et al. 2011). This section describes rates of receipt of comprehensive and family services based on reports from program directors and the FST system.[42]

Nearly All Children Received a Screening During the Observation Period

Early Head Start programs are required to perform developmental and health screenings and assessments to monitor children's development and help tailor services to their needs. Overall, data suggest that nearly all children receive these screenings and assessments. Most directors (95 percent) reported that 100 percent of children in their program receive developmental screenings, and staff use these results to plan services for each child. Consistent with program director reports, FST records show that 94 percent of children received at least one screening in the period observed.

Programs Offer Activities for Family Members, Including Educational Opportunities for Parents

Performance standards indicate that programs must provide opportunities for parents to increase their knowledge of child development and enhance parenting skills. Programs offering the home-based service option are required to offer at least two group socialization activities per month, and 91 percent of directors reported that they comply with this requirement. In terms of families' participation in these events, directors reported that about half (49 percent) of families regularly participate in group socializations, on average.

Based on FST data, we found that families in the home-based option attended about 11 group socializations per year, on average (less than once a month). Only 17 percent of families attended 24 or more group socializations during the year, the minimum recommended number.

Programs offer families in the center-based option educational opportunities, typically in the form of parenting workshops (Vogel et al. 2011). Program directors estimate that about 43 percent of families in the center-based option regularly participate in parent meetings or education activities, on average. FST records indicate that 80 percent of families participated in at least one parent education session during the year. Families who participated in at least one session attended a total of 12 sessions during the year, on average.

[42] As noted earlier in this chapter, differences between program directors' reports and the FST on receipt of comprehensive and family services may be due to a variety of factors. For example, program directors report on all families enrolled in their program, while the FST captures information about sampled families only. FST data include children who exited the program before receiving a full year of services, which is not necessarily reflected in program director reports. They also reflect seasonal variation in program operations schedules (for example, closures during summer months) also not necessarily reflected in program director reports. Finally, although the Baby FACES sample is representative of all families of 1-year-olds who were enrolled in spring 2009, it is not necessarily representative of an individual program's enrollment.

Programs Provide Referrals to Help Families Access Additional Services

Establishing partnerships with providers in the community is one critical strategy to help families access services they need. In the baseline report, we found that programs provide referrals to a range of community partners and agencies. Referrals for health care services were most common, but programs also provided referrals for education and job training, and employment or legal assistance (Vogel et al. 2011).

According to FST reports, 70 percent of families received at least one referral from July 2009 to June 2010—averaging six a year for those who received at least one referral.[43] Compared with families who did not receive a referral, these families were less likely to be African American and more likely to be a dual-parent household. Families receiving referrals were also more likely to have a child who is a dual language learner and a mother who is not employed (Table IV.12).

Table IV.12. Characteristics of Children and Families Who Received a Referral Compared with Those Who Did Not

	Received a Referral	Did Not Receive a Referral
	Weighted Means or Percentages (Standard Error)	Weighted Means or Percentages (Standard Error)
Child Characteristics		
Race/Ethnicity		
White	40.4 (4.06)	32.4 (4.89)
African American	12.5 (2.67)**	28.2 (5.48)**
Hispanic	37.9 (4.44)	27.9 (5.32)
Other	9.2 (1.95)	11.5 (3.55)
Dual language learner	41.7 (4.17)*	27.0 (5.31)*
Child was born prematurely	15.2 (2.46)	10.3 (2.96)
Child in excellent or very good health	75.6 (2.86)	77.9 (3.37)
Child diagnosed with any disabilities	5.9 (2.05)	3.5 (2.24)
Child has no health insurance	10.0 (2.69)	7.0 (2.98)
Parent/Household Characteristics		
Number of children in the household	2.5 (0.08)	2.4 (0.13)
Number of adults in the household	1.9 (0.10)	1.8 (0.12)
Both biological parents in household	52.2 (3.46)**	37.0 (4.37)**
Household income as percentage of poverty level	1.2 (0.23)	1.2 (0.33)
Mother has no high school credential	42.4 (3.30)	34.9 (4.65)
Mother not employed, in school, or in training	34.0 (3.05)*	23.1 (3.84)*
Teenage mother	50.8 (3.15)	58.2 (5.03)
Parent ever had a drinking or drug problem	13.1 (2.52)+	7.5 (2.65)+
Sample size	**471**	**202**

Source: Family Services Tracking Reports, July 2009 to June 2010.

Note: Sample restricted to children in the 1-year old Cohort. Estimates calculated from multiply imputed data.

+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$.

[43] We coded "any referral" if a family received any of 16 possible referrals (8 for a child and 8 for another family member) in a given week. Therefore, technically, this number does not specify how many referrals a family received but how frequently they received a referral during a given week.

Summary of Key Findings

- Programs offer core child development services at recommended rates.
  - Most programs that provide home-based services reported offering weekly home visits and at least two group socializations per month to families in the home-based program option.
  - Nearly all programs providing center-based services offered five center days per week; a few multiple-approach programs offered four instead of five center days per week.
- Program service offerings vary throughout the year, according to weekly FST reports.
  - The average family in the home-based option is offered about one home visit per week for most of the year but slightly fewer in summer and winter.
  - The average child in the center-based option is offered four to five center days for most of the year; in summer and winter, the average number of center days dropped to about three or four days per week.
- Most families take up services at recommended frequencies.
  - Parent reports of services received were consistent with what directors said they offer. Most of the parents in the home-based option reported that they typically received home visits about once a week. Parents of children in the center-based option reported that their children attended nearly five days a week, on average.
  - The average family in the home-based service option received 37 home visits per year, and the average child in the center-based option attended 179 days per year. These rates did not vary considerably by child and family characteristics, although families with mothers not employed or in school received more home visits than families with employed mothers, and there is a difference at the trend level for dual language learners to attend fewer center days than English-speaking children. There were no other differences between groups in terms of service take-up.
  - Few programs reported having pervasive issues related to attendance in center-based services, although many program directors expressed concern about the attendance of some families.
- Take-up of core services varies by time of year.
  - The average ratio of services received to services offered is consistently high.
  - Take-up rates were slightly lower in the winter months for those in both center-based and home-based options.
- Programs have established thresholds for disenrollment based on nonattendance.
  - Programs offering home-based services typically disenroll families that miss two to four consecutive home visits.
  - Programs offering center-based services typically disenroll a child that misses 6 to 10 consecutive center days.
- Programs have strategies in place to support family participation.

  - Program staff reached out to families with poor attendance by conducting a home visit or contacting parents by phone.
  - Programs also made efforts to address barriers to participation by providing transportation assistance or changing service options.

- Families do not commonly change service approach.
  - Only 6 percent of children in multiple-approach programs experienced any service changes, and fewer than 1 percent experienced more than one change.
- Home visitor changes are less common than teacher changes.
  - About 27 percent of all 1-year-old Cohort children experienced a change in teacher or home visitor during the year.
  - Among children who did not change service options during the year, only 10 percent of children in the home-based option experienced a home visitor change, but 38 percent of children in the center-based option experienced a teacher change.
- Programs provide activities for families such as group socializations in the home-based service option and parenting workshops in the center-based option.
  - Fewer than half of families participate in these activities regularly, according to program directors.
  - FST data showed that the typical family in the home-based option attended an average of 11 group socializations over the observed period (less than once a month).
  - Eighty percent of center-based families participated in at least one parent education session during the year, and these participants attended 12 sessions total for the year, on average.
- Programs provide referrals to help families access additional services.
  - Seventy percent of families received at least one referral during the period of July 2009 to June 2010. These families received an average of six referrals during the year.
  - Families who received a referral were less likely to be African American and more likely to be a dual-parent household. They were also more likely to have a child who is a dual language learner and a mother who is not employed.

V. STAFF CHARACTERISTICS, TRAINING, AND PROGRAM QUALITY

An important aspect of the Early Head Start conceptual framework is the relationship between the provision of high-quality services and children's growth and development. The quality of early childhood service is multidimensional and encompasses not only characteristics of staff but also the quality of the interactions and relationships among staff members and the children and parents with whom they work. Accordingly, Baby FACES provides important information about the overall quality of classrooms and home-based services for families and children and about attributes of classrooms and home visits that relate to quality. Areas of interest include the characteristics of teachers and home visitors serving children and families, and the quality of the interactions and relationships among staff members and the children and parents with whom they work.

This chapter uses data provided by teachers, home visitors, and program directors to describe characteristics of Early Head Start staff serving children and families.[44] Teaching and home visiting staff provided detailed information about themselves, such as socio-demographic details, education and training, professional experience, and job satisfaction and well-being. Program directors reported on staffing characteristics of the program they oversee as a whole, including the number of home visiting staff; efforts to improve quality through professional development; and issues associated with the retention of frontline and management staff.[45] Here, we provide reports from all three respondents–teachers, home visitors,[46] and program directors–on Early Head Start program staffing. Next, we provide information on key aspects of children's home visits, and we describe both structural and process characteristics of children's classrooms.

Background Characteristics of Teachers and Home Visitors

Research has linked some aspects of staff characteristics to quality early childhood experiences and child outcomes, and indeed, Early Head Start's conceptual framework illustrates such a pathway (Figure I.1). Important staff characteristics associated with the quality of care and children's outcomes include amount and type of education and training, beliefs, and job satisfaction (Burchinal et al. 2000). For example, teacher education has been associated with children's cognitive and social-emotional development (Burchinal et al. 1996; Clarke-Stewart 1989; Hayes et al. 1990; Ruopp et al. 1979; Whitebook et al. 1989; Zaslow 1991). However, these relations are typically weak, especially in more recent studies (Bogard et al. 2008; Early et al. 2006). In this section, we use teacher and home visitor

[44] These are data from children in the 1-Year-old Cohort who were 2 years old in spring 2010.

[45] Early Head Start programs employ a variety of frontline and management staff members. These staff include, but are not limited to, teachers, home visitors, directors, assistant directors, managers, coordinators, and specialists. Teachers include all staff with primary responsibility for all or some children in a classroom, and home visitors include all staff whose primary function is to make regular home visits to families and children. Frontline staff members include all staff who work directly with children and families, and typically include teachers in center-based programs, home visitors in home-based programs, and both in multiple-approach programs. Management staff is responsible for monitoring programs' progress toward goals and overseeing implementation of program services.

[46] Throughout this chapter, we distinguish between data from this smaller group of individual staff members and aggregate data about the program as reported by program directors.

reports to describe the characteristics of teachers and home visitors working with Early Head Start children and families.[47]

Children Have Diverse Teachers and Home Visitors

Nearly all study children have a teacher (100 percent) or home visitor (99 percent) who is female (Table V.1). Although most children have teachers or home visitors who are white (54 and 56 percent, respectively), a large percentage receive services from staff members whose backgrounds are Hispanic,[48] African American, or another race/ethnicity. Children are more likely to receive services from an African American staff member in the center-based option than in the home-based option. Twenty-two percent of children have an African American teacher compared with 7 percent of children with African American home visitors. Children in the home-based option are somewhat more likely to receive services from a Hispanic staff member than in the center-based option.[49] Six percent have a teacher from another racial/ethnic background, and 3 percent have a home visitor from another racial/ethnic background.[50]

Table V.1. Demographic Characteristics of Teachers and Home Visitors

Characteristics	Weighted Percentage (Standard Error)	
	Teachers	Home Visitors
Female	100.0 (0.00)	99.1 (0.84)
Race/Ethnicity		
White, non-Hispanic	53.7 (6.53)	56.0 (6.65)
African American, non-Hispanic**	21.9 (4.32)	6.8 (2.25)
Hispanic/Latino+	18.1 (5.43)	34.0 (6.84)
Other, non-Hispanic	6.3 (1.99)	3.2 (1.58)
Sample Size	**301–302**	**257–257**

Sources: Spring 2010 Teacher and Home Visitor Interviews.

Note: Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors.

Includes data on Early Head Start staff serving children in both cohorts.

+$p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

[47] Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors. For example, we describe the percentage of children having staff with specific attributes. Chapter II provides sampling information.

[48] Throughout this chapter, Hispanic refers to staff members or children with a Hispanic or Latino racial/ethnic background.

[49] Fifteen percent of Hispanic children receiving home-based services also have a Hispanic home visitor, while 9 percent of those receiving center-based services have a Hispanic teacher.

[50] We see some differences by child race/ethnicity in service option enrollment. A larger percentage of African American children are in center-based care than in home-based care (82 versus 17 percent, respectively). There are no differences in service option for Hispanic or white children.

English and Spanish Are the Languages Most Commonly Spoken in Classrooms and During Home Visits

Many children have a teacher or home visitor who speaks a language other than English, and for both service delivery approaches, that language is likely to be Spanish (see Table V.2). Overall, 39 percent of children receiving home-based services and 31 percent of those receiving center-based services have a home visitor or teacher speaking a language other than English.[51] Families receiving home-based services were served by a Spanish-speaking staff member 37 percent of the time, while 29 percent of those in the center-based option had a Spanish-speaking teacher. These findings reflect the need for staff with bilingual skills in both options.

Children served in the center-based option are in classrooms in which two children, on average, speak a language other than English. Meanwhile, children have home visitors who reported that about four families in their caseload speak a language other than English. The language backgrounds of these children are similar to what we saw in spring 2009. For example, in classrooms and home-based services, the language other than English that children and families most frequently speak is Spanish. Arabic is more common among families in the home-based option than in the center-based option.[52]

English is spoken by adults[53] in nearly all sampled children's classrooms and during home visits. Nearly all children and families (100 percent in center-based programs and 97 percent in home-based programs) receive services from adults who use English in the classroom or during home visits. Spanish is also spoken by adults in many classrooms and during home visits. For 45 percent of center-based children and 55 percent of home-based families, Spanish is reported to be spoken by adults in the classroom or during home visits. Among center-based staff, teachers are most often using a language other than English in the classroom (33 percent of teachers). Other staff members also speak languages other than English but at lower frequencies (assistant teachers for 15 percent of children, classroom aides for 6 percent of children, and volunteers or nonstaff members for 5 percent of children). Nearly all children (96 percent) are in classrooms in which English is most often used when reading to children. Spanish is most often used for reading in the classroom for 3 percent of children, and other languages are used for 1 percent of children.

[51] This percentage is an average across all children, not conditioned on those who speak a language other than English.

[52] Ten percent of home visitors and 13 percent of teachers report that families speak at least one of 15 languages other than those listed by name in Table V.2.

[53] Adults in the classroom included in these estimates are the lead teacher, assistant teacher, classroom aide, or volunteer/nonstaff.

Table V.2. Languages Spoken by Children, Families, and Staff

Characteristics	Weighted Mean or Percentage (Standard Error)	
	Teachers	Home Visitors
Teacher/Home Visitor Speaks Language Other than English (percentage)	31.3 (4.85)	39.4 (7.28)
Spanish	28.8 (4.78)	37.0 (7.20)
Other	2.7 (1.14)	6.2 (2.48)
Number of Families in Classroom/Caseload Speaking		
English only	5.6 (0.38)	6.0 (0.65)
English and another language	1.5 (0.28)	2.1 (0.38)
Only another language*	0.6 (0.26)	2.2 (0.55)
Non-English Languages Spoken by Families (percentage)		
Spanish	89.8 (4.07)	80.3 (5.85)
Arabic*	2.1 (1.09)	12.6 (5.14)
Asian languages	4.4 (2.72)	10.3 (4.19)
Other	15.0 (5.24)	17.9 (5.73)
Languages Used for Communication During Home Visits (percentage)		
English	n.a.	97.3 (1.61)
Spanish	n.a.	54.5 (7.62)
Other	n.a.	2.8 (1.23)
Languages Spoken by Adults[a] in Classroom (percentage)		
English	99.9 (0.14)	n.a.
Spanish	44.7 (5.31)	n.a.
Other	3.8 (1.52)	n.a.
Non-English Language Spoken in Classroom by (percentage)		
Teacher	33.2 (5.29)	n.a.
Assistant teacher	15.2 (2.91)	n.a.
Classroom aide	6.2 (2.05)	n.a.
Volunteer/nonstaff	5.3 (1.70)	n.a.
Language Used Most Often to Read to Children in Classroom (percentage)		
English	96.30 (1.51)	n.a.
Spanish	3.13 (1.39)	n.a.
Other	0.57 (0.58)	n.a.
Teacher/Home Visitor Communicates with Families Speaking Non-English Languages (percentage)		
Only in English	64.6 (5.99)	73.7 (5.09)
Uses an informal interpreter*	79.5 (4.15)	64.2 (5.94)
Uses physical cues or hand gestures	75.6 (4.94)	84.2 (3.91)
Uses bilingual newsletters/flyers/handouts	7.5 (2.09)	9.4 (3.54)
Uses pictures/drawing pictures	6.7 (4.08)	9.2 (3.29)
Uses books/dictionary+	0.6 (0.62)	7.6 (3.49)
Uses other methods	11.3 (3.26)	8.7 (2.62)
Sample Size	**178–302**	**182–257**

Sources: Spring 2010 Teacher and Home Visitor Interviews.

Note: Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors.

[a] Adults include the lead teacher, assistant teacher, classroom aide, or volunteer/nonstaff.

n.a. = not applicable.

+$p < 0.10$; *$p < 0.05$

Most Children and Families Have Staff Who Use Their Home Language to Provide Services

Looking at the language match between staff and families, we see that among all families, for 97 percent of children, home visits are conducted in their home language, and for 99 percent, their home language is used in the classroom. Considering only Spanish-speaking home-based families, the home visitor for 95 percent of families speaks Spanish. Among center-based children from Spanish-speaking homes, for 97 percent of children, the teacher or another adult in the classroom speaks Spanish.

Examining the match between staff and families' language is complex, because staff may serve children speaking languages other than English or Spanish, or speaking more than one language. Teachers and home visitors reported using a variety of strategies to communicate with families who speak a language the teacher or home visitor does not speak.[54] In these instances, about two-thirds of children have teachers and three-quarters have home visitors who reported communicating with families only in English.[55] More teachers than home visitors reported using an informal interpreter to communicate with families (80 and 64 percent, respectively). Meanwhile, many children have a teacher (76 percent) or home visitor (84 percent) who reported using physical cues or hand gestures for communication with families.

Teachers and Home Visitors are Highly Qualified and have Experience Working with Infants and Toddlers

Head Start has placed a heavy emphasis on staff education level. The reauthorization of the Head Start Act required that by September 30, 2013, nationally, 50 percent of teachers must have a bachelor's degree in early childhood education or a related degree with experience (U.S. Congress, H.R. 1429 Conference Report 2007). In addition, as of September 2010, all teachers serving children in center-based Early Head Start settings are required to have at least a CDA (Child Development Associate) credential and training or coursework in early childhood (U.S. Department of Health and Human Services 2010). Home visitors in Early Head Start are required to have relevant experience and education, but there are no specific educational requirements.

More home-based children than center-based children are being served by a staff member with at least a bachelor's degree (Table V.3). About half (51 percent) of children receiving home-based services have a home visitor with a bachelor's degree or higher. Meanwhile, only one-third of children receiving center-based services have a teacher with a similar academic background, although they are more likely to have a teacher with an associate degree (39 percent compared with 27 percent of those in the home-based option).

Many children have teachers and home visitors with training in child development and teaching that extends beyond their degree. Sixty-three percent of children have a teacher and 59 percent have a home visitor with at least an associate degree in early childhood education or child development. Of teachers who have not earned a college degree, 74 percent have a CDA; similarly, of home visitors who have not earned a college degree, 79 percent have a CDA. Thirty-seven percent of center-based children have a teacher with a state-awarded preschool certificate, and 39 percent have a home visitor with a state-issued teaching certificate or license.

[54] These findings apply to all the families served by the teachers and home visitors we interviewed who were working with any 2-year-old children in spring 2010, not to only the children and families in the study sample.

[55] As discussed in Chapter VI, 23 percent of children are spoken to at home in a language other than English.

On average, families in the home-based option have home visitors with more years of experience working with young children and working in Early Head Start than do center-based children (Table V.3). Families in the home-based option typically have home visitors with 10 years of experience working with infants and toddlers; center-based children's teachers average 7 years of experience (the medians are 9 and 6 years, respectively). Families have home visitors who have been working in Early Head Start for approximately 6 years, and children have teachers who have been working in Early Head Start for 5 years (the medians are 6 and 4 years, respectively).

Table V.3. Qualifications and Experience of Children's Teachers and Home Visitors

	Weighted Mean or Percentage (Standard Error)	
Characteristics	Teachers	Home Visitors
Highest Level of Education (percentage)		
Less than high school	0.4 (0.41)	0.2 (0.23)
High school or equivalent	5.8 (2.64)	1.8 (0.93)
Some college but no degree	21.8 (3.84)	20.4 (4.60)
Associate degree+	39.2 (4.86)	27.0 (5.13)
Bachelor's degree+	30.3 (3.86)	42.7 (6.52)
Graduate degree or higher	2.6 (1.32)	7.9 (2.86)
Field of Study Includes Early Childhood Education or Child Development (associate degree or higher; percentage)	63.1 (4.60)	58.8 (5.59)
Has a CDA (less than a college degree; percentage)	74.0 (9.00)	78.9 (11.64)
Has State-Awarded Preschool Certificate or License (percentage)	36.9 (4.52)	39.1 (5.37)
Years Teaching/Caring for Infants/Toddlers***	6.6 (0.42)	10.0 (0.68)
Years Working in Early Head Start*	4.9 (0.38)	6.2 (0.41)
Sample Size	**294–301**	**250–257**

Sources: Spring 2010 Teacher and Home Visitor Interviews.

Note: Includes data on Early Head Start staff serving children in both cohorts. Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors.

CDA = Child Development Associate credential.

+$p < 0.10$; *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

Staff Satisfaction and Well-Being Are High

To examine staff characteristics that may influence program quality, program directors provided staffing-related information on the program as a whole, including the number of teachers and home visiting staff; efforts to improve quality through professional development; and issues associated with the retention of frontline and management staff. The teacher and home visitor interviews also provide information on characteristics that may influence their interactions with children and families, including training experiences, job satisfaction, and depressive symptoms. This section details the information reported by program directors on overall staffing, retention, and training, and then discusses the professional development, job satisfaction, and well-being of teachers and home visitors serving children in Baby FACES.

Programs Have Moderately Low Staff Turnover Rates

Program directors reported that, on average, 12 percent of teachers and 11 percent of home visitors left the program in the past year (see Table V.4).[56, 57] Teacher turnover is lower in 2010 than in the previous year, when rates were 17 percent.[58] More than half of directors (58 percent) reported that these teachers and home visitors left for personal reasons. About one-third of directors (37 percent and 36 percent, respectively) reported that staff left for a change in career or due to a firing or layoff. About one-quarter reported that teachers and home visitors left for higher compensation or improved benefits. Turnover at the leadership level in programs was high, with 43 percent of programs losing a coordinator or manager during that same period, and 17 percent losing a director. On average, most programs lost one program manager or coordinator (0.6).

Table V.4. Staff Turnover

	Weighted Percentage or Mean (Standard Error)
Mean Number of Teachers Currently Employed	15.8 (1.46)
Mean Number of Home Visitors Currently Employed	7.1 (0.63)
Turnover Rate Among Frontline Staff (Percentage of Staff Who Left Program in Past 12 Months)	
Teachers	11.8 (1.67)
Home visitors	10.5 (3.02)
Reasons Teachers and/or Home Visitors Left (Percentage of Programs)[a]	
Personal reasons	58.0 (6.25)
Change in careers	37.1 (6.80)
Firing/layoff	35.7 (6.62)
Higher compensation/better benefits	22.8 (6.29)
Maternity leave	7.7 (3.42)
Other	16.1 (5.38)
Percentage of Programs in Which a Coordinator or Manager Left in the Past 12 Months	43.0 (6.29)
Percentage of Programs in Which a Director Left in the Past 12 Months	17.3 (4.19)
Mean Number of Coordinators or Managers Who Left in the Past 12 Months	0.6 (0.09)
Sample Size	**66–89**

Source: Spring 2010 Program Director Interview.

[a]Among programs in which teachers/home visitors, coordinators, or managers left.

Despite low rates of staff turnover, nearly half (47 percent) of programs have unfilled full-time staff positions (Table V.5). This percentage is higher than in spring 2009, when less than one-third

[56] Directors reported that turnover rates among teachers ranged from 0 to 67 percent, while among home visitors it ranged from 0 to 100 percent. Thirty-five percent of programs had no teacher turnover, and 58 percent had no turnover of home visitors.

[57] These rates of turnover are low compared with other studies of frontline staff. In the program implementation ratings described in Chapter III, we consider programs fully implemented if turnover is less than 20 percent. In the EHSREP in fall 1999, turnover in most Early Head Start research programs ranged between 15 and 32 percent. It was 39 percent in the 11 programs that offered all or some center-based care (ACF 2002b).

[58] As noted previously, this chapter focuses on descriptions of program quality in spring 2010. We highlight when findings differ statistically significantly from those obtained in spring 2009.

had vacant positions.[59] On average, program directors report that they have about four unfilled full-time staff positions. Most commonly, programs have vacancies for teachers (61 percent), home visitors (37 percent), and managers/supervisors (15 percent). Eight percent of programs have unfilled director positions.

Table V.5. Staff Vacancies, Salaries, and Benefits

	Weighted Mean or Percentage (Standard Error)
Program Currently Has at Least One Unfilled Full-Time Staff Position (Percentage of Programs)	47.2 (6.18)
Mean Number of Full-Time Positions Currently Unfilled[a]	4.5 (0.89)
Type of Position Unfilled (percentage of programs)[a]	
Teacher	61.3 (8.78)
Home visitor	37.2 (8.84)
Manager/supervisor	14.6 (4.42)
Director	8.1 (3.95)
Other	35.6 (8.80)
Level of Staff Salaries and Benefits (percentage of programs)	
Below the average in the surrounding area	11.5 (4.18)
About the same as the average in the surrounding area	36.3 (6.10)
Above the average in the surrounding area	52.2 (6.19)
Sample Size	**47–89**

Source: Spring 2010 Program Director Interview.

[a]Among programs with unfilled full-time positions.

According to program directors, programs generally offer salaries and benefits commensurate with other early childhood education positions in the surrounding area[60] (Table V.5). Just 11 percent of program directors feel that the program pays salaries and benefits below the average for the surrounding area. Thirty-six percent of program directors feel that they pay salaries and benefits that are about the same as the surrounding area, and 52 percent feel that they pay above the average. This finding marks a shift from patterns in spring 2009, when a higher proportion of programs offered below-average salaries and benefits.

Staff Participate in a Number of Training and Professional Development Activities

As reported by program directors, all programs develop staff training plans each year, with nearly all soliciting from staff feedback on their needs, specifically for training new staff members (Table V.6). Nearly all programs have staff who attended at least three training sessions in the past year (range = 60 to 100 percent). A later section of this chapter describes the participation of teachers and home visitors in these professional development activities.

[59] Note that 61 percent of the programs participating in the Baby FACES study received ARRA funding to expand their program's services (which could include the need to hire new staff) between the baseline data collection in 2009 and the 2010 data collection reported in this chapter. Differences in staffing between the 2009 baseline and 2010 data collections could be due, in part, to this policy change.

[60] Program directors were asked to report on how salaries for staff in their program compare with other early childhood education salaries and benefits in the community. Reports reflect program directors' perceptions and are not intended to serve as a direct measure of how closely salaries align with other programs in the area.

Table V.6. Staff Training Opportunities

	Weighted Percentage (Standard Error)
Program Develops Staff Training Plan Each Year (percentage of programs)	100.0 (0.00)
Program Solicits Information on Staff Needs to Inform Training Plan (percentage of programs)	98.0 (1.44)
Mean Percentage of Frontline Staff in Programs Who Attended At Least Three Training Sessions in Past Year	98.7 (0.59)
Program Offers Specialized Training for New Staff Members (percentage of programs)	99.6 (0.40)
Sample Size	**88–89**

Source: Spring 2010 Program Director Interview.

Children and families have teachers and home visitors who reported receiving substantial hours of staff training per year (see Table V.7). Children in the center-based option have teachers who reported attending an average of 58 hours of staff training annually, and families in the home-based

Table V.7. Teacher and Home Visitor Professional Development Activities

	Weighted Mean or Percentage (Standard Error)	
Characteristics	Teachers	Home Visitors
Currently Enrolled in Child-care-related Training (percentage)**	50.7 (4.48)	30.6 (4.75)
Mean Hours of Staff Training Per Year	58.3 (6.26)	63.7 (5.44)
Has Career or Professional Development Plan (percentage)	92.3 (2.02)	85.6 (3.83)
Supervision Meetings (percentage)		
One-on-one supervision	12.4 (2.76)	18.1 (3.64)
Group supervision+	11.8 (3.23)	5.1 (2.41)
Both	72.0 (4.38)	74.4 (4.55)
None	3.8 (2.53)	2.4 (1.41)
Frequency of Supervision Meetings (percentage)		
At least once a month*	74.2 (4.47)	86.3 (3.95)
Once every one to three months	10.0 (2.80)	5.9 (3.26)
One every four to six months	7.6 (2.12)	4.1 (2.11)
Once a year	3.5 (1.72)	1.2 (0.98)
Never	4.7 (3.10)	2.5 (1.49)
Has Mentor or Coach (percentage)	40.4 (6.54)	38.3 (4.71)
Frequency of Meetings with Mentor or Coach (percentage)		
Daily	9.0 (3.46)	13.0 (5.82)
Weekly	17.9 (7.01)	21.3 (6.14)
A few times a month	21.1 (7.19)	21.0 (5.50)
Once a month	35.4 (8.25)	23.4 (5.84)
More than once a year	6.4 (2.46)	13.9 (5.46)
Once a year	2.5 (1.38)	3.1 (2.46)
Never	7.9 (6.59)	4.2 (3.47)
Sample Size	**113–302**	**97–257**

Sources: Spring 2010 Teacher and Home Visitor Interviews.

Note: Includes data on Early Head Start staff serving children in both cohorts. Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors.

+ $p < 0.10$; *$p < 0.05$

option have home visitors who reported an average of 64 hours. Fifty-one percent of children have a teacher currently enrolled in child-care-related training, and only about one-third have a home visitor who is currently enrolled in child-care-related training. More than 70 percent of children have a teacher or home visitor who receives both one-on-one and group supervision. Supervision meetings usually are held at least once a month. Forty percent of center-based children have a teacher with an assigned mentor/coach, as do 38 percent of home-based families. The frequency of meetings with these coaches varies, but at least three-quarters of teachers and home visitors meet with coaches at least once a month.

Children's Teachers and Home Visitors Report Positive Feelings About Their Current Job and Few Depressive Symptoms

Children's teachers and home visitors are generally positive about their profession and work in programs that offer a variety of benefits (Table V.8). Most children have a teacher (89 percent) or home visitor (94 percent) who reported that she is very likely to stay in her job. More than 80 percent of children's teachers and home visitors reported receiving paid sick leave, paid holidays, paid vacations, retirement/pension plans, life insurance, and health insurance.

Table V.8. Teacher and Home Visitor Reports of Job Satisfaction, Job Benefits, and Depressive Symptoms

	Weighted Mean or Percentage (Standard Error)	
Characteristics	Teachers	Home Visitors
Very Likely to Stay in Job (percentage)	89.0 (2.86)	94.3 (2.12)
Job Benefits Provided (percentage)		
Paid sick leave	96.0 (1.37)	95.0 (1.81)
Paid holidays	95.3 (1.81)	92.2 (3.34)
Retirement/pension plan	90.2 (2.97)	94.6 (2.18)
Paid vacations	86.2 (4.53)	89.4 (4.26)
Life insurance	84.2 (3.02)	87.9 (3.21)
Paid health insurance	81.4 (3.24)	82.8 (4.52)
Dental insurance	76.5 (3.42)	74.0 (6.18)
Paid maternity leave	64.1 (5.17)	65.5 (6.17)
Educational stipends to cover workshops^{+}	60.8 (4.92)	71.6 (3.72)
Personal/bonus days	7.3 (2.67)	7.3 (2.89)
Bereavement/family leave	0.0 (0.00)	1.2 (0.70)
Mileage	2.1 (0.99)	4.7 (2.43)
Vision care	1.9 (0.91)	1.6 (0.91)
Other	16.2 (3.18)	13.4 (2.85)
CES-D Short Form Scale Score	3.5 (0.41)	2.8 (0.33)
CES-D Short Form Categories (percentage)		
No/low number of symptoms	71.5 (5.41)	78.8 (4.16)
Mild symptoms	20.3 (4.35)	15.2 (3.64)
Moderate symptoms	6.7 (1.96)	4.0 (1.43)
Severe symptoms	1.5 (0.83)	2.1 (1.19)
Sample Size	**229–302**	**214–257**

Sources: Spring 2010 Teacher and Home Visitor Interviews.

Note: The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff 1977) uses 12 items to measure levels of depression among primary caregivers. Scores range from 0 to 36: 0–4 = not depressed; 5–9 = mildly depressed; 10–14 = moderately depressed; 15 or more = severely depressed.

Includes data on Early Head Start staff serving children in both cohorts.

Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors. Chapter II provides sampling information.

$^{+}p < 0.10$

Research has documented links between teacher psychological well-being and the quality of care children receive (Gerber et al. 2007, Vogel et al. 2011). Using the short form of the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff 1977; Ross et al. 1983), teachers and home visitors provide self-reports of their mental health that hold critical information about the environment in Early Head Start classrooms, home visits, and staff interactions with children and families. Most 2-year-old children have teachers (92 percent) or home visitors (94 percent) who reported no or mild symptoms of depression (see Table V.8). On the other hand, 6 to 8 percent of children have a home visitor or teacher who reported elevated (moderate or severe) numbers of symptoms. Rates in Baby FACES are comparable to those found in the NICHD Study of Early Child Care in which 9 percent of nonfamilial caregivers reported moderate or severe depression over the course of the study (Hamre and Pianta 2004). Rates of depression in the FACES 2009 study, although measured at the classroom level, indicate that 10 percent of classrooms have a teacher who reports moderate to severe depressive symptoms (Aikens et al. 2011).

Observed Quality in Early Head Start Programs is in the Mid-Range

This section describes key aspects of children's home visits and classroom environments. We begin by offering a brief overview of the relationships among observed quality, teacher and home visitor characteristics, and children's development.

Home visiting services are intended to support children's development, parenting outcomes, and the parent-child relationship. Approaches vary, of course, in their success achieving these goals (Roggman et al. 2008b; Sweet and Appelbaum 2004), and the evidence for the efficacy of different home visiting strategies in Early Head Start and other settings is mixed (Astuto and Allen 2009; Del Grosso et al. 2011; Paulsell et al. 2010). The Early Head Start Research and Evaluation Project found the Early Head Start home-based program to have modest but important benefits for children and families, including impacts on various domains related to parenting (mostly at the end of the program) and children's outcomes (mostly at the prekindergarten follow-up; ACF 2002). Research shows that stronger effectiveness is likely when the quality of the home visit is high and the relationship between the home visitor and the family is strong. There is evidence that parents are more engaged and retention is higher when visitors are matched to the family on characteristics such as ethnicity and language (Astuto and Allen 2009). The home visitor–parent relationship is also associated with Early Head Start parents' engagement and involvement in visits and with children's vocabulary at 36 months (Roggman et al. 2008a). In addition, qualitative research highlights the importance of home visitor conscientiousness (for example, honoring commitments to parents) and the match between home visitor and parent life experiences (Brookes et al. 2006). Others have found associations with child outcomes when Early Head Start home visits focus on children rather than adults (Raikes et al. 2006). Findings suggest that the content of home visits could be important for enhancing child outcomes.

Research on factors in early childhood classroom settings that contribute to children's development points to the important contribution made by process factors (including teacher behavior, teacher-child interactions, and quality of instruction) and structural factors (including child-teacher ratios, group sizes, and teacher education; Love et al. 2005). Studies suggest strong associations between structural and process features of classrooms and the developmental outcomes of infants, toddlers, and preschoolers served in these settings (Phillips et al. 2000; Phillipsen et al. 1997). For example, the positive association between a low adult-to-child ratio in child care and child outcomes has been well documented in settings serving infants (Burchinal et al. 1996; Scarr et al. 1994), as well as for those serving toddlers and preschoolers (Scarr et al. 1994; Whitebook et al. 1989). In addition, modest associations between observed classroom quality and child outcomes for low-income infants have been found in individual studies (Burchinal et al. 1996), and relationships for toddlers and preschoolers have been found in meta-analyses (Burchinal et al. 2008a, 2009). Sensitive and responsive interactions with teachers are particularly important for preschool

children's learning and social-emotional development (NICHD Early Child Care Research Network 1996, 1997, 1998, 2006; Whittaker and Harden 2010). In fact, process characteristics, such as sensitive and stimulating interactions with teachers, are associated with prekindergarten children's language, preacademic, and social skills (Burchinal et al. 2008b).

The Baby FACES study examines the quality and content of home visits and the center-based classroom environment for Early Head Start children and families. Based on observation-based measures (described in Box V.1), the following sections of this chapter describe the key aspects of quality for both home- and center-based services for children and looks at how quality relates to characteristics of home visitors and teachers. We again point out that the design of Baby FACES does not allow us to aggregate quality observations to the program level; we can describe the experiences of only children at age 2 who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010. It is also possible that the presence of an observer during a home visit could alter the length, content, or dynamic of the interactions in unknown ways.

Box V.1 Measures of Home Visit and Classroom Quality

To assess key aspects of the quality of both home visits and center-based classrooms, field staff conducted structured observational assessments of home visits and classrooms of 1- and 2-year-old children.[61] We observed home visits for those receiving child development services through home visits and observed center-based classrooms for infants and toddlers receiving child development services in a center-based setting. We observed one home visit per home visitor (not one per child).[62] For home visits, we used the Home Visit Rating Scale-Adapted (HOVRS-A; Roggman et al. 2009) and its manual (Hallgren et al. 2009), an adaptation of the HOVRS (Roggman et al. 2006b). For classroom observations, we used the Infant Toddler Environment Rating Scale-Revised (ITERS-R; Harms et al. 2003) and the Classroom Assessment Scoring System-Toddler (CLASS-T; Pianta et al. 2010a) for classrooms serving 1-year-old and 2-year-old children, respectively.

HOVRS-A, originally developed for training Early Head Start home visitors, is based on a theoretical perspective of an optimal model of home visiting. In this model, home visitors facilitate developmentally appropriate parenting behaviors and build on parents' skills and resources to support child development (Roggman et al. 2008b). This approach focuses more on the parent-child interaction and less on one-on-one interaction with either the parent or child. Higher scores on the HOVRS-A have been associated with higher scores on a measure of the quality of the home environment (Roggman et al. 2006a), which has been found to mediate children's language development (Tamis Le-Monda et al. 2005).

HOVRS-A consists of seven items, which can be combined to form a total score and two subscale scores: Visitor Strategies (four items) and Visitor Effectiveness (three items). Visitor Strategies items include (1) the home visitor's responsiveness to the family, (2) the home visitor–family relationship, (3) the home visitor's facilitation of parent-child interaction, and (4) the home visitor's nonintrusiveness. Visitor Effectiveness includes (1) parent-child interaction during the visit, (2) parent engagement, and (3) child engagement. Items on HOVRS-A are rated from 1 to 5, based on indicators defined for each item and with anchor ratings of 1 (minimal), 3 (moderate), and 5 (good). HOVRS-A uses the same scoring procedures as those used for rating scales such as the Environment Rating Scales (for example, Early Childhood Environments Rating Scale [ECERS] or ITERS). Scores are assigned

[61] Although here we describe the measures used for capturing classroom and home visit quality for both 1- and 2-year-olds, we focus our discussion in this chapter on findings for 2-year-olds. Where appropriate, we describe differences in characteristics of classrooms and home visits for the two cohorts. But we primarily reserve findings for 1-year-olds for the technical appendix.

[62] We based our decision to observe one visit per home visitor rather than per child on two considerations. The first was the logistical difficulty of scheduling an observation of each child's home visit in the site visit week (five days). The second was prior research, which suggested that home visitors tend to have low intra-visitor variability; in other words, home visitors tend to provide home visits of a consistently similar quality (personal communication with Lori Roggman, 2008). We observed the option (center or home-based) in which the child and family was enrolled at the time of each wave of data collection. For the few families in the combination option, we chose randomly whether to observe a home visit or the classroom.

based on the number of indicators checked and observed under each anchor rating. Because of the clear theoretical underpinnings of this instrument, home visiting programs that adhere to alternative models of home visiting and that stress different types of behaviors (such as home visitor–child interactions) will not score as highly on the HOVRS-A.

During observations of home visits, field staff also collected data on the content and characteristics of the home visit, including topics (such as the child's health and development, parenting, the parent's health and well-being, parent employment and education, and community services); activities (including assessment, provision of information, goal-setting, and crisis intervention); and structure (for example, participating children and adults and languages used; Boller et al. 2009).

We observed classrooms serving 1-year-old children using the ITERS-R,[63] which consists of 39 items organized under seven subscales:

(1) Space and Furnishings (5 items)

(2) Personal Care Routines (6 items)

(3) Listening and Talking (3 items)

(4) Activities (10 items)

(5) Interaction (4 items)

(6) Program Structure (4 items)

(7) Parents and Staff (7 items)

Items on the ITERS-R are rated from 1 to 7, with the authors providing the following descriptors for the level of quality represented by ratings: 1 (minimal); 3 (moderate); 5 (good practice); and 7 (excellent). The Baby FACES study used a modified 32-item ITERS-R scale that excluded all parent and staff subscale items. These items were excluded because they rely heavily on staff reports rather than observations.

Classroom observations of 2-year-olds were conducted using the CLASS-T (Pianta et al. 2010a), a downward extension of the Pre-K CLASS (Pianta et al. 2008), which focuses on teacher-child interaction quality in toddler child care classrooms. The CLASS-T measures process quality along eight dimensions:

- Positive Climate
- Negative Climate
- Teacher Sensitivity
- Regard for Child Perspectives
- Behavioral Guidance
- Facilitation of Learning and Development
- Quality of Feedback
- Language Modeling

The dimensions exist within two broader domains: Emotional and Behavioral Support and Engaged Support for Learning. Dimensions are defined by observable indicators along a seven-point scale, with ratings reflecting scores in the low (1-2), mid (3-5), and high (6-7) ranges of quality. Appendix D presents additional information, including findings of principal components factor analysis and procedures for scoring the CLASS-T.

[63] We report findings on the ITERS-R along with other findings for 1-year-olds in the technical appendix. This report concentrates on findings for the 1-year-old Cohort at age 2.

Classroom observations for both 1- and 2-year-olds also included counts of infants and toddlers and the adults caring for them, which we used to compute child-adult ratios and group sizes.

For the HOVRS-A, ITERS-R, and CLASS-T, observers look for evidence of specific indicators as they rate each item. The unweighted means, standard deviations, and ranges for scores at age 2 (that is, HOVRS-A and CLASS-T scales) are presented below. Appendix E presents additional information about scores on the structured observations at age 1 (that is, HOVRS-A and ITERS-R scales).

Spring 2010 HOVRS-A and CLASS-T Scores, Unweighted

Domain	Mean	Standard Deviation	Range
HOVRS-A Overall Quality	3.4	0.77	1.6-4.7
Visitor Strategies quality	3.3	0.82	1.3-5.0
Visitor Effectiveness quality	3.6	0.89	1.0-5.0
CLASS-T Emotional and Behavioral Support	5.3	0.80	2.8-6.9
Positive Climate	5.5	1.13	2.3-7.0
Negative Climate	1.3	0.39	1.0-2.8
Teacher Sensitivity	4.8	1.02	1.8-7.0
Regard for Child Perspectives	4.7	0.99	1.8-7.0
Behavioral Guidance	4.7	1.12	1.5-7.0
CLASS-T Engaged Support for Learning	3.5	1.17	1.0-6.6
Facilitation of Learning and Development	3.9	1.10	1.0-7.0
Quality of Feedback	3.4	1.33	1.0-6.3
Language Modeling	3.3	1.29	1.0-6.5
Sample Size	**230–323**		

Source: Spring 2010 home visit observation; spring 2010 classroom observation.

Note: Scores are reported only for children at age 2. The CLASS-T Emotional and Behavioral Support composite score includes reverse-coded values on Negative Climate

HOVRS-A = Home Visit Rating Scale-Adapted; CLASS-T=Classroom Assessment Scoring System-Toddler.

Home Visitor Caseloads and Visit Characteristics are Consistent with the Performance Standards and Professional Recommendations

Program directors report that home visitors have an average caseload of 10 families (Table V.8). This number falls within performance standards (10 to 12 families per home visitor), which also require that families receiving home-based services receive weekly home visits that last 90 minutes. According to program directors, programs offer fairly frequent home visits; 70 percent of families receive visits four or more times a month and another 24 percent receive them three times a month. Only 7 percent receive two visits or fewer per month.[64] Based on our observations, the length of the home visits provided to children and their families is slightly less than the required 90 minutes, on average (mean = 77 minutes; range = 20 to 135 minutes; Table V.9). However, approximately 35 percent of observed home visits last at least 90 minutes (not shown in table).

On average, we observed one child other than the focus child and one adult working with the home visitor during home visits (Table V.9). Eighty-seven percent of the time, the child's mother or female guardian was the adult present during the home visit (not shown). Home visitors are encouraged to meet family needs by engaging the whole family in the visit while maintaining an individualized, focused approach for each individual child.

[64] See Chapter IV for a more detailed discussion of the frequency of home visit receipt.

Table V.9. Home Visiting Characteristics

Characteristics	Weighted Mean or Percentage (Standard Error)
Program Director Reports[a]	
Number of Families per Home Visitor	10.3 (0.32)
Percentage of Home-Based Families Receiving Home Visits	
Four or more times a month	70.4 (3.80)
Three times a month	24.2 (3.37)
Two times a month or less	6.7 (1.22)
Home Visit Observations	
Length of Home Visit (minutes)	77.4 (2.57)
Home Visits Lasting 90 minutes or more (percentage)	33.4 (5.68)
Number of Children Other than Focus Child Participating in Visit	0.5 (0.09)
Number of Adults Other than Home Visitor Participating in Visit	1.2 (0.11)
Languages Used During Home Visit (percentage)[b]	
English	76.4 (5.36)
Spanish	27.7 (5.74)
Other Language	2.3 (1.56)
If Language Other than English Used During Home Visit, Interpreter Used (percentage)	10.1 (6.24)
Sample Size	
Program Director Interviews	**66–74**
Home Visit Observations	**63–223**

Source: Spring 2010 Program Director Interview and Home Visit Observations.

Note: Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors.

[a] Items asked only of program directors reporting a home-based option.
[b] Language categories do not sum to 100, because more than one language could have been used during the home visit.

Programs strive to provide home visiting services in the languages families and children are most comfortable speaking. According to observations, most children and their families (76 percent) participate in visits in which English is spoken, either alone or in combination with another language[65]; 28 percent participate in visits where Spanish is spoken, and 2 percent have visits in which a language other than English or Spanish is used.[66] For approximately three-quarters of children from homes in which Spanish is the primary language, Spanish is used during the home visit.[67] Ten percent of observed home visits are conducted with an interpreter.

[65] In some instances, more than one language was used during the home visit.

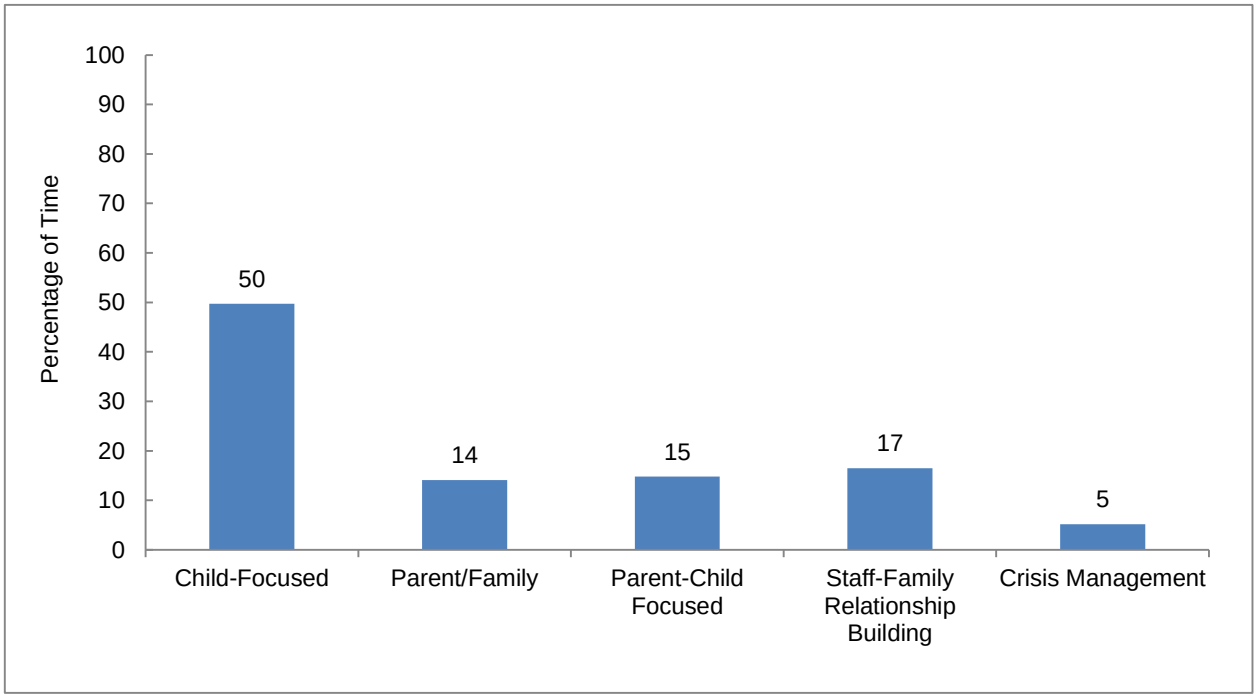
[66] Note that these data differ from data reported earlier in this chapter about the percentage of children having a home visitor speaking a language other than English. This difference may be due to the fact that data reported here are based on our observations of the languages spoken during home visits sampled for this study. The data reported earlier in this chapter are based on the home visitor interview and may reflect all the families in the home visitor's caseload, not just those families sampled for Baby FACES.

[67] The information presented here is drawn from multiple questions about family language and service delivery approaches. Thus, the responses do not necessarily total 100 percent.

Children and Families in the Home-Based Option Participate in a Variety of Activities During Visits

Early Head Start home visits involve a range of activities.[68] Based on our observations, most of the time in a home visit with families is spent on child-focused activities (that is, activities that are focused on the child and his/her development, such as developmental assessments or parenting education on developmental milestones). In fact, half of the home visit time is focused on the child (Figure V.1; Table V.10). Seventeen percent of the time is focused on staff-family relationship building activities (for example, through general conversation); 14 percent on parent and family-focused activities (for example, case management, family support, or adult education on other topics); and another 15 percent on parent-child activities (that is, activities that are focused on the parent-child dyad, such as activities to enhance parent-child interactions or the parent-child relationship). About 5 percent of the time is focused on crisis management (that is, activities focused on meeting emergent family or child needs).

Figure V.1. Time Spent on Activities in Observed Home Visits



Source: Spring 2010 home visit observation.

Notes: N = 220; 1-year-old Cohort at age 2.

[68] Observers recorded information on activities that took place during the home visit. One item set recorded the amount of time spent on five overarching home visit activities. Observers also indicated whether a series of specific activities occurred during the visit, some of which fell under the umbrella of the overarching activities.

Table V.10. Activities During Home Visits

Activities	Weighted Mean or Percentage (Standard Error)
Proportion of Home Visit Time per Type of Activity (percentage)	
Child-focused activities	49.7 (2.93)
Parent/family-focused activities	14.1 (1.37)
Parent-child-focused activities	14.8 (1.66)
Staff-family relationship-building activities	16.5 (1.76)
Crisis management activities	5.2 (0.96)
Activities During Home Visit[a] (percentage)	
Child/parent observation/assessment	50.1 (5.34)
Evaluation/feedback on parent-child interactions	25.2 (4.27)
Provision of education and/or information	67.1 (4.78)
Problem solving	32.6 (4.24)
Goal setting/planning	54.8 (5.38)
Crisis intervention	10.7 (3.12)
Model or demonstrate interaction with child/facilitate parent-child interaction	43.7 (5.31)
Observation of caregiver-child interactions	23.8 (4.62)
Provision of emotional support to parent	27.2 (4.63)
Play	86.1 (4.02)
Other	4.6 (2.08)
Alignment of Home Visit Activities with Planned Activities[b]	4.2 (0.12)
Sample Size	**219–221**

Source: Spring 2010 Home Visit Observations.

Note: Because we did not sample teachers or home visitors, we must provide overall estimates as a percentage of children rather than as a percentage of teachers and home visitors.

[a] Activity categories do not sum to 100, because more than one activity could occur during the home visit.
[b] Rated on a scale of 1 to 5, with 5 designating the activities as "very well aligned" with planned activities.

Nearly all home visits involve play (86 percent), and most involve the provision of education or information (67 percent; Table V.10). Half of the home visits include assessment/observation of the parent or child, and about half address goal setting and planning (55 percent). Visits with families also often include spending time modeling or facilitating parent-child interactions (44 percent), providing emotional support to the parent (27 percent), evaluating or providing feedback on parent-child interactions (25 percent), and observing parent-child interactions (24 percent). Although relatively few visits (11 percent) include crisis intervention, one-third involve problem-solving with families. After the visits were completed, home visitors reported that observed visits were highly aligned with the activities they had planned, with staff able to cover the topics and perform the activities on which they had set out to work.

Most Children and Families in the Home-Based Option Receive Home Visits of Mid-Range Quality

Using the HOVRS-A, we find that Early Head Start families[69, 70] have home visits scoring in the 3- to 4-point range on average out of a possible score of 5 (weighted mean = 3.4; see Table V.11). Average HOVRS-A total scores range from about 2 to 5, with almost half (41 percent) of children having a visit scoring between 3 and 4 (the moderate range). Very few families (5 percent) receiving home-based services have a home visit with a score lower than 2, indicating a minimal level of quality, and none have a score of 5.[71] Nineteen percent have a score of at least 4, indicating moderate quality (see Figure V.2). On the Visitor Strategies subscale, home visits were also in the 3- to 4-point range, on average (mean = 3.2). This scale includes four items that capture the home visitor's interactions and relationship with the parent and child. Nearly half of families have visits scoring between 3 and 4 on this subscale. Scores in this range on this scale indicate that home visitors occasionally use strategies in their interactions that demonstrate responsiveness and that help develop relationships with parents and children. It also means that the home visitor occasionally tries to facilitate and reinforce parent-child interactions rather than interacting solely with the parent or child, and occasionally guides (rather than controls) aspects of parent-child interactions.

Table V.11. Quality of Home Visits Received by Children and Families in the Home-Based Option

Scales	Weighted Mean (Standard Error)
HOVRS-A Overall Quality	3.4 (0.09)
Visitor Strategies Quality	3.2 (0.09)
Responsiveness to family	3.1 (0.11)
Relationship with family	4.0 (0.10)
Facilitation of parent-child interaction	2.8 (0.12)
Nonintrusiveness	2.9 (0.12)
Effectiveness Quality	3.6 (0.11)
Parent-child interaction	3.3 (0.13)
Parent engagement	3.2 (0.15)
Child engagement	4.2 (0.11)
Observer Rating of Visit Quality	3.2 (0.11)
Sample Size	**220–225**

Source: Spring 2010 Home Visit Observations.

HOVRS-A = Home Visit Rating Scale-Adapted.

On the Visitor Effectiveness subscale, which captures the home visitor's effectiveness in involving and engaging the family, the average subscale score is about 4. This score is somewhat higher than the average on the Visitor Strategies subscale. About half of families have a home visit scoring a 4 or higher on this subscale. These average scores suggest that families have home visitors who are relatively effective at engaging parents and children with each other and with the activities of the home visit. On this subscale, visits score highest in child engagement (mean of 4) compared with the other

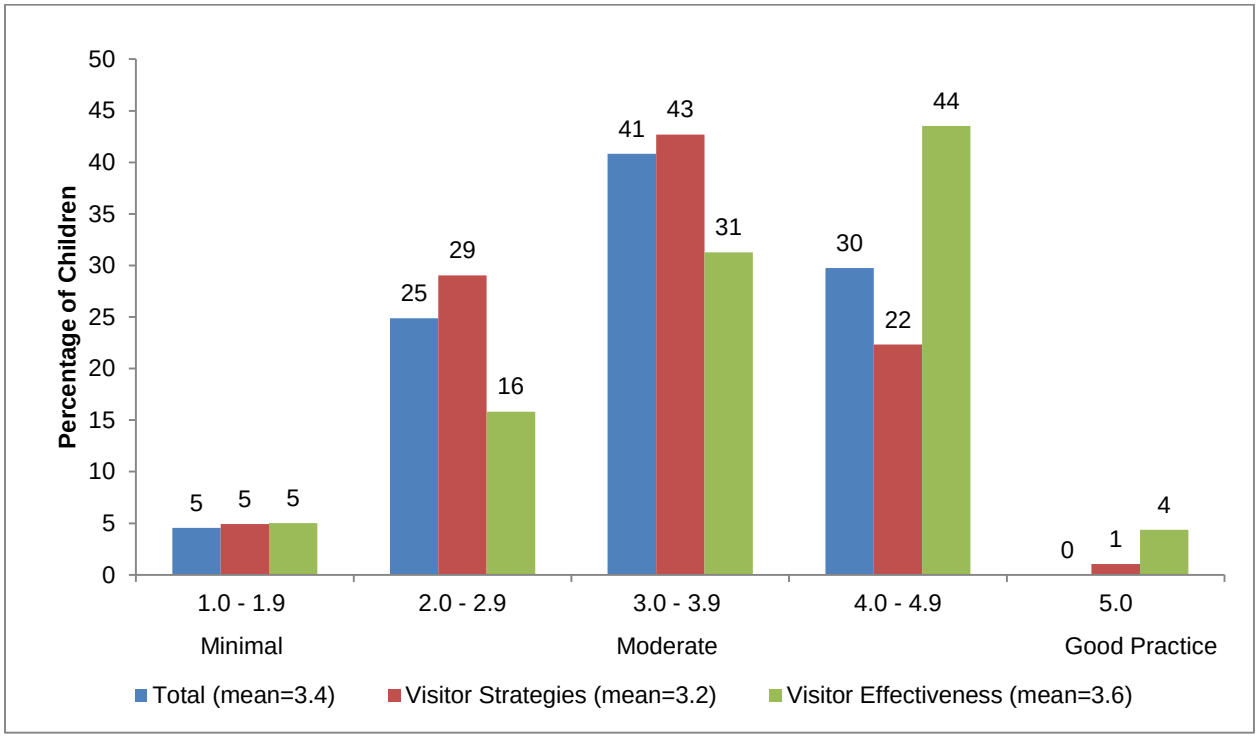
[69] We conducted classroom and home visit observations for children in both the Newborn and 1-year-old cohorts. As noted earlier in this chapter, mean classroom and home visit scores reflect those of only children in the 1-year-old Cohort at age 2.

[70] Because home visits, unlike center-based services, target children and family members, we reference "families" or "children and their families" when describing the characteristics of visits and home visitors.

[71] Among these families, mean scores were lower than 2 on six of the seven component scales of the HOVRS-A (ranging from 1.3 to 1.9). The average score on the relationship with family scale was in the mid-range (3.0).

two scale items. Therefore, during home visits, children at least occasionally interact with the parent or home visitor and demonstrate interest in home visit activities. Scores and patterns on the HOVRS-A in the spring of 2010 are similar to findings from spring 2009.

Figure V.2. Observed Home Visit Quality Based on the HOVRS-A



Source: Baby FACES Spring 2010 Home Visit Observation.

Note: N = 220; 1-year-old Cohort at age 2. We point out that the nature of the scoring rubric is such that each of the anchor points includes a range of scores (for example 2.0 to 2.9), with the exception of 5, the highest point. We elected not to collapse scores to create a range, because that approach would entail a loss of precision and useful information about the highest end of the scale.

HOVRS-A = Home Visit Rating Scale-Adapted.

Correlational analyses[72] indicate that visit quality, including the total HOVRS-A score and the two subscale scores, is associated with other characteristics of home visitors and features of the program, but the magnitude of these relationships is small (ranging from 0.14 to 0.16; see Table V.12).[73] Although there is no association between home visitors' educational attainment and visit quality, there is a positive relationship between the HOVRS-A overall score and whether the home visitor has a

[72] Analyses examined correlations between home visit quality and a range of factors. These factors include the number of children and adults participating in the visit; percentage of visit time spent on crisis management; visit length; whether the program has unfilled positions; and program turnover of home visitors, teachers, and management staff. Analyses also examined the relationship of visit quality to the home visitor's years of experience working with young children; educational level (including categorical educational level and dummy codes for whether the home visitor has a high school degree plus some college, an AA, or a BA), training (whether the home visitor has a degree in early childhood education and whether he or she is currently participating in child-care-related training), and credentials (whether home visitor has a CDA or state-awarded credential); depressive symptoms (whether the home visitor has moderate to severe levels of depressive symptoms); job satisfaction; reported relationship with the parent; and parent involvement in the program. Similar correlational analyses were conducted in spring 2009 and, in general, associations were fairly similar across years. Table V.12 presents only statistically significant relationships.

[73] Cohen (1992) defines correlations of 0.10 as small, 0.30 as medium, and 0.50 as large.

child development credential. That is, home visitors with a CDA have higher quality visits than those without a CDA, of home visitors' overall level of education. The total HOVRS-A and Visitor Strategies scores are related to home visitors' risk of depression, with a higher risk of depression related to lower home visit quality scores. In addition, there is a negative relationship between the total HOVRS-A and HOVRS-A effectiveness quality scores and whether the program has unfilled staff positions, meaning that quality is lower in programs with unfilled positions. This finding is consistent with the idea that staff turnover and the potentially higher caseloads that may result may degrade the quality of the home visitor–parent relationship and the quality of home visits overall.

Finally, we examined the total HOVRS-A score and the two subscale scores for associations with other features of the home visits and found that quality is negatively related to the number of children other than the focus child participating in the visit. Correlations are small to moderate (ranging from 0.19 to 0.27; see Table V.12).[74] That is, the involvement of additional children in the home visit activities is associated with lower quality visits. Total HOVRS-A and visitor strategies scores are positively associated with home visit length, indicating higher quality is related to longer visits.

Table V.12. Correlations of Home Visit Quality with Home Visitor Characteristics, Program Characteristics, and Home Visit Activities at Age 2

HOVRS-A Scale	Overall Quality	Visitor Strategies Quality	Visitor Effectiveness Quality
Home Visitor Characteristics			
Home visitor has CDA credential[a]	0.15*	0.14	0.18
Home visitor depression score	-0.14*	-0.13	-0.13
Home visitor is at risk of moderate or severe depression	-0.15*	-0.14*	-0.14
Program Characteristics			
Program has unfilled staff positions	-0.16*	-0.14	-0.15*
Home Visit Activities and Characteristics			
Home visit length	0.19**	0.23***	0.10
Number of children participating in home visit	-0.27***	-0.23**	-0.26***
Sample Size	**185–189**	**185–189**	**185–189**

Source: Spring 2010 Home Visit Observation, Home Visitor Interview, and Program Director Interview.

Note: Reported observations are for only the 1-year-old Cohort at age 2. Only statistically significant correlations are presented.

[a] Staff may or may not have other degrees in addition to having a CDA.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

[74] We also examined concurrent relationships between HOVRS-A scores and key child development and family outcomes at age 2. Most scores had nonsignificant relationships with developmental outcomes. However, there were positive associations between visitor effectiveness and children's engagement and emotional regulation scores (0.13 and 0.14, respectively) on the Bayley Behavior Rating Scale (BRS), and negative associations between scores and home visitor reports of children's problem behaviors (-0.17) on the BITSEA. Interestingly, the ASQ-3 gross motor, fine motor, and problem solving scores had significant *negative* correlations with home visit quality (ranging from -0.14 to -0.17), meaning that higher quality was related to lower development scores. No relationships emerged with family outcomes measures such as the HOME.

Classrooms Offer Group Sizes and Ratios Within the Performance Standards and Professional Recommendations

On average, children are in Early Head Start classrooms with observed group sizes of six children and child-teacher ratios of close to three children per teacher[75] (Table V.13). These numbers fall within performance standards (four children per adult and a maximum group size of eight). Nearly all Baby FACES children (99 percent) are in classrooms with observed group sizes of eight or fewer children, and 98 percent are in classes with ratios of 4 to 1 or better.

Table V.13. Classroom Group Sizes and Ratios

	Weighted Mean (Standard Error)
Group Size	5.9 (0.14)
Child/Adult Ratio	2.7 (0.06)
Sample Size	**295**

Source: Spring 2010 Classroom Observations.

Relatively Wide Age Ranges Are Common in Classrooms

Many classrooms we observed included a fairly wide range of ages, with an average span of almost 15 months between the youngest and oldest child (ranging from 2 months to 37 months). To understand the proportion of "mixed-age" classrooms in the sample, we examined the percentage of classrooms of 2-year-olds that included children who were 12 months or younger and/or 36 months or older. According to this criterion, 47 percent of the classrooms we observed are mixed-age. Within these mixed-age classrooms, the average age span between the youngest and oldest child is 21 months (ranging from 10 months to 37 months), as compared with a 9-month average age span (ranging from 2 months to 21 months) among children in non-mixed classrooms.[76]

Most Children in Center-Based Programs Are in Classrooms of Midrange Quality

As noted above, child care quality is associated with child outcomes and is a fundamental component of the services provided by Early Head Start programs. For observations of classroom quality in center-based programs, we used the ITERS-R and the CLASS-T for classrooms serving 1-year-old and 2-year-old children, respectively. Findings using the ITERS-R are reported in the baseline report (Vogel et al. 2011) and in the Technical Appendix. Using the CLASS-T, a new measure of effective teacher-child interactions intended for use with children ages 15 to 36 months, we find that 2-year-old children are in classrooms that score a mean of just over 5 and just under 4 (out of 7) in the domains of Emotional and Behavioral Support and Engaged Support for Learning, respectively (Table V.14).[77] Although scores in the Engaged Support for Learning domain are lower, on average,

[75] This ratio is slightly smaller than was observed at 24 months in the EHSREP (3.5 children per adult).

[76] To understand whether children in mixed-age settings experienced fewer teacher changes than those in same-age settings, we examined the proportion of children in both groups experiencing a change. Based on teacher reports of child service receipt (FST), we examined the proportions of children in mixed-age versus non-mixed classrooms who experienced one or more teacher changes during the 52-week period from July 2009 to June 2010 and found no statistically significant differences.

[77] As noted in Box V.1, for classroom observations, we used the ITERS-R in classrooms serving infants in the Newborn Cohort who were 1 year old in spring 2010 and the CLASS-T for children in the 1-year-old Cohort who were 2 years old. Appendix E presents descriptive information on observed classroom quality for the 1-year-olds. The level of quality is also in the midrange on the ITERS-R.

than those observed in the domain of Emotional and Behavioral Support, scores across both domains represent ratings in the midrange of quality (scores of 3 to 5). Classrooms are strongest in the area of Emotional and Behavioral Support, including the dimensions of Positive Climate (6), Teacher Sensitivity (5), Regard for Child Perspectives (5), Behavioral Guidance (5) and Negative Climate (1; with low scores in Negative Climate indicating that interactions characterized by negativity were infrequently observed). Classrooms scored lower in the area of Engaged Support for Learning, including the dimensions of Facilitation of Learning and Development (4), Quality of Feedback (4), and Language Modeling (3).

Table V.14. Observed Classroom Quality

	Weighted Mean (Standard Error)
CLASS-T Emotional and Behavioral Support	5.3 (0.07)
Positive Climate	5.6 (0.12)
Negative Climate	1.3 (0.04)
Teacher Sensitivity	4.8 (0.10)
Regard for Child Perspectives	4.7 (0.09)
Behavioral Guidance	4.8 (0.10)
CLASS-T Engaged Support for Learning	3.6 (0.15)
Facilitation of Learning and Development	3.9 (0.12)
Quality of Feedback	3.5 (0.18)
Language Modeling	3.4 (0.16)
Sample Size	**300–302**

Source: Spring 2010 Classroom Observations.

CLASS-T = Classroom Assessment Scoring System-Toddler.

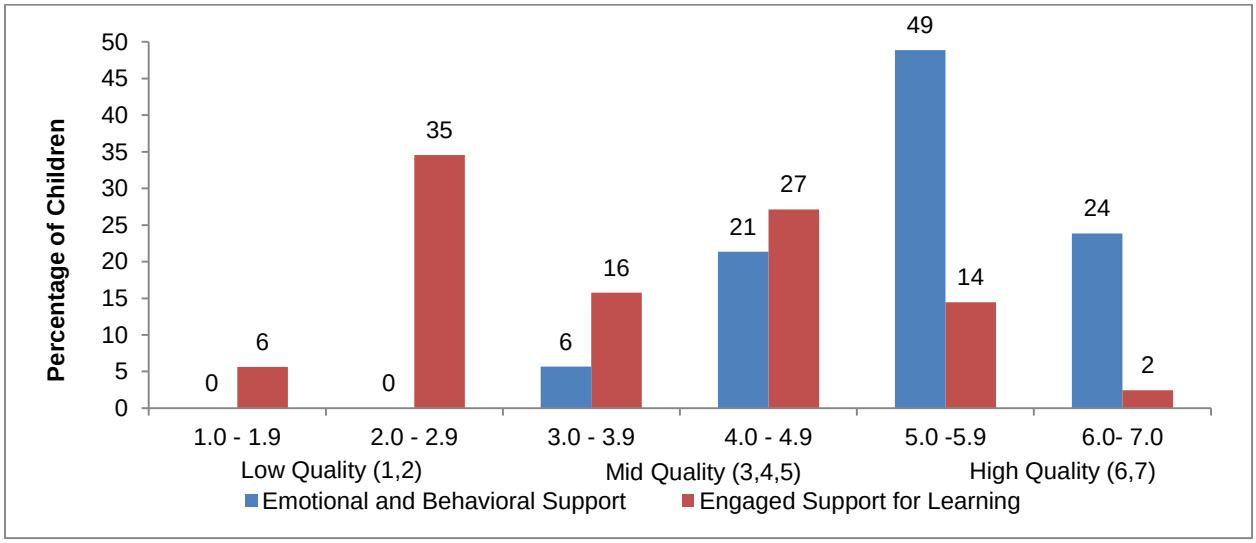
The findings in this study are similar to those found in other work on the quality of interactions between teachers and children in center-based programs. For example, in the pilot study of the CLASS-T (Thomason and LaParo 2009),[78] Language Modeling is likewise rated the lowest of all the observed dimensions (2). Additionally, Baby FACES findings indicating lower instructional quality compared with emotional aspects of the classroom mirror those in studies with older preschool children (for example, FACES, Aikens et al. 2010; C-PEP, Ross et al. 2008) and suggest that teachers face greater challenges in their attempts to offer high-quality instructional support to children, including facilitating activities that support children's learning and development, providing individualized feedback to promote children's understanding of concepts, providing opportunities for children to use language, and engaging in conversations that extend children's language skills. Notably, across all the CLASS-T dimensions, these Early Head Start classroom scores compare favorably with those reported by the CLASS-T authors across a number of reports (personal communication with Robert Pianta and Karen LaParo, November 2, 2011).

Using the developer-provided definitions of the CLASS-T dimension scores, all children in Baby FACES are in classrooms rated as falling in the mid-to-high range in the domain of Emotional and Behavioral Support (Figure V.3). One-quarter (24 percent) are in classrooms rated as 6 or higher. In

[78] The measure used by Thomason and LaParo (2009) was a downward extension of the CLASS (Pianta et al. 2008), which included only six of the eight component dimensions: Positive Climate, Negative Climate, Teacher Sensitivity, Regard for Child Perspectives, Behavioral Guidance, and Language Modeling. Consequently, the study authors reported neither the findings for the dimensions of Facilitation of Learning and Development and Quality of Feedback, nor the resulting composite domain score derived from these dimensions. The Emotional Climate domain score reported by the authors is similar to the composite measure of Emotional and Behavioral Support derived in Baby FACES; a key dissimilarity is the inclusion of Behavioral Guidance in the Emotional and Behavioral Support composite score (see Appendix D for findings of principal components factor analysis using the Baby FACES study sample).

contrast, only 59 percent of children are in classrooms receiving scores in the mid-to-high range for Engaged Support for Learning. Forty-one percent of all children are in classrooms scoring in the low range, with far fewer children (2 percent) in classrooms rated as 6 or higher. The overall pattern of findings is comparable to what we observed in spring 2009 using the ITERS-R; at 1 year old, most children (76 percent) were in classrooms scoring in the minimal-to-good range of quality.

Figure V.3. Observed Classroom Quality Based on the CLASS-T



Source: Baby FACES Spring 2010 Classroom Observation.

Note: The overall mean score is 5.3 for Emotional and Behavioral Support and 3.6 for Engaged Support for Learning.

Sample size: 220 classrooms.

CLASS-T = Classroom Assessment Scoring System-Toddler.

Associations between CLASS-T dimension scores and teacher education and credentials, group size, child-staff ratios, and other quality-related measures are generally small to modest,[79] but several are statistically significant (see Table V.15).[80] Teachers' experience working with infants and toddlers

[79] As with the HOVRS-A, analyses examined correlations between classroom quality and a range of factors. These factors include whether the program has unfilled positions and program turnover of home visitors, teachers, and management staff. Analyses also examined the relationship of classroom quality to the teacher's years of experience working with young children; educational level (including categorical educational level and dummy codes for whether the teacher has a high school degree plus some college, an AA, or a BA), training (whether the teacher has a degree in early childhood education and whether he or she is currently participating in child-care-related training), and credentials (whether teacher has a CDA or state-awarded credential); depressive symptoms (whether the teacher has moderate to severe levels of depressive symptoms); job satisfaction; reported relationship with the parent; and parent involvement in the program. Table V.15 presents only statistically significant relationships.

[80] We also examined the relationship between CLASS-T scores and key child development outcomes at age 2. Most scores had significant associations with language and social-emotional development outcomes that were small to modest in magnitude. The three dimensions comprising the Engaged Support for Learning domain (Facilitation of Learning and Development, Quality of Feedback, and Language Modeling) were significantly and consistently associated with measures of children's language and social-emotional development, including ASQ communication IRT scores (0.13 to 0.14), PLS-4 English standard scores (0.20 to 0.24), BITSEA Competence scores (0.13 to 0.18), and ratings of Sustained Attention from the Two-Bag Task Parent-Child Interaction Rating Scales (0.13 to 0.18). Positive associations between children's CDI Comprehension and Production scores and CLASS-T Quality of Feedback and Language Modeling scores also emerged (0.11 to 0.13). The dimensions comprising the Emotional and Behavioral Support domain were significantly associated with children's PLS-4 English standard scores (0.17 to 0.22) and BITSEA Competence (0.13 to 0.18) and Problem scores (-0.11 to 0.15). Behavioral Guidance scores were the least consistently associated with children's outcomes, with positive relationships emerging only with children's PLS-4 English standard scores (0.18).

Table V.15. Correlations of Classroom Quality with Teacher, Program, and Classroom Characteristics

CLASS-T Scale	Emotional/ Behavioral Support	Positive Climate	Negative Climate	Teacher Sensitivity	Regard for Child Perspectives	Behavioral Guidance	Engaged Support for Learning	Facilitation of Learning and Development	Quality of Feedback	Language Modeling
Teacher Characteristics										
Years teaching infants/toddlers	0.16**	0.12	-0.18**	0.14*	0.17**	0.12	0.03	0.09	0.00	-0.00
Teacher has CDA credential	0.21**	0.13*	-0.18**	0.21**	0.19**	0.19**	0.10	0.13	0.09	0.07
Teacher depression score	-0.21**	-0.18**	0.20**	-0.19**	-0.18**	-0.18**	-0.03	-0.02	-0.03	-0.03
Teacher has any depressive symptoms	-0.18**	-0.20**	0.13	-0.16*	-0.16*	-0.15*	0.00	-0.00	0.01	0.00
Teacher is very likely to return to job next year	0.20**	0.16*	-0.18**	0.14*	0.22***	0.16*	0.17**	0.20**	0.16*	0.14*
Relationship with parent	0.19**	0.16*	-0.24***	0.17*	0.14	0.17**	0.22**	0.19***	0.23***	0.19**
Program Characteristics										
Number of teachers who left the program in the past year	-0.17*	-0.11	0.17**	-0.13	-0.19**	-0.17**	-0.04	-0.06	-0.04	-0.04
Program has unfilled staff positions	-0.08	-0.12	0.06	-0.05	-0.06	-0.10	-0.11	-0.09	-0.08	-0.14*
Sample Size	**206–220**	**206–220**	**204–218**	**206–220**	**205–219**	**206–220**	**206–220**	**206–220**	**206–220**	**206–220**

Source: Spring 2010 Classroom Observation, Teacher Interview, Parent Interview, Program Director Interview, and Program Director Self-Administered Questionnaire.

Note: Reported observations are for only the 1-year-old Cohort at age 2. Only statistically significant correlations are presented.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$

is positively related to Teacher Sensitivity and Regard for Child Perspectives, and inversely related to Negative Climate, suggesting more experience is related to higher quality. Having a child development credential is similarly related to a number of CLASS-T dimensions, in the expected directions. For all CLASS-T dimensions, quality is higher when children have teachers reporting a greater likelihood of returning to their jobs in the coming year (that is, lower scores in Negative Climate; higher scores in other areas). In addition, component scores of the Emotional and Behavioral Support domain are related to teachers' risk of depression, with higher risk of depression related to lower classroom quality scores. Teacher turnover is associated with lower classroom quality as measured by the Regard for Child Perspectives, Behavioral Guidance, and Negative Climate dimension scores (Table V.14). Finally, having unfilled staff positions is negatively associated with Language Modeling scores.

Parents and Staff Have Positive Relationships with One Another

Communication between parents and teachers or home visitors, as well as agreement between parents and these staff on child-rearing philosophy, has been shown to relate to child outcomes. Particularly with home visiting services, the quality of the relationship between the home visitor and the parent may influence the effectiveness of care and the extent and quality of parent engagement and involvement (Korfmacher et al. 2007, 2008; Roggman et al. 2008b). Accordingly, we included items from the Parent-Caregiver Relationship Scale (PCRS; Elicker et al. 1997) in Baby FACES to assess the quality of this relationship (see Box V.2).

Box V.2. Measuring the Parent-Staff Relationship

The Parent-Caregiver Relationship Scale (PCRS; Elicker et al. 1997) measures the perceived relationship between the parent and the Early Head Start staff member who delivers the primary service to the child and family (that is, the teacher or the home visitor). Items capture important dimensions of the parent-staff relationship, including trust and confidence, communication, respect and acceptance, caring, competence and knowledge, partnership and collaboration, and shared values. The spring 2010 Baby FACES instruments included items across these dimensions. The version used with home visitors was adapted from the original version developed primarily for center-based teachers. Parents and staff rated items on a scale from 1 to 5 (that is, from strongly disagree to strongly agree). Scale scores represent the average across a subset of these items (six and seven items for staff and parents, respectively). Appendix C presents additional information on the reliability of these scales in spring 2010.

Spring 2010 Staff-Parent Relationship Quality Scores, Unweighted

Domain	Mean	Standard Deviation	Range
Staff-Parent Relationship Quality Scores for Children Receiving Services by Home Visits			
Parent report	4.6	0.59	1.6–5.0
Home visitor report	4.4	0.69	1.0–5.0
Staff-Parent Relationship Quality Scores for Children Served in Centers			
Parent report	4.6	0.57	1.0–5.0
Teacher report	4.2	0.79	1.0–5.0
Sample Size	**216–301**		

Source: Spring 2010 Staff-Child Report, Spring 2010 Parent Interview.

Note: Scores are reported here only for staff and parents of children at age 2.

PCRS = Parent-Caregiver Relationship Scale.

On average, parents agree or strongly agree with positive statements about the quality of relationships with their home visitor or teacher (means are about 5 both for those receiving home visits and those with children in centers; see Table V.16). For example, they typically agree or strongly agree with statements such as, "If there is a problem, my child's teacher or home visitor and I always talk about it soon," and "I feel that my child's home visitor or teacher genuinely cares for [my child]." As in spring 2009, teachers and home visitors express similar positive attitudes about their relationships with children's parents (means are about 4 for both).

Table V.16. Quality of Relationships between Parents and Staff Based on PCRS

Characteristic	Weighted Mean (Standard Error)
Staff-Parent Relationship Quality Score for Children Served in Centers	
Parent report	4.5 (0.05)
Teacher report	4.3 (0.06)
Staff-Parent Relationship Quality Score for Children Served by Home Visits	
Parent report	4.6 (0.06)
Teacher report	4.4 (0.06)
Sample Size	**468–513**

Sources: Spring 2010 Parent, Teacher, and Home Visitor Interviews.

Note: Scores are reported here only for staff and parents of children at age 2.

PCRS = Parent-Caregiver Relationship Scale.

Although relationship quality is not associated with observations of home visit quality, all CLASS-T dimension scores are related to teacher reports of relationships with parents; higher observed quality is associated with better relationships. Teachers who report better relationships with parents have classrooms characterized by higher scores on Positive Climate, Teacher Sensitivity, Regard for Child Perspectives, Behavioral Guidance, Facilitation of Learning and Development, Quality of Feedback, and Language Modeling (correlations range from 0.14 to 0.23), and lower Negative Climate scores (correlation of -0.24). A similar association emerges in the area of Language Modeling and parent reports (0.16). Correlations between parent ratings of the relationship and staff ratings were not statistically significant. In a study of 217 parents and caregivers, Elicker and colleagues (1997) also found that correlations among the parent and caregiver scales were not significant, suggesting that parent-caregiver reports were incongruent. The authors note that on measures of perceived relationships, staff typically report positive ratings of parents less frequently than parents report of staff, with staff ratings varying with the demographic characteristics of parents (for example, age, education, income, and marital status).

Summary of Key Findings

- All children are served by female teachers or home visitors.
- Children have diverse teachers and home visitors.
  - Many children have a teacher (31 percent) or home visitor (39 percent) who speaks a language other than English.
- English and Spanish are the languages most commonly spoken in classrooms and during home visits serving children and families.

  - English is the language adults most often speak in classrooms (100 percent) and during home visits (97 percent).
  - Following English, teachers and home visitors report Spanish as the language most frequently spoken in children's homes. Arabic and Asian languages are also common, particularly in the home-based option.

- Most children interact with staff members who provide services using the child's home language.
  - Ninety-five percent of children from Spanish-speaking homes who receive home-based services have a home visitor who speaks Spanish.
  - For 97 percent of children from Spanish-speaking homes who receive center-based services, a teacher or another adult in the classroom speaks Spanish.
- Many children have a teacher or home visitor with a college degree and experience working with infants and toddlers.
- Teachers and home visitors of children have backgrounds in early childhood and relevant credentials.
  - Fifty-nine percent of children's home visitors and 64 percent of their teachers have a degree in early childhood.
  - Meanwhile, 41 percent of the home visitors serving those in the home-based option and 55 of teachers serving those in center-based settings have a CDA.
- Programs have moderately low frontline staff turnover rates, although turnover at the leadership level is higher.
- Nearly half (47 percent) of programs have unfilled full-time staff positions, and an average of 4 vacancies.
- Approximately one-third of children have a home visitor, and one-half have a teacher who is currently enrolled in child-care-related training.
- Children's teachers and home visitors report positive feelings about their current jobs and low levels of depressive symptoms.
- Children and families receiving home visits participate in a variety of activities during visits.
  - The largest proportion of home visit time is spent on child-focused activities (50 percent), followed by staff-family relationship building activities (17 percent), and parent-child (15 percent) and parent-family focused activities (14 percent).
  - A typical home visit includes time devoted to play (86 percent), provision of education and/or information (67 percent), goal setting/planning (55 percent), and child/parent observations (50 percent). Modeling or facilitation of parent-child interactions is also common (44 percent).
  - Visits last approximately 77 minutes, on average.
- Most children and families served by home visits receive visits of moderate quality. Families have home visits scoring in the mid-range on the total HOVRS-A score (mean is about 3).

- Home visit quality is positively related to home visitors' receipt of a CDA credential. Quality is also negatively associated with the number of unfilled staff positions in the program and home visitors' risk of depression.
- Children are in classrooms with group sizes and ratios within the performance standards and professional recommendations.
- Most children in center-based programs are in classrooms of midrange quality. Overall, children are in classrooms scoring in the midrange on the CLASS-T (out of a possible score of 7). Scores are highest in the area of Emotional and Behavioral Support (5)) and lowest in the area of Engaged Support for Learning (4).
- Aspects of classroom quality are positively related to teacher job satisfaction, experience, and CDA credentialing, and negatively related to teachers' depressive symptoms and staff turnover.
- Parents and staff have positive relationships with one another.
- Relationship quality is not associated with observed quality of the home visits, but it is positively correlated with aspects of classroom quality.

VI. FAMILY CHARACTERISTICS, HOME ENVIRONMENT, AND PARENTING

As a two-generation program, Early Head Start aims to effect change on participating families' quality of life and on children's development by supporting and working with parents. Programs work to engage parents in the learning and development of their children and also to meet the parents' own comprehensive needs around health, mental health, and self-sufficiency goals. Thus, programs are meant to individualize services based on family needs. This chapter is divided into two sections. The first section reports on the current characteristics of families of 2-year-olds (the baseline report provides more extensive description of what the sample looked like when children were newborns and 1-year-olds). The second section describes observations of parents' interactions with their 2-year-old children.

In the first section, we focus mainly on overall indices of families' psychological, household, and financial risk, as well as other key factors that make up the indices. We describe parents' well-being, including their access to health care, overall health, mental health, and history of substance abuse. The sample at age 2 is similar but not identical to the sample included in the baseline report due, in part, to attrition from the program between 2009 and 2010 among some families.

Because this year is the first in which we visited the homes of study participants, in the second section of the chapter, we describe for the first time the home environments and neighborhoods in which participants live (including children's exposure to violence in the neighborhood and family conflict in the home). Measures include the overall quality of the home environment and disorder in the home, parent reports of how often they and other adults expose the child to language through books and storytelling, and the results of observations of parent-child interactions. One of the goals of Early Head Start is to improve parent-child relationships and parenting behaviors, as previous research has found that supportive parenting and stimulating environments are associated with enhancing children's cognitive development (ACF 2002). The Early Head Start Research and Evaluation Project (EHSREP) found Early Head Start to have positive impacts on parenting behaviors and support for children's language and learning when children were 2 and 3 years old and to contribute to a lower level of negative parenting strategies (ACF 2001, 2002). In fact, impacts on parents at age 2 were one pathway to impacts on children at age 3.

Family Characteristics and Risk Factors

In the discussion and tables that follow, we present the weighted averages for each variable for the 1-year-old Cohort at age 2.

More than half of children reside with their biological fathers. Slightly more than half of 2-year-olds live with their biological fathers (56 percent; Table VI.1). This estimate is slightly lower than findings from previous studies of the population at large, but slightly higher than in previous studies of Early Head Start. The Early Childhood Longitudinal Study-Birth Cohort (ECLS-B) reported that three-quarters of biological fathers lived with their child at age 2, while the EHSREP results showed that fewer than half (47 percent) of biological fathers lived with their 2-year-old child (Mulligan 2006; ACF 2001).

Table VI.1. Household Demographics for Families of 2-Year-Olds

	Weighted Means or Percentages (Standard Error)
Biological father currently lives with the child	55.9 (2.95)
Household size	4.7 (0.11)
Mother earned certificate, diploma, or degree between 2009 and 2010	13.0 (1.82)
Mother is currently employed	44.0 (3.04)
Father earned certificate, diploma, or degree between 2009 and 2010	5.8 (1.32)
Father is currently employed	66.2 (2.96)
Mother is currently single[a]	38.5 (2.70)
Mother does not have a high school credential[a]	34.8 (2.89)
Household is currently receiving public assistance[a]	72.7 (3.15)
Mother is not currently employed, in school, or in training[a]	37.3 (2.97)
Maternal Demographic Risk (percentage at age 2)	
Lower	57.7 (3.34)
Medium	25.6 (2.80)
Highest	16.6 (2.09)
Sample Size	**417–475**

Sources: Spring 2010 Parent Interview.

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

[a] The person of reference for each of the five composite factors depended on the respondent and whether a nonbirth-mother respondent lived with the birth mother (and study child). In 2010, 10 respondents were nonbirth mothers who did not live with the birth mother and 13 respondents were nonbirth mothers who did live with the birth mother. In all cases, teen mother status is a measure of whether the birth mother was a teenager when she gave birth to her first child. Two other factors—not having a high school credential and not being employed or in school or training—were based on birth mother's characteristics if she lived in the home, regardless of whether she was the respondent, and were the respondent's characteristics if the mother was not living in the home. The remaining two factors—being a single mother and receiving public assistance—were based on the respondent's characteristics, regardless of where the birth mother resided. When the respondent was not the birth mother, information about the birth mother is based on the respondent's best assessment of the birth mother's characteristics.

n.a. = not applicable.

Employment and education. Two-thirds of fathers of 2-year-olds were employed a year into the study. Conversely, about 44 percent of mothers were employed at the same point in time. Overall, 64 percent of mothers had at least a high school diploma or equivalent, while 57 percent of fathers had achieved that level of education. In the year since the study began, 13 percent of mothers received a certificate, diploma, or degree. Most of these achievements were trade licenses or certificates (40 percent) or high school diplomas or their equivalent (33 percent). About 6 percent of fathers received a certificate, diploma, or degree in the previous year. Most also were trade licenses or certificates (65 percent); 15 percent received a high school diploma or equivalent.[81]

[81] High school diploma equivalents do not include GED certificates. About 8 percent of fathers earned a GED or an equivalent from 2009 to 2010.

Cumulative demographic risk. We measured cumulative risk by creating a demographic risk index for parents of 2-year-olds.[82] This index is a general measure of risk for suboptimal child outcomes and is modeled after the cumulative measure of risk from the EHSREP.[83] The index comprises the following five risk factors:

(1) being a teenage mother[84]

(2) lacking a high school credential

(3) receiving public assistance

(4) not being employed, in school, or in training

(5) being a single parent

Our objective is to describe current risk, because (except for teenage motherhood) these factors can change over time. The overall levels of cumulative risks are stable with 17 percent at highest risk, 26 percent at medium risk, and 58 percent at lower risk (see Table VI.1).

Household income and economic risk factors. We asked parents to both indicate their household annual income and identify any difficulties they had experienced in the past year related to their ability to pay basic bills. We also asked about their ability to feed themselves and their families. This information allowed us to gauge each family's overall economic risk. Parents also reported whether they had within the previous year experienced hardships related to paying household bills and buying food for themselves and their children. Box VI.1 details the measures of financial and food security risks that we asked parents to evaluate. In this section, we first present families' annual income as measured in nominal dollars and relative to the poverty line. We then discuss the number of financial and food risks families faced. Finally, we look at their overall level of economic risk as an index of those risk measures.

Median household income is just under $19,000 for the year and is similar to that reported in the prior year. Overall, 64 percent of families of 2-year-olds are at or below 100 percent of the poverty line, and an additional 18 percent are below 130 percent of poverty.[85] On average, parents reported one financial difficulty and one food security concern (Table VI.2).

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[82] Nine respondents were nonmothers who lived with the study child but did not live with the child's mother in either year. These respondents were told to answer to the best of their knowledge questions about the mother's characteristics. The question regarding public assistance, however, is in reference to the respondent and his or her household. Therefore, for these cases, the measure is in part a household measure of resources.

[83] We created the maternal demographic index to capture the multiple dimensions of risk of poorer developmental outcomes a child may face as a consequence of his or her mother's socioeconomic circumstances. The index comprises three risk groups (lowest, at zero to two risks; medium, at three risks; and highest, at four to five risks), modeled after a similar construct in the EHSREP.

[84] We defined teenage mothers as women who were teenage mothers at *first* birth, regardless of whether their first child was the child in the study.

[85] Parents reported income for any jobs or public assistance, before taxes and deductions, for all members of the household.

Box VI.1. Measures of Financial and Food Security Risks

- Parents were asked to assess whether they had experienced specific **financial risks.** Hardships on this scale include:

  (1) inability to pay the full amount of the rent or mortgage

  (2) inability to pay the full amount of the gas, oil, or electricity bills

  (3) gas or electric company turning off services, or oil company refusing to deliver oil

  (4) telephone company turning off service for nonpayment

  (5) eviction

- Parents were asked to assess whether they had experienced specific **food security risks.** Hardships on this scale include:

  (1) worry that food will run out before there is money to buy more

  (2) food not lasting and inability to buy more

  (3) inability to afford to eat balanced meals

  (4) inability to afford to feed children balanced meals

  (5) reliance on only a few kinds of low-cost food to feed children, because money is running out

Table VI.2. Household Risk Factors for Families of 2-Year-Olds

	Weighted Means or Percentages (Standard Error)
Median Household income	$18,850.9 (1023.84)
Household at or below 100% poverty line	63.8 (2.43)
Number of financial difficulties	1.0 (0.07)
Number of food security difficulties	1.2 (0.10)
Economic risk[a]	
Low	40.0 (2.47)
Medium	31.3 (2.57)
High	28.8 (2.74)
Sample Size	**434–459**

Sources: Spring 2010 Parent Interview.

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

[a] Economic risk is an index that aggregates financial difficulties and food security difficulties. Parents with no financial difficulties or food security difficulties were classified at lower economic risk. Parents with either financial difficulties or food security difficulties were classified at medium economic risk. Parents with both financial and food security difficulties were classified at high economic risk.

To measure a household's overall economic risk, we created an index combining financial and food security risks. A household with no risk factors in either category is considered to be at low risk; a household with at least one risk in only one category is considered to be at medium risk; and a household with risks in both categories is at high risk. The definition of the economic risk index used in this report differs slightly from that described in the baseline report (Vogel et al. 2011). For more information on how and why we redefined this measure, see Appendix D. About 40 percent of families are at low economic risk according to this index, 31 percent are at medium risk, and 29 percent at high risk.

Parents' health and access to care. Overall, about 52 percent of parents reported very good to excellent health (average of about 4 on a five-point scale, from 5=excellent to 1=poor). Most parents have access to health care. Eighty-two percent of parents have a regular health care provider, although nearly 20 percent do not. However most families could obtain health care when needed; about 8 percent of families said they could not obtain needed care. Table VI.3 shows the distribution in parents' health, as well as health care availability.

Table VI.3. Health Care Services and Health Status of Families of 2-Year-Olds

	Weighted Means or Percentages (Standard Error)
Parent's health status (1=poor to 5= excellent)	3.6 (0.05)
Parent in excellent or very good health	52.4 (2.67)
Parent in fair or poor health	14.2 (2.11)
Family has a regular health care provider	82.2 (2.48)
Family's health insurance status[a]	
A private health insurance plan	45.7 (3.11)
Public/government insurance	78.9 (2.59)
No health insurance	7.3 (1.20)
Family member needed health care but couldn't obtain it	8.2 (1.13)
Sample Size	**461–466**

Sources: Spring 2010 Parent Interview.

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

[a] The estimates are not mutually exclusive and therefore sum to more than the estimated percentage of parents with coverage.

A relatively small proportion of parents (7 percent) do not have health insurance. Among those with insurance, most families have public or government insurance plans (79 percent), and almost half have private plans (46 percent). (Families could be covered by both types of plans; therefore, the estimates sum to more than the estimated percentage of families with coverage.)

Parents Have Few Mental Health Problems

We measured a child's exposure to risk by the level of psychologically challenging circumstances present in the household. This section discusses parents' mental health, including depression and stress related to parenting, as well as the prevalence of substance abuse problems, and how those problems have changed since baseline. We also asked parents to identify whether they were seeking help for any problems. We then present parents' overall level of psychological risk, measured as an accumulation of depression, a high level of parenting stress, and substance abuse.

Prevalence of smoking and substance abuse problems were low. Twenty percent of parents said they are smokers, and 5 percent reported that smoking occurred in their homes (Table VI.4)**.** The overwhelming majority of parents (99 percent) reported they did not have problems with drugs or alcohol in the past year.

Table VI.4. Substance Use Prevalence

Parent Substance Use and Treatment	Weighted Percentages (Standard Error)
Smoking allowed inside the home	4.5 (1.30)
Currently smoking	19.9 (1.96)
Parent has had drug or alcohol problem	0.8 (0.50)
Sample Size	**440–501**

Sources: Spring 2010 Parent Interview.

Notes: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

Depression and parenting stress. We asked parents to report symptoms of depression in the previous week using the Center for Epidemiologic Studies Depression Scale-Short Form (CESD-SF), which is a 12-item scale to categorize the degree of a parent's depressive symptoms (Ross et al. 1983; see Box VI.2 for more information). The average raw score is 4, which represents mild levels of depressive symptoms, a decline of about 1 point from the average raw score at baseline. High levels of depressive symptoms are of greatest concern, and we see 14 percent of parents reporting moderate to severe symptoms, defined as a raw score of 10 or more on the CESD-SF (Table VI.5). This finding is similar to the proportion reporting moderate to severe symptoms at baseline (Vogel et al. 2011). We cannot make a direct comparison to the EHSREP at 24 months, because a different measure was used (the Composite International Diagnostic Interview, or CIDI). Using that measure, about 15 percent of parents were estimated to have had a major depressive episode in the previous year (ACF 2001).

Table VI.5. Mental Health for Parents of 2-Year-Olds

	Weighted Means or Percentages (Standard Error)
CESD-SF raw score	3.9 (0.35)
CESD-SF: Parent has moderate to severe depressive symptoms	13.5 (1.91)
PSI: Parental Distress raw score	10.4 (0.21)
PSI: Parent-Child Dysfunctional Interaction raw score	8.6 (0.25)
Sample Size	**440–501**

Sources: Spring 2010 Parent Interview.

Notes: CESD-SF severe depressive symptoms are defined as scores of 15 or higher; moderate depressive symptoms as scores of 10 or higher but lower than 15; mild depressive symptoms as scores of 5 or higher but lower than 10; and no depressive symptoms as scores lower than 5.

Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

CESD-SF raw scores are significantly higher in 2009 than in 2010 ($p < 0.01$).

PSI = Parenting Stress Index; CESD-SF = Center for Epidemiologic Studies Depression Scale-Short Form.

We also asked parents to rate the degree of stress in their parent-child relationships measured by two subscales of the Parenting Stress Index-Short Form (PSI-SF; Abidin 1995). The mean scores in 2010 on both the Parental Distress and the Parent-Child Dysfunctional Interaction subscales are nearly identical to those in 2009. On average, parents in the Baby FACES sample reported lower levels of parenting stress (on both subscales) than did parents in the EHSREP. Parents of 2-year-olds in the EHSREP sample reported a mean score of 25 on the Parental Distress subscale, and a mean of 17 on the Parent-Child Dysfunctional Interaction subscale.

Box VI.2. Measures of Parent Mental Health and Family Functioning

- **The Center for Epidemiologic Studies Depression Scale** (CES-D; Radloff 1977) is a self-administered screening tool to identify symptoms of depression or psychological distress. The full version of the CES-D comprises 20 items, and the short form (CESD-SF; Ross et al. 1983) has 12 items. Parents are asked to rate how often each of the items applied to them in the past week, on a four-point scale from rarely or never (0) to most or all of the time (3). Symptoms include poor appetite, restless sleep, loneliness, sadness, and lack of energy. Raw scores range from 0 to 36 for the short form, with higher scores indicating more depressive symptoms. The unweighted mean for raw scores is 3.9 (SD = 5.7).
- Parents with scores of 10 or higher on the CESD-SF are identified as having moderate to severe depressive symptoms; those with scores of 9 or lower are identified as having no or mild depressive symptoms.
- **The Parenting Stress Index–Short Form** (PSI-SF) measures the degree of stress in parent-child relationships stemming from three sources: (1) the child's challenging temperament, (2) parental depression, and (3) negatively reinforcing parent-child interactions (Abidin 1995). We included two subscales in Baby FACES:
  - **The Parental Distress subscale** (five items) measures the level of distress the parent is feeling in his or her role as a parent, including a low sense of competence and stress because of perceived restrictions stemming from parenting. The parent answers whether he or she agrees with statements such as, "You have been unable to do new and different things," and "You feel trapped by your responsibilities as a parent." Parents rate each item on a five-point scale from strongly disagree to strongly agree. Scores can range from 5 to 25. Higher scores indicate high levels of parental distress. The unweighted mean for Baby FACES parent ratings of Parental Distress is 10.5 (SD = 4.8).

The Parent-Child Dysfunctional Interaction subscale (six items) measures the parent's perception that the child does not meet expectations and that interactions with the child are not reinforcing to the parent. The parent indicates whether he or she agrees with statements such as, "Most times, you feel that your child does not like you and does not want to be close to you," and "When you do things for your child, you get the feeling that your efforts are not appreciated very much." Parents rate each statement on a five-point scale from strongly disagree to strongly agree. Scores can range from 6 to 30. A higher score indicates a more dysfunctional parent-child interaction. The unweighted mean for Parent-Child Dysfunctional Interaction is 8.7 (SD = 4.7).

We defined high levels of stress in parent-child relationships as scoring more than a standard deviation above the sample mean score. Similar percentages of parents reported high levels of stress on either of the individual subscales. About 25 percent of parents scored at least a standard deviation above the sample mean on either subscale (Table VI.6).

Parent psychological risk levels. We measured an individual's level of overall psychological risk as the sum of parents' responses to three questions: (1) whether they report moderately or severely depressive symptoms based on the CESD-SF; (2) whether they have, or have been told they have, a drug or substance abuse problem; and (3) whether their measure of parenting stress on the PSI Parental Distress and/or Parent-Child Dysfunctional Interactions subscales are more than one standard deviation above the sample mean. Those who report having experienced none of these factors are considered at low risk; those who have experienced one are considered to be at moderate risk; and those who have experienced two or three factors are at high risk (Table VI.6). Most parents in our study had a low level of psychological risk (69 percent). Only 8 percent of parents had a high level of psychological risk. The remaining one-quarter of parents were at moderate risk in 2010.

Table VI.6. Psychological Risk Factors for Families with 2-Year-Olds

	Weighted Means or Percentages (Standard Error)
Number of Parent's Psychological Risk Factors (percentage at age 2)	
Low	69.5 (2.84)
Medium	22.2 (2.60)
High	8.3 (1.69)
Parent is one standard deviation above mean on either PSI subscale (mean at age 2)	24.8(2.20)
Parent is moderately or severely depressed (CESD-SF; mean at age 2):	13.5 (1.91)
Sample Size	**428–503**

Sources: Spring 2010 Parent Interview.

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

The number of parent psychological risk factors are significantly lower in 2010 than in 2009 ($p < 0.10$).

PSI = Parenting Stress Index; CESD-SF = Center for Epidemiologic Studies Depression Scale Short Form.

Mental health treatment. Overall, about 14 percent of parents reported they received treatment for emotional, mental, or personal problems (Table VI.7). Parent reports indicate that 3 percent of parents reported receiving treatment for drug and alcohol problems in the past year. About 14 percent of parents reported receiving treatment for any mental health problem.

Table VI.7. Mental Health Treatment Prevalence for Parents of 2-Year-Olds

	Weighted Means or Percentages (Standard Error)
Parent received treatment for emotional, mental, or personal problems	13.7 (2.14)
Parent received treatment for a drug or alcohol problem	2.6 (0.86)
Parent received treatment for any mental health problem	14.4 (2.19)
Sample Size	**462**

Sources: Spring 2010 Parent Interview.

Notes: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

Parenting and the Home Environment

In this section, we describe what we learned about aspects of parenting and the home environment. We first present information from the parent interview about parenting practices that support children's development (such as reading), information about children's use of language, and parent reports about the home environment. Next, we describe information gleaned from home visits about parenting and the home environment. During spring 2010, we for the first time visited families in their homes, allowing us to collect new information, including direct child assessments (see Chapter VII), video recordings of parent-child interactions, and observations of the home environment.

Most Children Are Read to or Told Stories at Least Once a Day, Mostly in English

Reading and telling stories to children are important to emergent and later literacy. In the EHSREP among English-speaking families, concurrent frequency of daily reading is associated with children having greater language comprehension, larger expressive vocabularies, and higher cognitive scores. A consistent pattern of daily reading at ages 1, 2, and 3 is significantly associated with children's age 3 cognitive and receptive vocabulary scores (Raikes et al. 2006). We asked parents of 2-year-olds about the presence of books in their homes and how often they read to their 2-year-old, as well as how often they tell other stories.[86] We also asked them about which languages that the child first learned to speak as well as the languages the child speaks most often.

Most parents reported that they have in their homes several children's books, most of them in English. More than half of all households (57 percent) have at least 25 books for the child, and nearly another quarter has 11 to 25 books for the child. Fewer than 5 percent of households have 4 or fewer books. Most households (83 percent) have only English-language books. Only about 16 percent of all households have books in both English and Spanish; all but a fraction of these households identify that Spanish is spoken in the home. Two-thirds of households with books in Spanish speak Spanish only or primarily, and one-third of these households speak English primarily and some Spanish. Table VI.8 presents measures of a child's exposure to books, reading, and storytelling.

Parents and other adults in the home frequently read to their child and are more likely to read than tell stories.[87] About 61 percent of parents read to their child more than once a day, and an additional 29 percent read about once daily. Comparatively, about 38 percent of parents tell stories to their child more than once a day; nearly the same proportion (39 percent), tell a story about once a day.

About one-tenth of parents reported infrequently reading or telling stories to their child. Ten percent of children are read to less than once a day, and 23 percent of children are told stories less than once a day. About 8 percent of parents reported that they neither read nor tell stories to their child at least once a day.

[86] Information on 2-year-olds includes 435 children included in the analysis of demographics from 2009 to 2010 as well as 32 new children whose parents were surveyed only in 2010.

[87] Responses on the frequency of reading and storytelling, as well as the language used in those activities, are based on parents' reports of their behaviors as well their reports about other adults in the household.

Table VI.8. Child's Exposure to Reading and Storytelling at Age 2

	Weighted Means or Percentages (Standard Error)
Language of Books in House	
English only	82.7 (2.26)
English and Spanish	16.3 (2.27)
Spanish only	0.7 (0.38)
Other only	0.2 (0.16)
English and other	0.3 (0.19)
Language Adult Reads to Child	
English only	77.0 (3.63)
English and Spanish	3.5 (0.88)
Spanish only	18.9 (3.11)
Other only	0.5 (0.49)
English and other	0.2 (0.16)
Language Adult Tells Child Stories	
English only	79.1 (3.47)
English and Spanish	12.5 (2.97)
Spanish only	7.3 (1.37)
Other only	0.4 (0.34)
English and other	0.8 (0.54)
Number of Books in House	
0	0.3 (0.25)
1 to 4	4.1 (1.28)
5 to 10	15.9 (1.87)
11 to 25	22.9 (2.10)
More than 25	56.8 (2.99)
Frequency Anyone in Household Reads to Child	
More than once a day	60.9 (2.59)
About once a day	29.4 (2.44)
A few times a week	6.3 (1.16)
Once or twice a week	2.7 (0.96)
Less than once a week	0.7 (0.39)
Frequency Anyone in Household Tells Child Stories	
More than once a day	38.4 (3.13)
About once a day	38.9 (3.26)
A few times a week	13.3 (1.88)
Once or twice a week	5.6 (1.28)
Less than once a week	3.8 (1.03)
Percentage of Children Who Are Neither Read to Nor Told Stories at Least Once a Day	7.7 (1.54)
Sample Size	**451–475**

Source: Spring 2010 Parent Interview.

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

Most parents read and tell stories to their children in English. Parents speaking other languages are more likely to use that language when reading, but tell stories in both English and the other language. Overall, about three-quarters of parents read and tell stories to their child in English. About 19 percent of parents read to their child in only Spanish or another non-English language, and about 4 percent read in both English and the other language. When telling stories, about 13 percent use both English and another language, and 8 percent use only the other language.

Most Children Speak One Language, Usually English

Most of the 2-year-olds (71 percent) in our study speak one language, typically English. The remaining children mostly speak two languages (Table VI.9). Three-quarters of parents said that their child's first language is English; of the remaining one-quarter of children, most first spoke Spanish.

We asked parents to identify the language that the child spoke first, as well as the language the child speaks most often. For most 2-year-olds, these languages are the same, but about 4 percent of parents said that their child most often does not speak his or her first language (Table VI.9). Of those, 67 percent are children whose first language is Spanish but who speak English most often. Overall, nearly all children speak some English (95 percent), but only two-thirds speak only English. The remaining one-third speak some Spanish; about 4 percent speak only Spanish, and one-quarter speak both Spanish and English.

Table VI.9. Languages Spoken by Child at Age 2

	Weighted Means or Percentages (Standard Error)
Number of Languages Child Can Speak	1.3 (0.03)
Zero	0.0 (0.00)
One	71.1 (3.39)
Two or more	29.0 (3.39)
Child's Language	
English	95.2 (1.40)
English only	66.3 (3.98)
Spanish	29.8 (4.03)
Spanish only	4.6 (1.40)
Spanish and English	24.7 (3.40)
Other	4.4 (1.29)
Other only	0.2 (0.16)
English and other	3.7 (1.20)
Child's First Language	
English	76.7 (3.30)
Spanish	21.3 (3.18)
English and Spanish	0.5 (0.33)
Other	1.5 (0.77)
Child's First Language is Different from Language Child Speaks Most Often	
Yes	3.5 (1.02)
No	96.5 (1.02)
Sample Size	**475**

Source: Spring 2010 Parent Interview.

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010.

Most Households Have Low Levels of Environmental Confusion

To measure environmental confusion, we asked parents of 2-year-olds to complete the Confusion, Hubbub, and Order Scale (CHAOS; Matheny et al. 1995) during the in-home child assessment (see Box VI.3 for a description of the CHAOS score and the scoring procedure). Research indicates that environmental confusion, defined as potentially stressful background factors such as noise, crowding, and chaos in the physical environment of the household, are negatively associated with child developmental outcomes, including academic and cognitive performance, language, behavior, and health (Bronzaft 1981; Cohen et al. 1981; Dumas et al. 2005; Evans et al. 1991; Gottfried and Gottfried 1984; Wachs and Chan 1986). Parents of 2-year-olds reported a low level of environmental confusion on average, with a mean score of 11 out of 45 (Table VI.10).

Table VI.10. Home and Neighborhood Environment at Age 2

	Weighted Means (Standard Error)
HOME	
Parental Warmth	6.1 (0.10)
Verbal/Social Skills	2.9 (0.03)
Parental Lack of Hostility	3.7 (0.14)
Support of Cognitive, Language, and Literacy Environment	9.7 (0.08)
Enhanced Cognitive, Language, and Literacy Environment	8.1 (0.14)
Internal physical environment	2.3 (0.06)
HOME total score	24.6 (0.27)
CHAOS total score	11.3 (0.31)
Sample Size	
Parent SAQ	**456–517**

Source: Spring 2010 Parent Self-Administered Questionnaire (SAQ).

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010 when the children were 2.

HOME = Home Observation for Measurement of the Environment (HOME). CHAOS = Confusion, Hubbub, and Order Scale.

Most Home Environments Are Emotionally Supportive and Cognitively Stimulating

During in-person home visits in spring 2010 to observe parents of 2-year-olds with the child present, assessors/interviewers completed the Home Observation for Measurement of the Environment (HOME) inventory (Caldwell and Bradley 2003). The HOME inventory measures the quality of stimulation and support available to a child in the home environment, found to be predictive of many later child outcomes (Bradley 2007; Bradley and Corwyn 2007; Bradley et al. 2001). Additional information was also obtained through a parent self-administered questionnaire for constructing the stimulation of language and learning variables. Table VI.10 presents the weighted means of the total and subscale scores for the HOME (see Box VI.3 for a description of the HOME subscales and the scoring procedures).

High levels of emotional support. Parents of 2-year-olds exhibited high levels of warmth toward their children, as observed by the assessors during home visits. The mean score on the HOME Parental Warmth subscale is 6 out of 7, which is about the same as was found in the EHSREP. More than half (53 percent) of parents have a score of 7 on this subscale.

Lack of hostility. Assessors rated parents of 2-year-olds as generally absent of harsh or punitive parenting behaviors. The mean score on the Lack of Hostility subscale is 4 out of a possible 5. Approximately 62 percent of parents have a score of 5.

Stimulation of language and learning. Parents of 2-year-old children structured the home environment to stimulate children's language and learning by providing the child with a variety of developmentally stimulating toys and materials and by frequent reading and talking to the child. The mean score on the Support of Cognitive, Language, and Literacy Environment subscale is 10 out of 12. These findings are similar to results of the EHSREP. We also created an Enhanced Cognitive, Language, and Literacy Environment score by giving credit to parents only when they provide the child with more developmentally stimulating toys. The mean score on the enhanced subscale is 8 out of 12.

Adequate maternal verbal and social skills. Assessors rated parents of 2-year-old children as having adequate verbal and social skills, with a mean score of almost 3 out of 3 on the Verbal/Social Skills subscale—the same as results found in the EHSREP. Ninety percent of parents have a score of 3.

Internal physical environment of the home. Assessors rated 2-year-old children's homes as generally clean and organized, with a mean of 2 out of 3 on this subscale. Nearly half (47 percent) of parents have a score of 3.

Total HOME score. Overall, the total HOME scores average 25 out of 30, suggesting that 2-year-old children live in home environments that have adequate emotional support and cognitive and language stimulation. This score is similar to that found at age 2 in the EHSREP (27; ACF 2001).

Children Generally Experience Supportive, Positive Interactions with Their Parents

As part of the assessment activities conducted with 2-year-olds, we also administered to parents and children an 8-minute semistructured free-play task. Play assessments were video-recorded for later coding by a trained team of Mathematica coders using two coding schemes: the Parent-Child Interaction Rating Scales for the Two-Bag Assessment (Mathematica Policy Research 2010) and an adaptation of the Parenting Interactions with Children: Checklist of Observations Linked to Outcomes (PICCOLO; Roggman et al. 2009).[88] Collectively, the coding schemes assess positive and negative parenting behaviors that are meaningfully linked to children's developmental outcomes. Box VI.4 provides additional information on each of the behaviors that are the focus of the Parent-Child Interaction Rating Scales and PICCOLO coding schemes, including the unweighted means for each of the scales.

[88] Chapter VII discusses observed child behaviors derived from the Parent-Child Interaction Rating Scales for the Two-Bag Assessment.

Box VI.4. Parent Scales from the Parent-Child Play Assessment

- **The Parent-Child Interaction Rating Scales for the Two-Bag Assessment** consists of 12 scales that assess a range of child and parent behaviors. A total of 8 scales address both positive and negative parenting behaviors. Each behavior is rated along a seven-point scale, ranging from a very low incidence of the behavior to a very high incidence of the behavior. We created a composite parenting score, synchronicity, (Cronbach's alpha=0.88), by computing a mean score derived from scores on parental sensitivity, positive regard, and relationship quality—all of which were highly and significantly correlated (ranging from 0.63 to 0.79).
  - **Sensitivity** measures the degree to which the parent responds to the child's cues (such as gestures, expressions, and signals) during times of both distress and nondistress. The defining characteristic of maternal sensitivity is its child-centered focus, which includes "tuning in" to the child; manifesting an awareness of the child's needs, moods, interests and capabilities; and being flexible in supporting and responding to the child's emerging need for autonomy.
  - **Positive Regard** assesses the parent's expression of love, respect, and/or admiration for the child. Key indicators include verbal or physical praising of the child's efforts and successes, words of encouragement or support, and nonverbal expressions of affection. Additional exemplars include clear enjoyment of the child, displays of interest in his or her play, and expressions of concern and/or empathy for the child's distress.
  - **Stimulation of Cognitive Development** measures the quality and quantity of the parent's efforts to enhance the child's perceptual, cognitive, and linguistic development. Key features include attempts to stimulate higher levels of mastery and sophistication matched to or slightly above the child's developmental level and interest, and the use of complex and varied language. This scale weights heavily opportunities that encourage and/or facilitate pretend play.
  - **Quality of the Relationship** assesses the degree of affective sharing and reciprocity between the parent and the child. Quality interactions are characterized by a sense of emotional relatedness and mutual engagement, contingent responding, and displays of affective and/or verbal sharing.
  - **Negative Regard** reflects the parent's expression of discontent with, anger toward, and disapproval and/or overt rejection of the child. This dissatisfaction may be manifested verbally (for example, derogatory words or disregard toward the child) or physically (for example, threatening posture or physical roughness). Additional indicators of negativity include an underlying sense of frustration with the child and abrupt or curt responses to the child's bids for attention.
  - **Intrusiveness** reflects the extent to which the parent exerts control over the child rather than acts in a way that acknowledges and respects the child's perspective. Intrusive interactions are adult-centered and involve imposing the parent's agenda on the child despite signals that a different activity, level, or pace of play is needed. Expressions of intrusiveness can be physical or verbal.
  - **Detachment** measures the parent's lack of awareness, attention to, and engagement with the child. Key indicators include a lack of emotional responsiveness to the child's bids for attention, interacting with the child in a perfunctory or indifferent manner, or responding in a way that is not contingent on, or "out of sync" with, the child's affect, actions, or vocalizations.
  - **Physical and/or Psychological Dissolution of Boundaries** refers to the extent to which the parent fails to maintain an appropriate parental role in his or her interaction with the child. Interactions characterized by boundary dissolution lack clear distinctions between the parent and the child, as demonstrated in the parent's inability to provide firm directives, set appropriate limits, and/or provide the child with clear expectations for behavior. Displays of boundary dissolution can be psychological or manifest in inappropriate physical behaviors.
- **The Parenting Interactions with Children: Checklist of Observations Linked to Outcomes** (PICCOLO; Cook and Roggman 2009; Roggman et al. 2009) is an observational instrument designed to measure positive parenting along four domains known to support children's early development: (1) affection, (2) responsiveness, (3) encouragement, and (4) teaching. Twenty-nine behaviors are rated on a three-point scale, ranging from "absent" (0) to "clearly" evident (2). Behaviors that are infrequently or "barely" observed are indicated by a score of 1. The domains of affection, responsiveness, and

encouragement each comprise seven items; the teaching scale consists of eight items. In Baby FACES, scores for each item are collapsed into a binary scale in which ratings of "0" and "1" are combined to reflect behaviors that are absent or infrequently observed; behaviors that are clearly evident and frequent in their occurrence and/or intensity are represented by values of 1. Domain scores are derived by calculating a mean score across the component items. A total score is also computed by averaging the domain scores. Appendix C further details inter-rater reliability estimates and scoring procedures.

- **Affection** measures the extent to which the parent displays warmth, physical closeness, and positive expressions toward the child. Items include the degree to which the parent speaks in a warm tone of voice, smiles at the child, praises the child, maintains close physical proximity, displays positive expressions of affect, actively engages the child in the interaction, and demonstrates emotional support.
- **Responsiveness** assesses the frequency with which the parent responds to the child's cues, emotions, vocalizations, interests, and behaviors. Items include the extent to which the parent attends to the child's actions; adjusts the activity, level, or pace of play as needed to align with the child's interests and/or needs; demonstrates flexibility in supporting the child's interests; follows the child's lead; responds to the child's displays of emotion; visually orients toward the child in response to the child's vocalizations; and responds verbally to the child's vocalizations.
- **Encouragement** reflects the degree to which the parent actively supports the child's exploration, effort, skills, initiative, curiosity, creativity, and play. Items include the extent to which the parent provides the child with ample time to respond after offering a suggestion, encourages the child to explore the play materials, supports the child's choice of activity, supports the child's need for autonomy, verbally encourages the child's efforts, scaffolds the child's play, and shows enthusiasm in response to the child's efforts.
- **Teaching** assesses the degree to which the parent engages in shared conversation and play, provides cognitive stimulation, and extends the child's verbalizations. Items include the frequency with which the parent provides explanations, suggests activities that extend the child's actions, repeats or expands on the child's vocalizations, labels an object or action, engages in pretend play, performs activities in an ordered sequence of steps, describes features or characteristics of objects, and asks the child for information (for example, by posing questions).

Parent-Child Play Assessment Parent Scale Scores, Unweighted

Scales	Mean	Standard Deviation	Range
Parent-Child Interaction Rating Scales			
Sensitivity	4.3	1.19	1.0–7.0
Positive Regard	4.2	1.04	1.0–7.0
Stimulation of Cognitive Development	4.2	0.85	2.0–7.0
Quality of Relationship	4.2	1.19	1.0–7.0
Synchronicity	4.2	1.03	1.7–7.0
Negative Regard	2.7	1.11	1.0–6.0
Intrusiveness	3.5	1.22	1.0–7.0
Detachment	2.6	1.10	1.0–7.0
Boundary Dissolution	2.5	1.07	1.0–6.0
PICCOLO Total Score	0.6	0.15	0.0–0.9
Affection	0.7	0.20	0.0–1.0
Responsiveness	0.6	0.20	0.0–1.0
Encouragement	0.6	0.23	0.0–1.0
Teaching	0.5	0.16	0.0–1.0
Sample Size	**506–507**		

Spring 2010 Parent-Child Play Interaction, Two-Bag Task.

PICCOLO = Parenting Interactions with Children: Checklist of Observations Linked to Outcomes.

According to observed ratings on the Parent-Child Interaction Rating Scales (Table VI.11), parents of 2-year-old children received average scores of 4 on sensitivity, positive regard, stimulation of cognitive development, and relationship quality. Parental sensitivity, positive regard, and relationship quality were highly intercorrelated, and were combined into a single composite score (synchronicity), with comparable average ratings of 4.[89] Negative parenting behaviors during the play-based assessment averaged 3 for negative regard, 4 for intrusiveness, 3 for detachment, and 3 for dissolution of boundaries.

Table VI.11. Parent-Child Play Assessment Parent Scales at Age 2

Scales	Weighted Mean (Standard Error)
Parent-Child Interaction Rating Scales	
Sensitivity	4.3 (0.07)
Positive Regard	4.2 (0.05)
Stimulation of Cognitive Development	4.2 (0.05)
Quality of Relationship	4.2 (0.05)
Synchronicity	4.2 (0.05)
Negative Regard	2.7 (0.06)
Intrusiveness	3.5 (0.07)
Detachment	2.6 (0.06)
Boundary Dissolution	2.6 (0.05)
PICCOLO Total Score	0.6 (0.01)
Affection	0.8 (0.01)
Responsiveness	0.6 (0.01)
Encouragement	0.6 (0.01)
Teaching	0.5 (0.01)
Sample Size	**486–489**

Source: Spring 2010 Parent-Child Play Interaction, Two-Bag Task.

PICCOLO = Parenting Interactions with Children: Checklist of Observations Linked to Outcomes.

To place these findings in a broader context, we compared average ratings from Baby FACES with other large-scale studies that used the Parent-Child Interaction Rating Scales with children at this same age, including the EHSREP (ACF 2001) and the ECLS-B (Andreassen and Fletcher 2007). As Table VI.12 shows, mean ratings on the positive dimensions of parenting are similar across the studies. Overall, ratings of parental positive regard and cognitive stimulation are slightly higher in Baby FACES than in EHSREP. Notably, negative parenting behaviors (negative regard, intrusiveness, and detachment) were observed to be somewhat higher in Baby FACES than in other studies.

We also assessed positive parenting behaviors using the PICCOLO, an observational instrument designed to measure developmentally appropriate parenting along four domains: (1) affection, (2) responsiveness, (3) encouragement, and (4) teaching. On a scale ranging from 0 (absent

[89]To allow for comparisons with other large-scale studies, a second composite score of positive parenting, "supportiveness" (Cronbach's alpha = 0.73), was derived from scores on parental sensitivity, positive regard, and cognitive stimulation (correlations ranged from 0.32 to 0.69). Given the overall lower internal consistency reliability and intercorrelation of its components, we reserve discussion of this construct solely for anchoring our findings to those reported in other national studies. Appendix C provides additional information.

Table VI.12. Comparing Parent Scores on the Parent-Child Interaction Rating Scales Across Studies

Parent Rating Scales	PCI Rating Scales for the Two-Bag Assessment (Baby FACES)	PCI Rating Scales for the Three-Bag Assessment (EHSREP)	PCI Rating Scales for the Two-Bag Assessment (ECLS-B)
Sensitivity	4.3 (1.19)	4.5 (1.14)	4.8 (0.95)
Positive Regard	4.2 (1.05)	3.6 (1.28)	4.3 (1.03)
Cognitive Stimulation	4.2 (0.85)	3.9 (1.14)	4.1 (1.08)
Quality of Relationship	4.2 (1.19)	n.a.	n.a.
Supportiveness	4.2 (0.84)	4.0 (1.02)	4.4 (0.86)
Synchronicity	4.2 (1.03)	n.a.	n.a.
Negative Regard	2.7 (1.11)	1.4 (0.83)	1.1 (0.44)
Intrusiveness	3.5 (1.22)	1.9 (1.04)	1.8 (0.54)
Detachment	2.6 (1.10)	1.4 (0.86)	1.1 (0.32)
Boundary Dissolution	2.5 (1.07)	n.a.	n.a.
Sample Size	**506–507**	**1,794–1,796**	**5, 600–7,450**

Sources: Baby FACES 1-year-old Cohort at age 2. Early Head Start Research and Evaluation Project (EHSREP), 24-month assessment; Early Childhood Longitudinal Study, Birth Cohort (ECLS-B), Two-Year Data Collection, 2003–04.

Note: Across all study samples, scores are based on interactions when children were 2 years old. ECLS-B scores represent weighted estimates, and sample sizes are rounded to the nearest 50. The play task on which coding was based varied slightly across the studies. In the EHSREP, parents and children engaged in play with materials provided in three numbered bags (the Three-Bag Task). One bag contained a children's book, another contained a cooking set, and the last one contained a Noah's Ark set with various animals. In ECLS-B, the parent-child dyads were asked to play with materials provided in two numbered bags (Two-Bag Task)—a set of toy dishes and a children's book. Two parent scales, Quality of Relationship and Boundary Dissolution, were adapted from the rating scale developed by Cox (1997). They are unique to the version of the Parent-Child Interaction Scales for the Two-Bag Assessment that was adapted for Baby FACES.

or infrequently observed) to 1 (clearly evident), ratings averaged 0.8 for affection, 0.6 for responsiveness, 0.6 for encouragement, 0.5 for teaching, and 0.6 for the overall score.[90] To allow for comparisons with other large-scale studies that used the original PICCOLO 3-point Likert rating scale, we computed domain scores; each indicator is rated as "absent" (score of 0), "barely observed" (score of 1), or "clearly evident" (scores of 2). Ratings averaged 1.7 for affection, 1.3 for responsiveness, 1.4 for encouragement, 1.2 for teaching, and 1.4 for the overall score. These average scores are similar to those reported in other studies with parents of children at this same age (Cook and Roggman 2009).

Bivariate analyses indicate that parenting behaviors based on the PICCOLO and Parent-Child Interaction Rating Scales for the Two-Bag Assessment are significantly and consistently related, in the expected directions (see Table VI.13). Correlations between the PICCOLO and the positive parenting constructs derived from the Parent-Child Interaction Rating Scales are small to large in magnitude (ranging from 0.14 to 0.51), with the strongest associations emerging for Positive Regard. Associations are less consistent when examined in relation to the negative behaviors captured by the Parent-Child Interaction Rating Scales (ranging from -0.09 to -0.40), with Detachment being among the most strongly correlated with the PICCOLO domain and total scores.

[90] Based on recommended practices for scoring in research-based settings (personal communication with L. Roggman, April 2, 2010), scores for each item were collapsed into the binary scale described in Box VI.4. Inter-rater agreement on the three-point scale yielded lower estimates than that obtained on the binary scale. We thus present average ratings based on binary scores.

Table VI.13. Bivariate Associations Between PICCOLO and Parent Behaviors from the Parent-Child Interaction Rating Scales

	Positive Behaviors					Negative Behaviors			
Parent-Child Interaction Rating Scales	Sensitivity	Positive Regard	Cognitive Stimulation	Quality of Relationship	Synchronicity	Negative Regard	Intrusiveness	Detachment	Boundary Dissolution
PICCOLO Total Score	0.38***	0.51***	0.30***	0.43***	0.49***	-0.13**	-0.17***	-0.40***	-0.21***
Affection	0.26***	0.47***	0.21***	0.32***	0.38***	-0.08	-0.07	-0.34***	-0.15***
Responsiveness	0.34***	0.34***	0.14**	0.33***	0.38***	-0.11*	-0.23***	-0.28***	-0.16***
Encouragement	0.32***	0.42***	0.26***	0.34***	0.40***	-0.09*	-0.17***	-0.29***	-0.15***
Teaching	0.23***	0.30***	0.33***	0.33***	0.32***	-0.14**	-0.02	-0.31***	-0.18***
Sample Size	**501–502**								

Source: Spring 2010 Parent-Child Play Interaction, Two-Bag Task.

Note: Reported observations are for the 1-year-old Cohort at age 2.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Children Are Rarely Exposed to Violence or Conflict in Their Homes

To measure a child's exposure to violence, we used items from the Infant-Toddler Social and Emotional Assessment (ITSEA; Carter and Briggs-Gowan 2000), asking parents about their child's exposure to four types of violence: (1) seeing violence in neighborhood, (2) being a victim of violence in the neighborhood, (3) seeing a weapon used to threaten or hurt a family member, and (4) seeing someone hitting, pushing, or kicking a family member.

To date, there is little research establishing the prevalence or the effect of a very young child's exposure to anger or violence, particularly beyond individual maltreatment. Turner and colleagues attempted to establish a rate of prevalence of infant exposure to victimization, using a subsample of caregivers of 503 children under the age of 2 from the nationally representative sample from the National Survey of Children's Exposure to Violence. They found that just under one-third (32 percent) of children had been exposed to any violence in the previous year, either personally or observed (Turner 2010). This estimate includes physical or sexual assault to the child, witnessing family violence, and witnessing other violence. About 10 percent of these children had witnessed family violence, specifically, and almost 15 percent had been exposed to some form of violence outside of the family. Additionally, 19 percent of children had been personally victimized (mostly attributed to sibling assault). The authors found that exposure to any violence in the previous year was significantly associated with infant emotional and behavior symptoms, as measured by the Infant Traumatic Stress Questionnaire and six items from the BITSEA.

A study by McDonald et al. (2007), using the violence questions from the ITSEA with a sample of 1,152 children aged 12 to 42 months, also found that exposure to family violence was associated with higher levels of adjustment problems in children, primarily atypical/maladaptive symptoms, even when controlling for demographic characteristics and caregiver distress.[91] It also found that exposure to angry conflict in the home was associated with higher levels of adjustment problems in children on each of the four domains, when controlling for demographic characteristics and caregiver distress. Moreover, the authors found that children exposed to violence (regardless of their exposure to angry conflict) had significantly higher levels of adjustment problems than those exposed only to angry conflict.

Most 2-year-olds in our sample (86 percent) had not been exposed to any of the four violent acts (Table VI.14). The 15 percent of our sample who experienced violence is below Turner's estimate of any exposure (32 percent) but similar to Turner's rate of exposure to family violence in that sample (10 percent). In our sample, about 10 percent of children have encountered one of the four types of violence, and 4 percent have witnessed two or more. Overall, parents most commonly reported that their child had witnessed someone hitting, pushing, or kicking a family member (11 percent) and that the child had seen violence in his or her neighborhood (5 percent). Fewer than 1 percent of children have been victims of violence, and about 1 percent have seen a weapon used against a family member.

[91] McDonald et al. (2007) measured adjustment using the Infant-Toddler Social and Emotional Assessment (ITSEA; Carter et al. 2003). The authors used three domains from the ITSEA–Internalizing Problems, Externalizing Problems, and Dysregulation–and created an index of Maladaptive and Atypical Behaviors. They used the CES-D (Radloff 1977) and the Beck Anxiety Inventory (Beck and Steer 1993) to measure caregiver distress.

Box VI.3. Measures of Home and Neighborhood Environment

- **The Family Environment Scale, Family Conflict Subscale** (FES; Moos and Moos 2002) was designed to measure the social and environmental characteristics of families, including family relationships, emphases on aspects of personal development that families can support, and maintenance of the family system. The Family Conflict subscale measures the extent to which the open expression of anger and aggression and conflict-filled interactions are characteristic of the family. Parents rated each of five items on a four-point scale, in which 4 indicates strong agreement with statements such as, "We fight a lot," and "We sometimes hit each other." The subscale score is then the mean of the five individual item scores. For the Baby FACES sample, however, we removed one item that had a low correlation with the rest of the items in the scale and therefore reduced the overall alpha of the measure, "We hardly ever lose our tempers." The unweighted mean using the four other items for Family Conflict Subscale as reported by Baby FACES parents is 1.3 (SD = 0.4).

- **Exposure to Violence** measures how many violent incidents (out of four) a child has observed in his or her lifetime. Items come from the Infant-Toddler Social and Emotional Assessment, in which parents are asked to respond yes or no to questions about whether a child has: seen violence in his or her neighborhood; been a victim of violence; seen someone use a weapon to hurt or threaten a family member; or seen someone hit, push or kick a family member (Carter and Briggs-Gowan 2000). The unweighted mean is 0.2 (SD = 0.5).

- **Home Observation for Measurement of the Environment** (HOME) measures the quality of stimulation and support available to a child in the home environment (Caldwell and Bradley 2003). Information needed to score the inventory is obtained through a combination of parent self-reports and assessor observation conducted in the home with the child's parent while the child is present. We used selected items from the Infant version of the HOME inventory, the internal environment items from the Early Childhood version of the HOME, and neighborhood rating items from the Project on Human Development in Chicago Neighborhood (PHDCN). We derived five subscales from this assessment, as well as the total score:

  - **Emotional Responsivity** measures responsive and supportive parenting behavior observed by the interviewer during the home visit. Items in this subscale are based entirely on interviewer observations of the parent and child during the interview, and include, for example, whether the mother praised the child, whether she expressed warmth and affection toward the child, and whether she responded verbally to the child's verbalizations during the interview. Scores can range from 0, if the interviewer observed none of the positive behaviors, to 7, if he or she observed all of the behaviors. The unweighted mean is 6.1 (SD = 1.4) for the Emotional Responsivity subscale.
  - **Maternal Verbal-Social Skills** measures the parent's ability to speak freely and clearly to the interviewer. Items in this subscale are based entirely on interviewer observations of the parent during the interview. The maximum potential score is 3. The unweighted mean is 2.8 (SD = 0.52).
  - **Support of Cognitive, Language, and Literacy Environment** measures the provision of a variety of developmentally stimulating toys and furnishings, as well as whether the parent **provides** toys for the child during the visit, reads to the child several times per week, and talks to the child while doing household chores. Items are obtained by a combination of parent report and interviewer observation. The maximum potential score is 12, for homes in which all types of toys and furnishings are present, the parent provides toys for the child during the visit, and the parent reads and talks to the child during play. We also created another measure of ***Enhanced* Cognitive, Language, and Literacy Environment** by giving credit to parents only when more developmentally stimulating toys are provided to the child; the maximum potential score is also 12. The unweighted means for Support of Cognitive, Language, and Literacy Environment and Enhanced Cognitive, Language and Literacy Environment are 9.6 (SD = 1.25) and 8.0 (SD = 2.19), respectively.
  - **Absence of Punitive Interactions** measures harsh or punitive parenting behavior observed during the home interview. Items in this subscale are based entirely on interviewer observations of the parent and child during the interview, and include shouting at, expressing annoyance or hostility

toward, hitting, scolding, or restricting the child. Items are scored 1 if the parent did not engage in particular harsh or punitive behaviors during the home visit. Scores can range from 0 to 5. Higher scores on this outcome measure imply less negative parenting behavior. The unweighted mean is 3.7 (SD = 2.00) for this subscale.

- **Internal Physical Environment** measures the cleanliness, organization, and warmth of the home environment. Items in this subscale are based entirely on interviewer observations during the interview. Scores can range from 0 to 3. The unweighted mean for this subscale is 2.3 (SD = 0.80).
- **Total Score** measures the cognitive stimulation and emotional support provided by the parent in the home environment. The total includes 30 items used in the five subscales. The maximum potential score is 30. The unweighted mean of the total score is 24.6 (SD = 3.22).
- **External Environment** (not included in the HOME total) measures the physical and social environment of the face-block where the family lives. Items in this subscale are based entirely on interviewer observations of the neighborhood and include such items as general condition of housing units, garbage in the street or on the sidewalk, volume of traffic, and people arguing or fighting in the street. The items are recoded as 1 (yes) or 0 (no), and then summed. Scores can range from 0 to 8. The unweighted mean for this measure is 6.4 (SD = 1.74).

- **Neighborhood Disorder** measures the physical and social environment of the face-block where the family lives. Items in this subscale are based entirely on interviewer observations of the neighborhood and include such items as general condition of housing units, garbage in the street or on the sidewalk, volume of traffic, and people arguing or fighting in the street. The scale score is the mean of the item z-scores. Higher scores indicate higher levels of disorder.

- **The Confusion, Hubbub, and Order Scale** (CHAOS; Matheny et al. 1995) is designed to assess the level of confusion and disorganization in the child's home environment. It was completed by parents in a self-administered questionnaire. The scale consists of 15 statements, to each of which a parent or caregiver responds on a four-point scale ranging from 1 (very much like your own home) to 4 (not at all like your own home). A single scale score is derived from the CHAOS scale by summing the responses for the 15 items, which can range from 0 to 45. A higher score represents a more chaotic, disorganized, and hurried home. The unweighted mean of the CHAOS score for the homes of 2-year-olds in the Baby FACES sample is 11.2 (SD = 6.26).

Table VI.14. Child's Exposure to Violence and Neighborhood Disorder at Age 2

	Weighted Means or Percentages (Standard Error)
Number of Violent Acts to Which Child Has Been Exposed[a]	
Zero	85.9(2.14)
One	10.4(1.75)
Two or more	3.7(1.04)
External Environment	6.4 (0.13)
Neighborhood Disorder	-0.0 (0.05)
Sample Size	**458–497**

Sources: Spring 2010 Parent Interview and Parent Self-Administered Questionnaire.

Note: The 1-year-old Cohort in 2010 includes children who were 10 to 15 months of age, enrolled in spring 2009, and continued to be enrolled in spring 2010.

[a] Number is the sum of yes responses to four questions regarding acts of violence: (1) whether a child has ever seen violence in their neighborhood; (2) whether the child has been a victim of violence in the neighborhood, (3) whether a child has seen someone use a weapon to threaten or hurt a family member; and (4) whether a child has seen someone hit, push, or kick a family member.

Overall, parents in our sample also report low levels of household conflict. We asked parents to rate their level of agreement with statements about conflict among members of their household, using the four-point Family Conflict subscale of the Family Environment Scale (FES). The subscale mean measures the average level of agreement that parents reported for statements on the open expression of anger and aggression and conflict-filled interactions within their family; higher scores indicate a higher level of agreement with statements about incidence of anger in the home. (Box VI.3 provides more information on the measure.) On average, parents of 2-year-olds report a low level of household conflict, with an average score of 1 on a scale ranging from 1 (strongly disagree) to 4 (strongly agree). Five percent (standard error = 1.23) of parents had an average FES score above 2, suggesting that few parents mildly or strongly endorse statements that indicate expressions of conflict within the family. Mean scores are within the same range as those reported in EHSREP (mean = 1.7) for families of children at this same age (ACF 2001).

The McDonald study also found that violence toward a family member was linked to exposure to angry conflict in the home; more than three-quarters of the children in the study who had been exposed to violence had also observed angry conflict. We, however, do not find a similar relationship in the Baby FACES sample: Of 2-year-olds in our sample who had been exposed to any violence, about 10 percent also have parents who report an FES score above 2.

Many families of 2-year-olds live in neighborhoods with poor conditions. Assessors rated the physical and social environment of the face-block (generally, the block on which the families lives) upon exiting the in-person home visit. The neighborhood rating items are drawn from the Project on Human Development in Chicago Neighborhoods (PHDCN), and the ratings are based entirely on assessor observations of the neighborhood. The scores are a count of negative neighborhood conditions (such as garbage and/or drug paraphernalia in the street or on the sidewalk and people outside arguing or fighting), with a possible highest score of 8. Higher scores indicate more disorder in the neighborhood. On average, the assessors rated the neighborhoods as being in poor condition, with a score of 6 out of 8 (Table VI.14). More than half (58 percent) of the families have a score of 7 or 8. A neighborhood scoring an 8 would have some or all of the following characteristics: badly deteriorated housing units or buildings; streets with potholes, garbage, litter, and trash "just about everywhere"; drug paraphernalia, cigarette butts, condoms, or beer or liquor containers or packages "just about everywhere"; heavy vehicle backup at traffic lights; several adults or teenagers on the street arguing or otherwise behaving in a hostile manner; and a general atmosphere that had the observer fearing for his or her personal safety.

Summary of Key Findings

- More than half of children reside with their biological fathers at age 2.
- Most fathers are employed, while fewer than half of mothers of 2-year-olds are employed.
- The parents of 2-year-olds are continuing to improve their education.
  - Overall, 64 percent of mothers and 57 percent of fathers had at least a high school diploma or equivalent.
  - In the past year, 13 percent of mothers and 6 percent of fathers earned a certificate, diploma, or degree.
- Most families are at the lowest level of demographic risk, which means parents having no more than two of the following five risk factors: (1) being a single parent, (2) lacking a high school credential, (3) not being employed, in school, or in training, (4) receiving public assistance, and

(5) being (or having been) a teenage mother. Seventeen percent are at highest risk, with 4 or 5 of the above risks.

- Parents reported median household income of $19,000, one financial difficulty, and one food security concern. About two-thirds of families were at or below the poverty line, and an additional 18 percent are below 130 percent of poverty.
- About half of parents of 2-year-olds report very good to excellent health. Most have health insurance and a regular provider.
- Most parents have a low level of psychological risk.
  - Overall parents reported a low level of depressive symptoms; 14 percent reported moderate to severe depressive symptoms.
  - Levels of parenting stress were lower than in the EHSREP. About a quarter of the sample reported high levels of parenting stress (one standard deviation above the sample mean on either the Parenting Distress or Parent-Child Dysfunctional Interaction subscale).
  - About 14 percent of parents reported receiving treatment for any mental health problem.
- About 90 percent of parents read to children at least once a day. Eight percent of parents report they neither read nor tell stories to their child at least once a day.
- About 70 percent of children speak only English; the remaining children speak mainly Spanish and English (about 5 percent speak Spanish only).
- Parents provide supportive and stimulating home environments for their children.
  - Children are rarely exposed to violence, conflict in their homes, or high levels of chaos.
  - As reported by parents and by in-home observations, families are providing warmth and stimulation for children's development.
  - However, many children live in neighborhoods that are in poor condition.
- Children at age 2 have positive interactions with their parents, although negative interactions were somewhat higher than observed in the EHSREP.

VII. HOW EARLY HEAD START CHILDREN ARE FARING AT AGE 2

In the Baby FACES baseline report, we described the functioning of 1-year-olds enrolled in the Early Head Start program in spring 2009. In the second round of data collection, we follow the children, now 2 years old, who continue to be enrolled in Early Head Start in spring 2010. To provide a more complete picture of children's development, we draw on multiple data sources to capture development in different contexts, including reports from parents, Early Head Start staff, and assessors; direct child assessments; and video-recorded interactions with children during in-home assessments. In this chapter, we report how these children are faring in Early Head Start based on data from these sources. The first section of the chapter describes children's physical health and access to health care using information obtained through parent interviews and direct child assessments. The second section focuses on children's general development as measured by the Ages & Stages Questionnaires, Third Edition (ASQ-3), which parents complete using self-administered questionnaires (SAQs) during the child assessments. We then describe children's language development at age 2, based on reports from parents and Early Head Start staff, direct child assessments, and recorded interactions with the child. The final section is devoted to children's social-emotional development as rated by parents, Early Head Start staff, and assessors.

Most 2-Year-Olds in Early Head Start are Healthy and Have Access to Health Care

In their spring 2010 interview, we asked parents of 2-year-olds to report on the children's general health status, health care access, and disability evaluation and services since the baseline interview. We also collected child height and weight data through one-on-one assessments of each child.

Most 2-Year-Olds Are in Good Health

Generally, Early Head Start 2-year-olds are healthy. Table VII.1 presents the weighted means and percentages of the measures of child health. Based on parents' reports, 80 percent of 2-year-olds have excellent or very good health; only 5 percent have fair or poor general health. On the five-point rating scale for child general health that ranges from excellent (5) to poor (1), the mean of parent ratings is just over 4, suggesting that overall, children's general health status is between excellent and very good.

Using the height and weight data collected during direct child assessments, we calculated children's body mass index (BMI) for age percentile based on the 2000 CDC growth charts (Kuczmarski et al. 2002). According to expert committee recommendations (Barlow et al. 1998), children with a BMI for age at the 95th percentile or greater are identified as obese; those in percentiles from 85 to 94 are at risk for obesity; and those in percentiles lower than the 5th are underweight. Among 2-year-olds who were enrolled in Early Head Start in spring 2010, the prevalence of obesity is 17 percent—the same result found in the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B) with a nationally representative sample of children (Moss and Eaton 2011). In addition, about 16 percent of children are identified as at risk for obesity (similar to the 15 percent prevalence rate found in the ECLS-B); 6 percent are underweight.

Table VII.1. Most 2-Year-Olds are Healthy

Child Characteristics	Weighted Means or Percentages (Standard Error)
Health Status	4.2 (0.06)
Excellent or very good	79.6 (2.61)
Fair or poor	4.8 (1.31)
Child BMI	
Child is underweight (BMI < 5th percentile)	6.0 (1.51)
Child is at risk for obesity (BMI ≥ 85th and < 95th percentile)	15.5 (1.87)
Child is obese (≥ 95th percentile)	16.6 (2.27)
Sample Size	
Parent interview	**452–468**

Source: Spring 2010 Parent Interview.

Note: Sample restricted to 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010 when the children were 2.

BMI = body mass index.

Most 2-Year-Olds Have Access to Health Care

Access to health care and health insurance coverage is important for promoting good health in children. Table VII.2 summarizes information obtained through parent interviews regarding what health care services children have received and their health insurance coverage. At age 2, all Early Head Start children received some type of health services, including doctor or dentist visits, immunizations, and evaluation for disabilities. Compared with 6 percent of children nationally who do not have a regular source of health care (Federal Interagency Forum on Child and Family Statistics 2010), only 1 percent of Early Head Start children lack a regular health care provider. Approximately 14 percent of parents reported that Early Head Start helped them find regular health care. All 2-year-olds have visited a doctor since the last interview, and slightly more than half (52 percent) of children visited a dentist. Approximately half (51 percent) of the children have had at least three to four well-child checkups since the last interview. About 92 percent had their last checkup fewer than 6 months ago. Only 2 percent have not had a well-child checkup in the past year. Approximately 92 percent of 2-year-old children are reported as "completely up to date" with immunizations.

Parents reported on 2-year-olds' hospitalizations and emergency room (ER) visits. Approximately 11 percent of children have been hospitalized since the last interview. Sixty percent of children have visited the ER since birth. Parents most commonly cite high fevers and breathing problems (49 percent for each) as the reasons for these visits. The next most common reason noted is ear infection (43 percent). Fewer than one-third (29 percent) of children visited the ER due to an accident or injury, and approximately one-quarter sought emergency treatment for dehydration or diarrhea. Three percent of parents reported jaundice as the reason for their ER visit.

Children with health insurance coverage are more likely to have a regular and accessible source of health care (Kaiser Family Foundation 2013). Among 2-year-olds enrolled in Early Head Start in spring 2010, only 3 percent do not have health insurance coverage. This proportion is considerably lower than the national rate of 10 percent (Federal Interagency Forum on Child and Family Statistics 2010). Most children (86 percent) are covered by public plans, and more than one-third (35 percent) are covered by private health insurance. (Children could be covered by both types of plans; therefore, the estimates sum to more than the estimated percentage of children with coverage.) Approximately three-quarters (76 percent) of children have dental insurance coverage. Perhaps explaining why these

families are more likely to have health insurance than national averages, 7 and 10 percent of parents reported that Early Head Start helped them find health and dental insurance, respectively.

Table VII.2. Most 2-Year-Olds Have Access to Health Care

Child Characteristics	Weighted Percentages (Standard Error)
Has a Regular Health Care Provider	98.7 (0.56)
Early Head Start Helped Parent Find Regular Health Care	13.8 (1.69)
Received Any Health Services	100.0 (0.00)
Child Has Ever Visited	
A doctor for a checkup	100.0 (0.00)
A dentist	52.0 (3.48)
Child's Last Regular Doctor Checkup Was Fewer than Six Months Ago	91.6 (1.53)
Frequency of Well-Child Checkups Since Last Interview	
Never	2.4 (0.72)
Once or twice	46.2 (2.90)
3–4 times	31.5 (2.70)
5–9 times	12.6 (1.77)
10 times or more	7.4 (1.12)
Child's Immunization Status Is "Completely Up to Date"	92.0 (1.65)
Hospitalized Since Last Interview	11.2 (1.28)
Has Had an Emergency Room (ER) Visit	60.4 (2.58)
Reason for ER Visit	
High fever	49.1 (3.30)
Breathing problems	48.8 (3.94)
Ear infection	42.7 (3.79)
Accident or injury	29.4 (3.20)
Dehydration or diarrhea	24.3 (3.12)
Jaundice	2.9 (1.00)
Child's Health Insurance Status[b]	
Private health insurance plan	35.0 (2.78)
Public/government insurance	86.0 (2.05)
No health insurance	3.4 (0.83)
Child has dental insurance coverage	76.3 (2.15)
Early Head Start Helped Parent Find Health Insurance[c]	7.3 (1.69)
Early Head Start Helped Parent Find Dental Insurance [d]	10.1 (2.05)
Sample Size	
Parent interview	**452-468**

Source: Spring 2010 Parent Interview.

Note: Sample restricted to 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010 when the children were 2.

[a] Only for those who have had ER visits (N = 284).
[b] The estimates are not mutually exclusive and hence sum to more than the estimated percentage of children with coverage.
[c] Only for those with health insurance (N = 444).
[d] Only for those with dental insurance (N = 351).

Parents of 2-year-olds also reported on children's special needs and early intervention services since the last interview (Table VII.3). Fewer than one-quarter (22 percent) of parents reported their child has special needs;[92] 13 percent of children had been evaluated for disabilities since the last interview (17 percent had been evaluated since birth). The most common special needs reported by parents are hearing and speech problems: 15 percent of 2-year-olds had hearing/speech problems; 9

Table VII.3. Receipt of Early Intervention Services at Age 2

Characteristics	Weighted Percentages (Standard Error)
Child Has Any Disabilities According to Parent Report	21.9 (2.38)
Hearing or speech problems	15.2 (1.98)
Behavioral or attention problems	5.5 (1.34)
Motor problems	4.6 (1.15)
Developmental delay	4.1 (1.04)
Sleep apnea	3.1 (1.10)
Below-normal activity level	2.2 (0.73)
Vision problems	1.2 (0.53)
Child Has Been Evaluated for any Disabilities[a] Since Last Interview	13.4 (1.77)
Hearing or speech problems	8.8 (1.58)
Developmental delay	3.3 (0.98)
Motor problems	3.0 (0.93)
Sleep apnea	2.4 (0.91)
Behavioral or attention problems	1.8 (0.64)
Below-normal activity level	1.0 (0.57)
Vision problems	1.0 (0.47)
Child Has Ever Been Evaluated for any Disabilities[a]	16.5 (2.04)
Child Has Received Disability Services[a] Since Last Interview	75.1 (6.42)
Child Has Ever Received Disability Services[a]	75.2 (6.22)
Early Head Start Has Helped Family and Child Obtain Disability Services[b] Since Last Interview	63.8 (7.88)
Early Head Start Has Ever Helped Family and Child Obtain Disability Services[b]	67.0 (7.82)
Child Currently Participating in an early Intervention Program[a]	83.7 (9.80)
Child has an IEP/IFSP	40.1 (2.97)
Sample Size	
Parent interview	**454-468**
Reported by parent as having disabilities	**108**
Received disability services since last interview	**52**

Sources: Spring 2009 and 2010 Parent Interview.

Note: Sample restricted to the 1-year-old Cohort. The Newborn Cohort includes pregnant women (N = 85) and babies up to eight weeks of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010 when the children were 1. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 (including 69 who enrolled during pregnancy with that child). For tables that describe 1-year-olds, we include data from the 1-year-old Cohort collected in spring 2009 and from the still enrolled Newborn Cohort in spring 2010.

[a] Among those who were reported by parents as evaluated for disabilities.
[b] Among those who received disability services.

IEP = individualized education program or plan; IFSP = individual family service plan.

[92] This finding is based on parent reports, regardless of whether the child has a formal diagnosis. Specifically, we asked parents whether their child had any of the disabilities, and only those who answered yes were asked whether the child was evaluated.

percent were evaluated for such problems. Behavioral/attention problems and motor problems are the next most frequently reported special needs (5 percent for each), with 2 percent of children evaluated for behavioral/attention problems and 3 percent evaluated for motor problems. Sleep apnea and developmental delay are experienced by 3 and 4 percent of children, respectively, with 2 percent of children evaluated for sleep apnea and 3 percent evaluated for developmental delay. Three-quarters of children whose parents reported they have been evaluated for disabilities have received disability services. Among parents whose children received disability services, approximately two-thirds reported that Early Head Start helped them get the services. Most children with special needs (84 percent) are currently participating in an early intervention program. Forty percent of all parents reported that children have an Individualized Education Plan (IEP) or Individualized Family Service Plan (IFSP).

Two-Year-Old Early Head Start Children Are Near Their Peers in General Development

Parents of 2-year-olds completed the ASQ-3 (Squires et al. 2009), which measures children's cognitive, communication, and motor development, and identifies children who may be at risk in these developmental areas (Table VII.4). About 20 percent of parents completed the ASQ-3 in Spanish.[93] As defined in the ASQ-3 user's manual, children who score two standard deviations or more below the mean might be at risk and require further assessment. Children who score in the monitoring zone (between one and two standard deviations below the mean) need further monitoring and may benefit from practicing skills in a specific area of development (see Box VII.1 for a description of the ASQ-3 scores and scoring procedures).

On average, 2-year-olds enrolled in Early Head Start in spring 2010 are relatively similar to their same-age peers nationally in each of the developmental areas. The average scores on the age-specific forms are approximately 50 out of 60 in Communication, Gross Motor, and Personal-Social, and about 45 out of 60 in Fine Motor and Problem Solving. The average ASQ-3 total score for 2-year-olds is 239 out of 300. The average raw scale scores (including all items across age forms) show a similar pattern, with the lowest scores in Fine Motor and Problem Solving. At age 2, Early Head Start children scored in line with the normative sample in Communication, Gross Motor, and Personal-Social (Figure VII.1). However, their scores continue to be lower than the normative sample in Fine Motor and Problem Solving.[94]

Approximately 4 to 6 percent of 2-year-olds scored below the at-risk cutoff in Communication, Gross Motor, and Personal-Social and 9 to 10 percent below the cutoff in Fine Motor and Problem Solving. Most commonly, children scored in the monitoring zone in Fine Motor (20 percent); 10 to 12 percent scored in the monitoring zone in the areas of Communication, Gross Motor, Personal Social, and Problem Solving.

[93] This percentage confirms parent reports in Chapter VI that 19 percent of them read to their child in only Spanish or another non-English language.

[94] The ASQ-3 administration procedure changed from a telephone interview at age 1 to a parent SAQ at age 2. See Appendix D for details on how the change in administration mode might affect parents' ratings.

Table VII.4. Children's General Developmental Status at Age 2: ASQ-3

Measures	Weighted Means or Percentages (Standard Error)
ASQ-3 Age-Specific Raw Score[a]	
Communication	48.9 (0.56)
Gross Motor	51.1 (0.67)
Fine Motor	44.4 (0.63)
Problem Solving	45.0 (0.62)
Personal-Social	50.0 (0.46)
Total Score	239.1 (2.15)
ASQ Cut-Off Score (two SDs below the mean or lower)	
Communication	4.4 (0.84)
Gross Motor	5.8 (1.50)
Fine Motor	8.7 (1.46)
Problem Solving	9.7 (1.65)
Personal-Social	5.7 (1.08)
ASQ in the Monitoring zone (one to two SDs below the mean)	
Communication	11.7 (1.74)
Gross Motor	10.8 (1.63)
Fine Motor	19.8 (1.89)
Problem Solving	12.0 (1.49)
Personal-Social	10.2 (1.59)
ASQ-3 Raw Scale Score[b]	
Communication	84.3 (1.05)
Gross Motor	69.8 (0.90)
Fine Motor	73.7 (1.07)
Problem Solving	93.4 (1.07)
Personal-Social	86.9 (0.94)
Total Scale score	407.5 (4.05)
ASQ-3 IRT Score	
Communication	11.6 (0.21)
Gross Motor	12.6 (0.16)
Fine Motor	9.5 (0.21)
Problem Solving	12.9 (0.23)
Personal-Social	13.7 (0.21)
Sample Size	
Parent SAQ	**498–515**

Source: Spring 2010 Parent SAQ.

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010 when the children were 2.

[a] Includes only items on the age-specific forms.
[b] Include all items across age forms.

ASQ-3 = Ages & Stages Questionnaires (Third Edition); SD = standard deviation.

Box. VII.1. Measures of Children's General, Language, and Social-Emotional Development

Several factors were considered in the selection of measures, including the psychometric strength of the measure, its availability in Spanish, the likelihood that it could be adopted by Early Head Start programs or was already in wide use among programs, comparability with other large-scale studies, and feasibility for use in this large-scale study. Some of the measures below are considered screeners that are meant to identify children at an elevated risk for delayed development and initiate further, in-depth assessments. In addition to providing information on children whose screenings indicate problems, assessments also provide information about children's abilities and skills that programs can use to design interventions that support their development.

Measures of Children's General Development

- **Ages & Stages Questionnaires, Third Edition** (ASQ-3; Squires et al. 2009) is a parent-report tool for screening infants and young children for developmental delays. The ASQ-3 includes 21 questionnaires that are appropriate for children aged 1 month through 5-1/2 years. These surveys focus on the assessment of five key developmental areas:

  (1) Communication

  (2) Gross Motor

  (3) Fine Motor

  (4) Personal-Social

  (5) Problem Solving

  Parents are asked to respond "not yet," "sometimes," or "most of the time" to questions such as, "Does your child jump with both feet leaving the floor at the same time?" There are six items in each of the five developmental areas. The raw score in each developmental area can range from 0 to 60, and the ASQ-3 total area score can range from 0 to 300. For 2-year-olds in the second round of Baby FACES data collection, the unweighted mean for the ASQ-3 total area score is 238.2 (SD = 41.5). For the developmental area scores, the unweighted means range from 44.3 to 50.9 (with SDs ranging from 10.3 to 12.6).

  - As a screening tool, the age-specific raw score for each of the ASQ-3 developmental areas has a ceiling problem, because many children score at the maximum. This tendency limits our ability to examine change over time in each of the child's developmental areas. To address this problem, we developed in the second round of Baby FACES data collection a form that included all of the items required by the three forms we need to cover the range of ages of the 1-year-old Cohort children at age 2 (22, 24, and 27 months) as well as items from the 30-month form. This approach to the ASQ is novel, but it enabled us to look at child functioning in a more dimensional or continuous way rather than just whether he or she had a developmental concern. We developed this approach in collaboration with the ASQ test developer to ensure the resulting adaptation of the instrument was acceptable. We analyzed items across the forms and created both the age-specific area scores as well as summary (scale and item response theory or IRT) scores we could then analyze, controlling for child age. The scale scores can range from 0 to 110 for Communication, Fine Motor, and Personal-Social; 0 to 90 for Gross Motor; and 0 to 130 for Problem Solving. The unweighted means for the ASQ-3 scale scores for the 2-year-olds in spring 2010 are 83.4 (SD = 12.6) for Communication, 73.2 (SD = 19.4) for Fine Motor, 86.7 (SD = 18.3) for Personal-Social, 69.1 (SD = 16.7) for Gross Motor, and 93.3 (SD = 22.7) for Problem Solving. The unweighted mean for the total scale score across domains is 405.2 (SD = 81.2) out of 540.
  - Using all the items across the 22- to 30-month forms, we created the IRT scores that take item difficulties into account. IRT scores range from 0 to 20 for Communication and Fine Motor, 0 to 18 for Gross Motor, 0 to 22 for Personal-Social, and 0 to 26 for Problem Solving. The unweighted means of the IRT scores are 11.5 (SD = 4.7) for Communication, 9.4 (SD = 3.9)

for Fine Motor, 12.5 (SD = 3.1) for Gross Motor, 13.7 (SD = 4.3) for Personal-Social, and 12.8 (SD = 4.9) for Problem Solving.

- The developer-derived cutoff points, which vary by age and indicate a need for further assessment, are two standard deviations below the mean in each area of development. Children scoring two standard deviations below the mean or lower are in the at-risk range. For example, the cutoff point in Communication is 13.04 for the 22-month form and 25.17 for the 24-month form. The cutoff point of two standard deviations has a sensitivity and specificity of 0.86. In other words, children whose scores are two standard deviations below the mean or lower have an 86 percent chance of being identified for further assessment. Children whose scores fall in the monitoring zone—defined by the ASQ-3 authors as one to two standard deviations below the mean—might benefit from practicing skills in a specific area of development. As you would expect, the cutoff point of one standard deviation has a high sensitivity (0.98) but a low specificity (0.59; Squires et al. 2009). (Appendix C details the ASQ-3 norming sample and the psychometric properties observed in this study.)

Measures of Child Language Development

- **The MacArthur-Bates Communicative Development Inventories (CDI)—Toddler Short Form** (Fenson et al. 2000) is designed to assess children's early receptive and expressive language and communication skills through parent report. At round 2 of Baby FACES data collection, Early Head Start staff (teachers and home visitors) completed the English Toddler Short Form for the 2-year-olds. There are two equivalent forms for toddlers, with each form containing a 100-word vocabulary checklist for children ages 16 to 30 months. We used Form A in the spring 2010 data collection. Teachers and home visitors who reported they spoke Spanish completed the English form and the 100-word Spanish Toddler Form for children identified as understanding Spanish. Two measures were derived from each of the forms:

  - Vocabulary Comprehension measures the number of words the child understands. Teachers and home visitors were asked whether the child understands or, both understands and says each of 100 specific words.
  - Vocabulary Production measures the number of words in the child's spoken vocabulary. Early Head Start teachers and home visitors reported whether the child understands and says each of 100 specific words.

  In addition to staff reports, parents also report on children's English or Spanish Vocabulary Production in a self-administered questionnaire. The raw scores for both Vocabulary Comprehension and Vocabulary Production range from 0 to 100. Using the staff reports, the unweighted means are 69.1 (SD = 23.5) and 71.1 (SD = 22.8) for English and Spanish Vocabulary Comprehension, respectively, and 35.1 (SD = 26.0) and 30.8 (SD = 25.7) for English and Spanish Vocabulary Production, respectively. Using the parent reports, the unweighted means are 47.1 (SD = 25.6) and 46.9 (SD = 27.8) for English and Spanish Vocabulary Production, respectively. Appendix C details the CDI norming sample and the psychometric properties observed in this study. (Refer to the baseline report [Vogel et al. 2011] for information about creating virtual norms at baseline for the Spanish version.)

- **The Preschool Language Scale—Fourth Edition** (PLS-4; Zimmerman et al. 2002a, 2002b) is a direct child assessment used to evaluate receptive and expressive language skills, as well as understanding and use of grammatical rules for children from birth to 6 years of age. It comprises two subscales: Auditory Comprehension (AC) and Expressive Communication (EC). We used the AC subscale for both of the English and Spanish editions of the PLS-4 at round 2 of Baby FACES data collection. The tasks designed for infants and toddlers in the AC subscale assess skills that are important for language development (for example, following directions with cues and appropriate object play). The unweighted means of standard scores are 90.8 (SD = 16.8) for English and 91.1 (SD = 21.1) for Spanish.

  - In discussion with the test publisher, we developed a procedure to derive a "conceptual score" for dual language learners, giving children credit for their knowledge of both English and Spanish. For Spanish-speaking children, we also administered in English the items that they did not pass in Spanish until the children reached an English ceiling. Thus, we were able to calculate the conceptual scores by giving children credit for items that they answered correctly in Spanish and/or English and derive the bilingual standard scores using the norms for the Spanish Edition. The unweighted mean is 95.3 (SD = 20.1) for the bilingual standard scores.

- **The Early Communication Indicator** (ECI; Luze et al. 2001; Carta et al. 2010) is a semistructured, play-based assessment designed to measure the expressive communication of infants and toddlers between the ages of 6 and 36 months along four key skill elements: (1) gestures, (2) vocalizations, (3) single-word utterances, and (4) multiple-word utterances. (Appendix C defines each of the skill elements.) As part of the assessment activities conducted with 2-year-olds, assessors administered the ECI, which was video-recorded for later coding by staff at Mathematica. Coders recorded the frequency of occurrence of each skill element over the six-minute assessment. Observed instances were combined to yield a total communication score that reflects the weighted combination of the child's gestures, vocalizations, and single- and multiple-word utterances. (The latter two were given weights of two and three, respectively, to account for the greater complexity of skill associated with their use.) Total weighted scores were converted to a rate score that reflects the number of communicative bids per minute over the course of the six-minute play assessment (unweighted mean = 9.4; SD = 6.2). An age-based, standardized score with a mean of 100 (SD = 15) was also computed. The unweighted mean of standardized scores is 91.0 (SD = 18.6). Two cutoff scores identify children with (or at risk for) expressive language delays. Children scoring between one and one and a half standard deviations below the mean are in the at-risk range; those with scores one and a half standard deviations below the mean or lower are identified as demonstrating delays in expressive language (Greenwood et al. 2006, 2010).

Measures of Child Social-Emotional Development

- **The Brief Infant Toddler Social Emotional Assessment** (BITSEA; Briggs-Gowan and Carter 2006) is the screener version of the longer ITSEA, which is designed to detect delays in the acquisition of social-emotional competencies as well as social-emotional and behavior problems in children 12 to 36 months old. The 42-item parent and staff report focuses on the development of competencies (for example, "hugs or feeds dolls or stuffed animals") as well as problem behaviors (for example, "avoids physical contact").

  - The 31-item **BITSEA** Problem scale assesses social-emotional and behavioral problems such as aggression, defiance, overactivity, negative emotionality, anxiety, and withdrawal. Higher scores indicate more problems. The 11-item **BITSEA** Competence scale assesses social-emotional abilities such as empathy, prosocial behaviors, and compliance. Lower scores indicate lesser competence. Respondents are asked to rate each item as not true/rarely, somewhat true/sometimes, or very true/often. The BITSEA is available in both English and Spanish and was administered to both parents and teachers/home visitors in the baseline data collection. The raw scores range from 0 to 22 for the Competence domain and 0 to 62 for the Problem domain. At Baby FACES baseline, the scores on the BITSEA Parent Form have unweighted means of 10.6 (SD = 6.3) and 16.2 (SD = 3.4) for the Problem and Competence scales, respectively; the scores on the BITSEA Childcare Provider Form have unweighted means of 6.3 (SD = 4.7) and 12.8 (SD = 3.5) for the Problems and Competence scales, respectively.
  - We created cutoff scores to indicate either high problems or low competence. Cutoff points were calculated in six-month age bands according to child gender using values established with the national standardization sample on the parent form and child care provider form separately. For the BITSEA problem scale, the cutoff point is at or above the 75th percentile. For the BITSEA competence scale, the cutoff point is at or below the 15th percentile. Scoring in the cutoff range in at least one domain indicates "screening positive" on the BITSEA. (Appendix C details the BITSEA norming sample and the psychometric properties observed in this study.)

- **Bayley Behavioral Rating Scale** (BRS; Bayley 1993) measures the child's behavior during child assessment. The BRS is one of the three component scales of the Bayley Scales of Infant Development—Second Edition (Bayley 1993). There are two subscales of the BRS used in Baby FACES:
  - **Orientation/Engagement** measures the child's cooperation with the assessor during the assessment, positive affect, and interest in the test materials.
  - **Emotional Regulation** measures the child's ability to change tasks and test materials, negative affect, and frustration with tasks during the assessment.

  The assessor rates the child's behavior by scoring items on a five-point scale, with 5 indicating more positive behavior (for example, more cooperation and less frustration). Scores are the total of the items in the subscale. Possible scores range from 9 to 45 for Orientation/Engagement and 10 to 50 for Emotional Regulation.

  - The BRS "nonoptimal" cutoff scores indicate raw scores at or below the 10th percentile, and "questionable" cutoff scores indicate raw scores between the 11th and 25th percentile.

- **Child Behavior During the Parent-Child Play Assessment.** Semistructured, video-recorded assessments of parent-child play (Two-Bag Task) were coded using the Parent-Child Interaction Rating Scales for the Two-Bag Assessment (Mathematica Policy Research 2010). Four scales, each ranging from 1 (very low incidence) to 7 (very high incidence), address aspects of children's social and emotional competence:

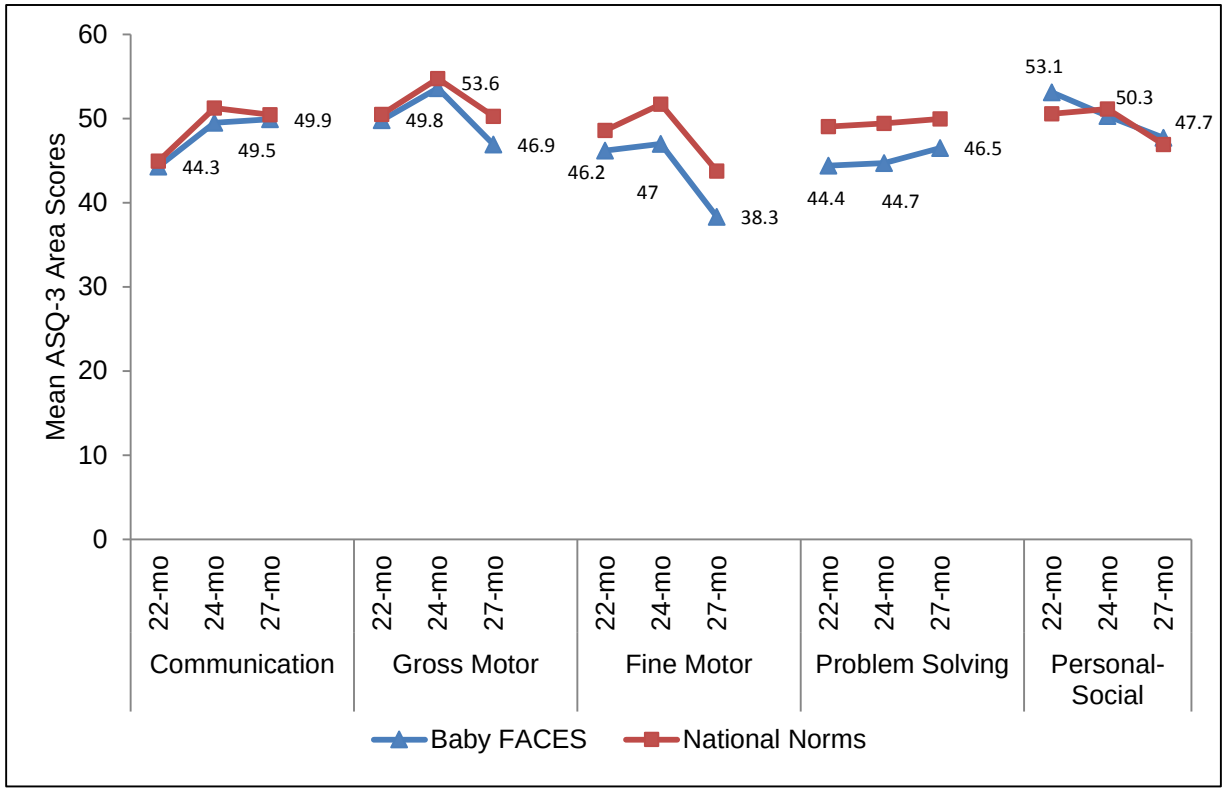
  Engagement of Parent reflects the extent to which the child displays, initiates, and/or maintains interaction with the parent and expresses positive affect toward the parent. Key indicators include approaching or orienting toward the parent, establishing eye contact, engaging the parent in play, and/or positively responding to the parent's play initiations and suggestions. The unweighted mean is 4.39 (SD = 1.19).

  Sustained Attention assesses the degree to which the child is involved with the objects presented in the two bags. Indicators include the degree to which the child "focuses in" when playing with an object and the extent to which the child coordinates activities with several objects and/or explores objects in an intentional, focused manner. The unweighted mean is 4.89 (SD = 1.01).

  Negativity Toward Parent measures the degree to which child displays expressions of anger, hostility, or disdain toward the parent. Expressions may be overt (for example, forcefully rejecting a toy offered by the parent or pushing the parent away) or covert (for example, hitting or throwing an object in response to a parent's overture). The unweighted mean is 2.81 (SD = 1.37).

  Enthusiasm reflects the degree to which the child approaches and participates in the task with vigor, confidence, energy, and eagerness. A child scoring high in enthusiasm expresses an active interest in the task, invests effort in the interaction, shows an appreciation for his or her own successes, and demonstrates a sense of agency and coordination between affect and behavior. The unweighted mean is 4.40 (SD = 1.08).

Figure VII.1. Comparison of the ASQ-3 Mean Score for Each Developmental Area in Baby FACES to National Norms, by Age, Within the 1-Year-Old Cohort



Source: Spring 2010 Parent SAQ.

Note: Sample restricted to the 1-year-old Cohort.

Sample sizes by age group: 22 months: N = 79; 24 months: N = 280; 27 months: N = 130.

ASQ-3 = Ages & Stages Questionnaire, Third Edition.

Parent and Staff Reports Differ on Language Development in Early Head Start Children

Children acquire language rapidly between ages 1 and 2 (Dixon 2006). In the spring 2010 data collection for 2-year-olds, we draw on data from multiple sources to assess children's language development across different contexts. In addition to using Early Head Start staff reports on children's vocabulary comprehension and production using the MacArthur-Bates Communicative Development Inventories (CDI)—Short Form for toddlers (Fenson et al. 2000), we also asked parents to report on children's vocabulary production using the CDI—Short Form in the SAQ (see Box VII.1 for a description of the CDI scores and scoring procedures). Early Head Start staff who spoke Spanish also completed the Spanish CDI Short Form for Spanish-speaking children. About 18 percent of 2-year-olds were rated on the Spanish version by Early Head Start staff. Parents completed the English or Spanish CDI depending on their primary language. Eighty percent of parents completed the English version, and the remaining 20 percent completed the Spanish version. Parents also reported on children's language ability during the parent interview.

We administered the Preschool Language Scale-Fourth Edition (PLS-4; Zimmerman et al. 2002) to children in one-on-one direct child assessments during an in-person home visit to assess auditory comprehension. Approximately three-quarters (74 percent) of children were tested in English only.

The remaining one-quarter (26 percent) of children were tested in Spanish first, followed by English prompts for items missed in the Spanish administration up to an English ceiling; for these children, we calculated a conceptual bilingual score in addition to a Spanish score. We assessed children's expressive communication while they engaged in a six-minute, play-based communication task with the assessor (Early Communication Indicator [ECI]; Carta et al. 2010; Luze et al. 2001; see Box VII.1 for descriptions of the PLS-4 and ECI scores and scoring procedures). Table VII.5 presents weighted means or percentages on the language measures.

Parents Reported Better Expressive Language Development in Children Than Staff, Although Both Are Lower Than National Scores

According to Early Head Start staff reports, 2-year-old children understand 69 of the 100 words in the CDI checklist and say 35 English words, on average (Table VII.5). Children from homes in which English is the only language spoken scored 77 and 41 on vocabulary comprehension and production, respectively, while dual language learners (DLLs) scored 55 and 24 on the same language dimensions. Spanish-speaking children understand 73 Spanish words and say 31 Spanish words. As reported by Early Head Start staff, the mean standard scores for children's Spanish vocabulary production (mean = 92) is approximately half a standard deviation below the mean for the normative sample.[95]

According to parent reports, English-speaking children say 48 English words of the 100 words included in the CDI, and Spanish-speaking children say 49 Spanish words, on average.[96] These scores are higher than the results reported by Early Head Start staff, which may be due to more opportunities for one-on-one conversation and/or increased inhibition in group care settings. The mean standard scores for Spanish vocabulary production (mean = 102) is around the mean for the normative sample. In addition, parents also reported on whether children can combine words. Overall, parents reported 22 percent of the children have not yet begun to combine words, 39 percent can sometimes combine words, and another 39 percent can often combine words.[97] In terms of combining words, Early Head Start children fall behind their national peers in the ECLS-B, in which 16 percent of children have not yet begun to combine words, 34 percent can sometimes combine words, and nearly half (49 percent) can often combine words (Andreassen and Fletcher 2007). When examining the percentages by language, 73 percent of Spanish-speaking children have begun to combine words, while 78 percent English-speaking children have begun to do so. The percentages of children who can combine words sometimes or often are similar across the two groups.

[95] We converted the Spanish vocabulary production raw scores into standard scores using the mean and standard deviation from the normative sample. The mean standard score in the normative sample is 100 (SD = 15). The published CDI Short Form for toddlers does not assess vocabulary comprehension. We included comprehension in the SCR in consideration of examining children's growth from the prior year, when the infant CDI—Short Form includes both comprehension and production. The mean and standard deviation information for English vocabulary production is not available from the CDI developer.

[96] Parents did not report on vocabulary comprehension.

[97] We did not ask Early Head Start staff to report on combining words.

Table VII.5. Children's Language Development at Age 2

Measures	Weighted Mean or Percentage (Standard Error)
Staff-Reported CDI	
English CDI raw score	
Overall	
Vocabulary comprehension	69.0 (1.49)
Vocabulary production	34.7 (1.51)
Children from English-only homes	
Vocabulary comprehension	76.8 (1.15)
Vocabulary production	40.5 (1.55)
Dual language learners (DLLs)	
Vocabulary comprehension	54.7 (2.29)
Vocabulary production	24.1 (2.10)
Spanish CDI raw score	
Vocabulary comprehension	72.6 (2.34)
Vocabulary production	30.9 (2.96)
Spanish vocabulary production standard score	91.5 (1.51)
Parent-Reported CDI Raw Score	
English vocabulary production	47.9 (1.43)
Spanish vocabulary production	48.7 (2.81)
Spanish vocabulary production standard score	102.3 (1.37)
Combining words	
Overall	
Not yet	22.0 (2.31)
Sometimes	39.4 (2.77)
Often	38.6 (2.46)
English	
Not yet	21.3 (2.54)
Sometimes	39.8 (3.10)
Often	38.9 (2.64)
Spanish	
Not yet	26.6 (4.73)
Sometimes	36.8 (4.56)
Often	36.6 (5.09)
Child's Ability to Speak Language Used Most Often[a]	
Speaks only a few words or phrases	23.7 (2.37)
Speaks it but has limited vocabulary	34.0 (3.09)
Speaks it and has good vocabulary	42.3 (3.33)
Child's Ability to Understand Language Used Most Often[b]	
Understands only a few words	4.4 (0.95)
Understands general idea of what was said	17.8 (2.23)
Understands most or all of what was said	77.8 (2.38)
Child's Ability to Understand Language Used Most Often	
Better than ability to speak language	45.8 (3.21)
About same as ability to speak language	49.0 (3.14)
Worse than ability to speak language	5.3 (0.99)
PLS-4 Standard Score	
English	91.0 (1.12)
Spanish	90.2 (1.93)
Bilingual	93.8 (1.85)
ECI	
Standard score	90.4 (1.03)
ECI language delay (percentage 1.5 SDs below the mean or lower)	31.3 (2.38)
ECI at-risk for language delay (percentage 1 to 1.5 SDs below the mean)	12.0 (1.56)
Sample Size	
Parent SAQ English CDI	408
Parent SAQ Spanish CDI	103
SCR CDI	522
SCR CDI Spanish	98–99
Assessor rating	364
Parent-Child Play Interaction	478
Parent interview	472–475

Sources: Spring 2010 Staff Child Report, Parent SAQ, Direct Child Assessment, Parent-Child Play Interaction (Two-Bag Task), and Parent Interview.

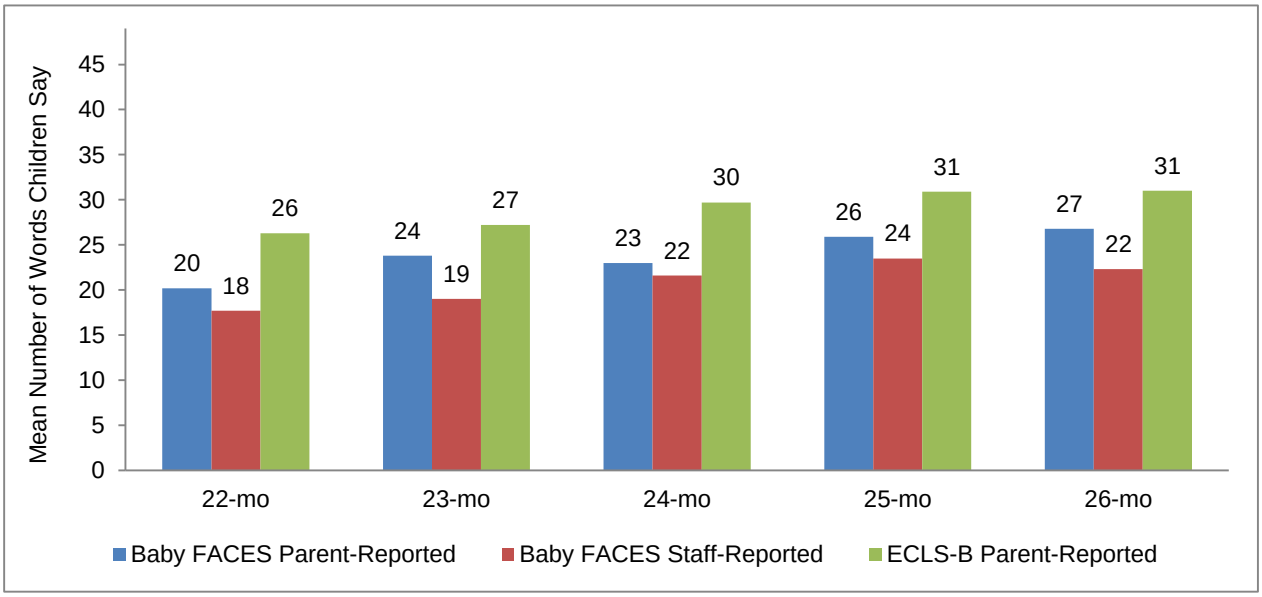
Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010 when the children were 2.

[a] If the parent reported the child spoke more than one language equally as often, the child's highest reported speaking ability of all languages was used.
[b] If the parent reported the child spoke more than one language equally as often, the child's highest reported comprehension ability of all languages was used.

CDI = MacArthur-Bates Communicative Development Inventories; PLS-4 = Preschool Language Scale (Fourth Edition); ECI = Early Communication Indicator.

In the age 2 data collection wave, the ECLS-B study used an abbreviated version of the English CDI checklist, which contains 50 words. Forty-nine of the 50 words overlap with the words in the official toddler English CDI Short Form. We generated the total CDI scores based on the 49 overlapping words for both Baby FACES and the ECLS-B and examined how Early Head Start children develop compared with their peers in this nationally representative sample[98] (Figure VII.2). Despite discrepancies between staff and parent reports, both parent- and staff-reported scores are lower than the ECLS-B sample.

Figure VII.2. Number of Words Children Say Compared with ECLS-B Sample, 1-Year-Old Cohort



Sources: Baby FACES Spring 2010 Parent SAQ and Staff-Child Report (SCR) and ECLS-B 24-Month Parent Interview.

Note: Sample restricted to the 1-year-old Cohort.

Sample sizes by age group:
Parent-Reported: 22 months: N=65; 23 months: N=83; 24 months: N=69; 25 months: N=71; 26 months: N=102.
Staff-Reported: 22 months: N=46; 23 months: N=57; 24 months: N=65; 25 months: N=60; 26 months: N=78.

[98] In the ECLS-B, parents were asked whether children can say the words on the checklist in their family's language, while in Baby FACES, parents whose primary language is English reported English CDI. To ensure comparability, we present the scores for children whose primary household language is English for both the Baby FACES sample and the ECLS-B sample.

Parents Rate Children's Speaking Ability Highly

Most 2-year-olds have a moderate to strong speaking ability in the language they speak most often, although a substantial minority has weak verbal skills, according to parents.[99] Slightly more than two-fifths (42 percent) of parents reported that their child has a good vocabulary (Table VII.5). One-third said their child has a limited vocabulary, and one-quarter of parents report that their child can speak only a few words or phrases in the language they speak most often.

Few children, however, have difficulty understanding the language they speak most often. Only 6 percent of parents reported that their child can understand only a few words. The majority of parents (78 percent) said their child can understand most or all of what is being said to them, and 18 percent reported their child can understand the general idea of what is being said.

In addition, most parents reported that their child understands the language at a level similar to, or better than, his or her ability to speak. About half of parents rated their child's speaking and comprehension abilities at the same level. An additional 46 percent rated their child's comprehension better than his or her speaking ability. About 5 percent of parents said, however, that their child speaks his or her first language at a level better than he or she understands it (which may indicate that parents did not understand the question).

Children Are Below Norms in Direct Assessments of Language Ability

As noted earlier, we used a combination of parent and staff reports and direct child assessments to measure language ability. The direct assessments used are the PLS-4 and the ECI, a six-minute play-based assessment completed with the assessor. This play task was video-recorded and the recordings coded by trained coders.

Direct Child Assessment Suggests That Children's Auditory Comprehension and Expressive Language Lag Their Peers' in the National Norms

Two-year-old Early Head Start children score more than half a standard deviation below the national norms[100] on English PLS-4 Auditory Comprehension (mean = 91) and on Spanish PLS-4 Auditory Comprehension (mean = 90). Spanish-speaking children's conceptual scores on the PLS-4 are less than a half a standard deviation below the national norms (mean = 94).

Likewise, the expressive communication skill of 2-year-old children on the ECI (90) is more than one-half of a standard deviation below the standardized mean. When examined by child age in months at the time of the assessment (23 to 27 months), standardized mean scores range from 89 to 95. Overall, the total weighted rate per minute communication score averaged 9.4 (SD = 6.17). Although there is considerable variability in children's scores (ranging from 0 to 33 communicative bids per minute), mean scores are considerably lower than those reported in normative samples of children at this same age (Greenwood et al. 2006, 2010). According to established benchmarks for children at this age (Carta et al. 2010; Greenwood et al. 2006), nearly one half of 2-year-olds in the Baby FACES sample demonstrate or are at risk for delays in expressive language. Specifically, 31 percent of children

[99] The distribution of speaking ability and comprehension is similar when using a child's first language compared with the language a child speaks most often, as all but 4 percent of children most often speak their first language.

[100] The standard scores for the national normative sample have a mean of 100 and a standard deviation of 15.

score at or below the threshold for delays in expressive language (1.5 SDs below the mean or lower); an additional 12 percent of children are within the at-risk range (between 1.0 and 1.5 SDs below the mean).[101]

Multiple Data Sources Provide a Mixed Picture of Children's Social-Emotional Development

Similar to the assessment of children's language development, we also gathered data from multiple sources to assess children's social-emotional development in different contexts. Measures included the Brief Infant Toddler Social Emotional Assessment (BITSEA; Briggs-Gowan and Carter 2006), the Parent-Child Interaction Rating Scales for the Two-Bag Assessment (Mathematica Policy Research 2010), and the Bayley Behavioral Rating Scale (BRS; Bayley 1993).

Parents Reported More Problem Behaviors for Children Than Did Early Head Start Staff

Early Head Start staff and parents of 2-year-olds completed the BITSEA, as they did with the 1-year-olds in the baseline data collection. The BITSEA measures children's emerging social-emotional competence as well as social-emotional and behavior problems (see Box VII.1 for a description of the BITSEA scores and scoring procedures). In addition to raw scores, cutoff scores on the two subscales were created to indicate problems for both forms. For the BITSEA Problem subscale, the cutoff point indicates scores at the 75th percentile or higher in the national norms. For the Competence scale, the cutoff point indicates a score at the 15th percentile or lower in the national norms, and may suggest a delay in social-emotional competence. Combining the cutoffs in both domains (that is, high levels of problems or low competence) yields a positive screening indicator for the BITSEA.

Parents rated their 2-year-old children as having more problems than did Early Head Start staff ($p < 0.001$). However, staff and parents offered similar reports on children's social-emotional competence. According to parent reports, on average, children's mean Problem subscale raw score is 12, and approximately one-third (34 percent) of children score above the risk cutoff on this subscale. In contrast, staff-reported Problem subscale raw scores average 8, and fewer than one-quarter (23 percent) of children score above the cutoff. Staff reports are comparable to the national norms (25 percent), while parent reports are higher than the national norms. Differences between reporters may reflect the contexts in which children are observed as well as differences in a parent's versus a staff member's sense of normative child behavior. Children's mean Competence subscale raw score is 17 and 16 for parent reports and staff reports, respectively. The proportion of children scoring below the risk cutoff on the Competence subscale is 21 percent and 19 percent for parent reports and staff reports, respectively. Both of these proportions are higher than the national norms of 15 percent. Based on parent reports, 44 percent of children were identified as screening positive for social-emotional issues, while the identification rate is 36 percent based on Early Head Start staff reports. Early Head Start staff reports yield a lower identification rate (44 versus 36 percent).[102] In summary, parents reported more 2-year-old Early Head Start children scoring in the at-risk range on the Problem

[101] During the ECI assessment, a play partner (in Baby FACES, a certified assessor) interacts with the child as he or she engages in play with a toy barn set. The play partner's role throughout the duration of the six-minute task is to facilitate the child's play in a manner that elicits the child's communication (while being nondirective and following the child's lead). Given the play partner was the assessor and not a more familiar adult (such as the child's parent), scores may underestimate children's expressive language skill. We asked parents and assessors to rate the shyness of the child as a means of better understanding performance on the ECI. The social-emotional section further details this process.

[102] Our research indicates no relationship between Early Head Start staff's reports of children's language and social-emotional outcomes and their perceptions of morale and self-reported depressive symptoms.

subscale than the national norms, while Early Head Start staff reported children scoring at the national norms on the Problem subscale. Both parent and staff reports identified more children at risk on the Competence subscale than the national norms. Similar to the findings at baseline when children were 1, parents reported more problems and higher rates of screening positive than staff. However, parents and staff reported similar perceptions of children's competence by age 2. We examined the match between staff and parent perceptions and found that of all children who screen positive by either staff or parent report, 34 percent screen positive according to both.

Children Display Positive Behaviors in Play Interactions With Their Parents

As part of the assessment activities conducted with 2-year-olds, we also administered a parent-child play-based assessment in which we evaluated a number of child behaviors. Interactions were video-recorded for later coding by a trained team of Mathematica coders using the Parent-Child Interaction Rating Scales for the Two-Bag Assessment (Mathematica Policy Research 2010).[103] Specifically, children's social-emotional competence was assessed along four dimensions:

(1) the extent to which the child engaged the parent in the play activities

(2) the degree of sustained attention with the provided play materials

(3) expressions of enthusiasm

(4) displays of negativity toward the parent

Box VII.1 provides additional information on each of the observed child behaviors.

As observed during the parent-child play interaction, children displayed behaviors of 4 or higher (out of 7) on engagement (4), sustained attention (5), and enthusiasm (4). Overall, expressions of negativity were in the lower range (3). More than three-quarters of children received scores greater than or equal to 4 on engagement of parent (77 percent), sustained attention with objects during play (87 percent), and expressions of enthusiasm (80 percent). In contrast, only 24 percent of children displayed indicators of negativity at a similarly high level. Scores are similar to those reported in other large-scale studies with children at this same age, including EHSREP and ECLS-B (ACF 2002; Andreassen and Fletcher 2007; Frosch et al. 2001).

More 2-Year-Old Children are Rated by the Assessors as Scoring Below the Cutoffs on the BRS Compared With the National Norms.

At the end of the one-on-one direct child assessments in spring 2010, the assessor completed the Bayley Behavioral Rating Scale (BRS; Bayley 1993) to evaluate the child's test-taking behaviors in the one-on-one assessment situation, including Orientation/Engagement and Emotional Regulation. In addition to raw scores on these two subscales, the BRS "nonoptimal" cutoff scores on the subscales indicate a raw score at or below the 10th percentile; "questionable" cutoff scores indicate a raw score between the 11th and 25th percentiles in the national norms (see Box VII.1 for a description of the BRS scores and scoring procedures). Table VII.6 shows the weighted statistics for measures of social-emotional development.

[103] Chapter VI discusses ratings of parent behaviors derived from the Parent-Child Interaction Rating Scales for the Two-Bag Assessment.

Table VII.6. Children's Social-Emotional Development at Age 2

Measures	Weighted Means or Percentages (Standard Error)
Parent-Reported BITSEA Raw Score	
Problem domain	12.0 (0.35)
Competence domain	17.0 (0.16)
Staff-Reported BITSEA Raw Score	
Problem domain	7.5 (0.31)
Competence domain	15.8 (0.21)
Parent-Reported BITSEA Cutoff Score	
Problem domain	34.0 (2.29)
Competence domain	21.1 (1.87)
Staff-Reported BITSEA Cutoff Score	
Problem domain	23.4 (1.75)
Competence domain	18.6 (2.10)
Parent-Reported BITSEA Screening Positive (percentage)	44.0 (2.72)
Staff-Reported BITSEA Screening Positive (percentage)	35.8 (2.28)
Assessor-Reported BRS Total Scale Score	
Orientation/engagement	32.6 (0.37)
Emotional regulation	36.5 (0.46)
Assessor-Reported BRS in Nonoptimal Range	
Orientation/engagement	26.5 (2.23)
Emotional regulation	43.0 (2.55)
Assessor-Reported BRS in Questionable Range	
Orientation/engagement	20.5 (2.04)
Emotional regulation	23.6 (2.57)
Shyness	
Parent report	
Very shy	3.8 (1.08)
Somewhat shy	28.4 (2.26)
Neither shy nor outgoing	12.8 (1.75)
Somewhat outgoing	22.2 (2.23)
Very outgoing	32.8 (2.96)
Assessor report	
Very shy	6.0 (1.05)
Somewhat shy	26.2 (2.33)
Neither shy nor outgoing	21.7 (1.98)
Somewhat outgoing	27.0 (2.14)
Very outgoing	19.0 (2.02)
Parent-Child Interaction Rating Scales	
Engagement of parent	4.4 (0.06)
Sustained attention	4.9 (0.06)
Negativity toward parent	2.9 (0.07)
Enthusiasm	4.4 (0.05)
Sample Size	
Parent interview	**490–495**
SCR	**511–529**
Assessor rating	**412–522**
Parent-Child Play Interaction	**491**

Sources: Spring 2010 Parent Interview, Staff-Child Report (SCR), Direct Child Assessment, and Parent-Child Play Interaction (Two-Bag Task).

Note: Sample restricted to the 1-year-old Cohort. The 1-year-old Cohort includes families of children between 10 and 15 months of age who were enrolled in Early Head Start in spring 2009 and continued to be enrolled in spring 2010 when the children were 2.

BITSEA = Brief Infant Toddler Social Emotional Assessment; BRS = Bayley II Behavior Rating Scale.

As reported by assessors at the end of direct child assessment, on average, 2-year-old Early Head Start children score 33 out of 45 on Orientation/Engagement and 37 out of 50 on Emotional Regulation. Approximately one-quarter (26 percent) of children score in the nonoptimal range (10th percentile or lower for the national norms) on Orientation/Engagement; 43 percent score in the nonoptimal range on Emotional Regulation. About 21 percent of children score in the questionable range (11th to 25th percentile for the national norms) on Orientation/Engagement; 24 percent score in the questionable range on Emotional Regulation. Compared with the national norms, there are more Early Head Start children scoring in the nonoptimal or questionable range.

More Parents Rated Children as Outgoing Than Did Assessors.

At the end of direct child assessment, assessors rated children's shyness during the visit and asked parents to rate their child's shyness. This rating was a means to help interpret the ECI, in which children who were interacting with the assessor might be inhibited. Parents and assessors reported a similar proportion of children as somewhat shy or very shy; however, more parents rated children as somewhat or very outgoing than did assessors ($p < 0.01$). Parents reported about one-third (32 percent) of children somewhat shy or very shy and 55 percent as somewhat outgoing or very outgoing. Assessors rated about 32 percent of children as being somewhat shy or very shy and 46 percent as somewhat or very outgoing.

Summary of Key Findings

- Most 2-year-old children in Early Head Start maintain physical well-being and have access to health care.
- Two-year-old Early Head Start children are near their same-age peers in general development, according to parents' reports.
- Report of children's language development from both parents and staff are lower than national norms.
  - Parents reported better expressive language development in children than did Early Head Start staff.
  - Parents rate their children's general speaking ability highly.
  - Direct child assessment suggests that children's auditory comprehension and expressive skills fall behind their peers' in national norms.
- Multiple data sources provide a mixed picture of children's social-emotional development.
  - Parents reported children have more problem behaviors than did Early Head Start staff; although ratings of competence were similar.
  - Children display positive behaviors in play interactions with their parents.
  - Assessors rate more 2-year-old children as scoring below the cutoffs on a behavior rating scale, compared with the national norms.
  - More parents rated children as outgoing than did assessors.

VIII. CHARACTERISTICS OF EARLY EXITERS

As we have seen, Early Head Start programs attempt to positively influence child development through many avenues. However, they are limited by families' willingness and ability to engage in the services and remain in the program. In Chapter II, we reported on the higher than anticipated attrition from the program. In Chapter III, we described the definitions and rules programs use to determine whether a family has exited the program and the strategies they use to re-engage families. There are many reasons why a family might leave the program—from relocating outside the catchment area to personal choice. Because a program cannot help a family it is not serving, it is important to understand who leaves Early Head Start and why.

This chapter focuses on children and families from the 1-year-old Cohort who left their Early Head Start programs since the first wave of data collection (or before the child reached age 2).[104] We discuss (1) the frequency and timing of leaving; (2) the relationship between leaving and program, staff, and child and family characteristics; and (3) family-reported reasons for leaving. We use data sources including the 2009 baseline interviews with parents and staff, staff-child reports, FST data, and the 2009 program director interview. For families who completed an exit interview, we report on their reasons for leaving and satisfaction with Early Head Start. For analytic purposes, we define an "early exiter" as a child who left his or her Early Head Start program before spring 2010, by the time of his or her second birthday.

A Substantial Number of Children Exit, and Most Leave in Summer and Fall

Approximately 21 percent of Early Head Start participants in the 1-year-old Cohort left their programs sooner than expected. Exit rates by family service option do not differ significantly (Table VIII.1). Nineteen percent of children in the center-based option and 22 percent of children in the

Table VIII.1. Exit Rates by Family Service Option

	Weighted Proportion (Standard Error)
Center-based service option	0.2 (0.03)
Home-based service option	0.2 (0.02)
Combination service option	0.4 (0.07)
Sample Size[a]	**244**

Source: Sample Management System.

Note: Exit rates in center- and home-based options are not significantly different ($F[1,80] = 0.47$, $p = 0.50$).

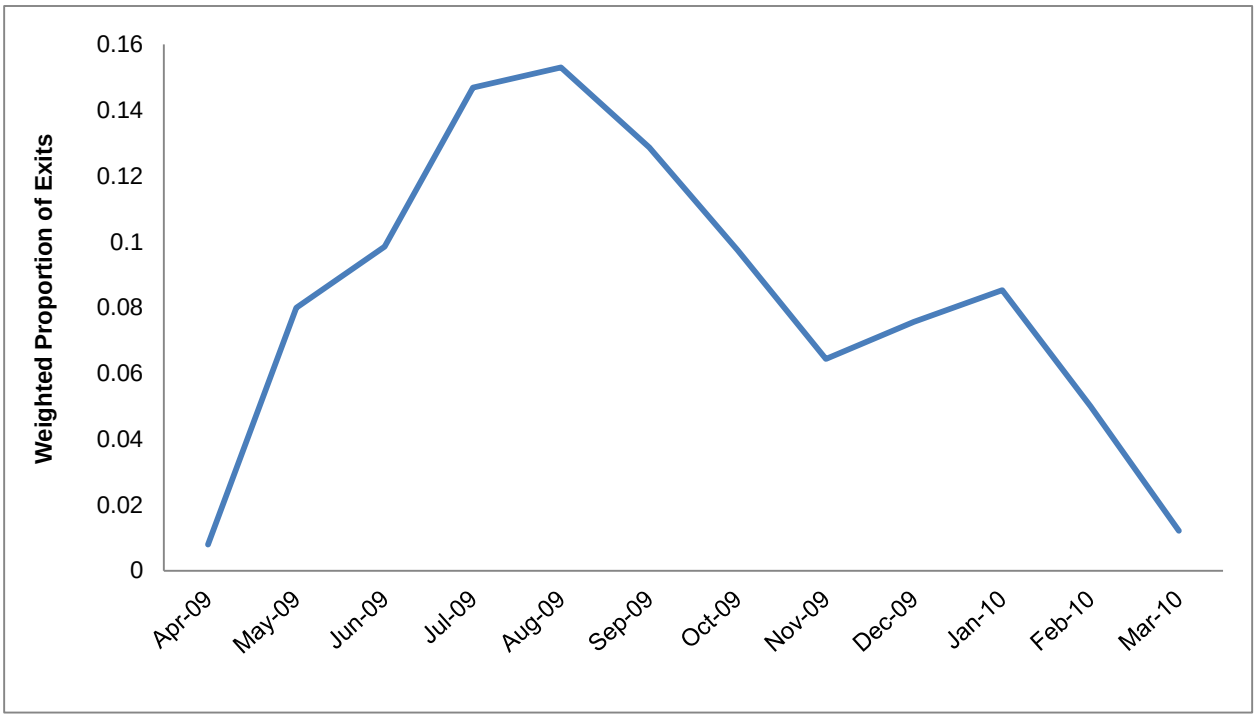
[a]Total number of exiters (unweighted).

[104] Although we have exit date information for children in the Newborn Cohort, there were very few significant differences in the characteristics of the programs or families of those children at exit compared with exiters from the 1-year-old Cohort. Exiters from the Newborn Cohort were about a year younger than 1-year-old Cohort exiters, and their program morale was slightly, though significantly, higher. Thus we omit discussion of the Newborn Cohort to maintain consistency with the rest of the report.

home-based option left their Early Head Start programs before spring 2010. These exit rates are not significantly different from one another.[105]

Figure VIII.1 shows the percentage of exits by month. Of the children who left, 40 percent did so during the summer of 2009 (June through August), shortly after enrolling in the study, and another 29 percent left during the fall of that year (September through November). The average age at exit is 17.6 months. The subsequent age 3 report will discuss length of enrollment.

Figure VIII.1. Weighted Proportion of Exits



Source: Sample Management System.

Early Exiters and Continuing Participants Experience Similar Program and Staff Characteristics and Levels of Quality

Both participants who leave early and those who stay attend programs with similar characteristics (Table VIII.2). We found no significant differences between the two groups in total enrollment, part-time staff per child, staff turnover, or program morale. Those who leave early, however, attend programs with significantly fewer full-time staff members per child. Though statistically significant, this difference is small in magnitude: continuing participants' programs have approximately eight full-time staff members for 32 children; exiters' programs have about seven.

[105] Forty-four percent of children in the combination service option left their Early Head Start programs before spring 2010. Because the number of study children in this option is so small, we do not perform statistical tests comparing combination exit rates with those of other service options.

Table VIII.2. Comparing Continuing Participants to Early Exiters: Program Characteristics

	Continuing Participants Weighted Mean (Standard Error)	Early Exiters Weighted Mean (Standard Error)
Total enrollment	141.2 (16.37)	139.3 (12.87)
Full-time staff per child	0.3* (0.02)	0.2* (0.01)
Part-time staff per child	0.1 (0.01)	0.1 (0.02)
Staff turnover	0.2 (0.02)	0.1 (0.02)
Program morale	3.5 (0.07)	3.4 (0.08)
Sample size[a]	**729**	**244**

Source: Spring 2009 Program Director Interview, Spring 2009 Program Director Self-Administered Questionnaire (SAQ), Sample Management System.

Note: Estimates calculated using multiply imputed data.

[a] Total number of continuing participants or exiters (unweighted).

* $p < 0.05$; ** $p < 0.01$

Staff characteristics and classroom and home visit quality are also similar for the two groups (Table VIII.3). Forty-one percent of the teachers serving continuing participants and approximately 45 percent of teachers serving early exiters have a bachelor's degree or more education. This difference is not significantly different from zero. The groups do not differ in terms of teacher experience—in either the total number of years teaching infants and toddlers or the total number of years working in Early Head Start. Providers' depressive symptoms are low and stable across both groups (3.2 for continuing participants versus 3.6 for early exiters). Finally, there are no significant differences in home visit or classroom quality between early exiters and continuing participants.

Groups Are Similar in Terms of Child Outcomes and Attendance

Children who leave early are similar to continuing participants in terms of overall development, language, and social-emotional competence at age 1. We did not find statistically significant differences between the two groups in average ASQ-3 total scores, English CDI raw scores, or parent- or staff-reported BITSEA raw scores (Table VIII.4).

Parents of children who leave early and of continuing participants reported similar patterns of service take-up in spring 2009. Table VIII.4 shows that, regardless of program exit status, parents in the home-based service option report similar home visit frequencies, and parents of center-based children report similar statistics for number of center days attended per week.

Table VIII.3. Comparing Continuing Participants to Early Exiters: Staff Characteristics and Home Visit or Classroom Quality

	Continuing Participants Weighted Mean (Standard Error)	Early Exiters Weighted Mean (Standard Error)
Percent with teacher/home visitor having bachelor's degree or more	0.4 (0.04)	0.5 (0.04)
Number of years teacher/home visitor has taught infants/toddlers	8.1 (0.54)	7.8 (0.58)
Number of years teacher/home visitor has taught in EHS	4.9 (0.26)	4.9 (0.40)
Teacher/home visitor CESD short form total score	3.2 (0.26)	3.6 (0.37)
Home visit quality (HOVRS-A)[a]	3.4 (0.11)	3.4 (0.10)
Classroom quality (ITERS-R)[b]	3.8 (0.11)	3.8 (0.09)
Sample size[c]	**729**	**244**

Source: Spring 2009 Teacher Interview, Spring 2009 Home Visitor Interview, Spring 2010 Classroom Observations, Spring 2009 Parent Interview, Sample Management System.

Notes: Estimates calculated using multiply imputed data. Children may have experienced teacher or home visitor changes. The teacher or home visitor characteristics listed are those of the child's teacher or home visitor as of the spring 2009 data collection.

[a] Sample restricted to children in the home-based service option.
[b] Sample restricted to children in the center-based service option.
[c] Total number of continuing participants or exiters (unweighted).

There were no statistically significant differences.

Table VIII.4. Comparing Continuing Participants to Early Exiters: Child Outcomes and Attendance

	Continuing Participants Weighted Mean (Standard Error)	Early Exiters Weighted Mean (Standard Error)
ASQ-3 Total Score	214.2 (3.65)	217.5 (5.14)
CDI (English) Raw Score		
Vocabulary Comprehension	30.0 (1.31)	30.1 (2.00)
Vocabulary Production	2.8 (0.28)	2.4 (0.48)
Parent-Reported BITSEA Raw Score		
Problem domain	10.3 (0.33)	11.2 (0.68)
Competence domain	16.2 (0.19)	16.0 (0.35)
Staff-Reported BITSEA Raw Score		
Problem domain	6.3 (0.28)	6.2 (0.42)
Competence domain	12.9 (0.17)	12.6 (0.34)
Home visit frequency[a]	4.4 (0.13)	4.4 (0.13)
Center days attended per week[b]	4.7 (0.08)	4.7 (0.16)
Sample Size[c]	**729**	**244**

Source: Spring 2009 Parent Interview, Spring 2009 Staff-Child Report.

Note: Estimates calculated using multiply imputed data.

[a] Sample restricted to children in the home-based service option. Parents were asked how often someone visited the family since the study child began receiving services from his or her Early Head Start program. Answers range from 1, once or twice a year, to 6, two or more times a week.
[b] Sample restricted to children in the center-based service option.
[c] Total number of continuing participants or exiters (unweighted)

There were no statistically significant differences.

Continuing Participants Experience Better Staff-Parent Relationships and Fewer Maternal Risks

Staff members serving continuing participants report significantly better staff-parent relationships than do those serving early exiters, but the magnitude of the difference is small (Table VIII.5). Otherwise, we find notable similarities in the family characteristics of exiters and continuing participants (Table VIII.5). The two groups do not differ in terms of gender, race/ethnicity, or dual language learner status. Early exiters are also as likely to have moved in the past year as continuing families: 37 percent of exiting families and 32 percent of continuing families report moving (difference is not statistically significant).

However, early exiters come from families facing a higher number of maternal risks, with an average of 2.3 compared with 2.1 for continuing families (Table VIII.5). This proportion is driven by differences in receipt of public assistance and in the percentage of mothers who were in their teens when they first gave birth. Seventy-five percent of exiting families are receiving public assistance, compared with 68 percent of continuing families, and 31 percent of exiting mothers were teenage mothers, versus 21 percent of continuing mothers. Though early exiters are more likely to receive public assistance than continuing participants, the two groups do not differ in income-to-needs ratio.

Table VIII.5. Comparing Continuing Participants to Early Exiters: Child and Family Characteristics and Staff-Parent Relationships

	Continuing Participants Weighted Mean (Standard Error)	Early Exiters Weighted Mean (Standard Error)
Male	0.5 (0.02)	0.5 (0.04)
Race[a]		
White	0.4 (0.04)	0.4 (0.05)
African American	0.2 (0.03)	0.1 (0.03)
Hispanic	0.4 (0.04)	0.4 (0.04)
Other	0.1 (0.02)	0.1 (0.03)
Dual language learner status	0.4 (0.04)	0.4 (0.04)
Moved in past year	0.3 (0.02)	0.4 (0.05)
Maternal risk factors (total number)	2.1** (0.05)	2.3** (0.10)
Receiving public assistance	0.7** (0.03)	0.8** (0.03)
Not currently employed, in classes, or training	0.4 (0.03)	0.4 (0.05)
Less than high school education	0.4 (0.03)	0.4 (0.04)
Teenage mother at first birth	0.2** (0.03)	0.3** (0.04)
Single mother	0.5 (0.03)	0.5 (0.04)
Income-to-needs ratio	1.2 (0.15)	1.1 (0.29)
Staff-parent relationship (parent-reported)	4.5 (0.03)	4.5 (0.05)
Staff-parent relationship (staff-reported)	4.2** (0.04)	4.1** (0.05)
Sample Size[b]	**729**	**244**

Source: Spring 2009 Parent Interview, Sample Management System.

Notes: Estimates calculated using multiply imputed data. Children may have experienced teacher or home visitor changes. The staff-parent relationship scores are given with respect to the child's teacher or home visitor as of the spring 2009 data collection.

[a] Wald tests (F[1, 534.7] = 0.46, p = 0.50) indicate no group differences in the race/ethnicity distribution.
[b] Total number of continuing participants or exiters (unweighted).

* $p < 0.05$, ** $p < 0.01$

Exiting Families Express High Levels of Satisfaction with Early Head Start and Cite Moving as Their Primary Reason for Leaving

Exit interviews conducted with families who left their Early Head Start programs provide valuable information on their satisfaction with the program, reasons for leaving, and where they go next. Response rates, however, were fairly low, in part due to the fact that many exiting families moved, and programs lacked up-to-date contact information for them. Fifty-one percent of exiting families in the 1-year-old Cohort completed an exit interview.[106]

In general, exiting families expressed high satisfaction with their Early Head Start programs. Seventy-four percent said they were "very satisfied" with their programs overall, and 97 percent reported that they were either "very" or "somewhat satisfied" (Table VIII.6).

Table VIII.6. Satisfaction with Program Overall

	Weighted Percentage (Standard Error)
Very satisfied	74.1 (0.05)
Somewhat satisfied	23.1 (0.05)
Somewhat dissatisfied	2.1 (0.01)
Very dissatisfied	0.7 (0.01)
Sample Size[a]	**126**

Source: 2009-2010 Exit Interview.

Note: Means weighted to represent all 1-year-old Cohort exiters.

[a]Total number of exit interview respondents (unweighted).

Families most commonly cited moving away from the program area as their reason for leaving the program (31 percent; Table VIII.7). The second most common reason, given by 12 percent of families, was being too busy to participate. Despite the high levels of satisfaction reported, 8 percent of families cited inconvenient center hours or home visit times as their main reasons for leaving, and 7 percent desired a service option that was not available.

Table VIII.7. Main Reason for Leaving

	Weighted Percentage (Standard Error)
Moved away from program area	31.2 (0.05)
Too busy to participate	12.3 (0.03)
Center hours/time for home visits inconvenient	7.5 (0.03)
Wanted center-/home-based care and option not available	7.2 (0.03)
Family crisis	3.7 (0.03)
Other reason (listed)	19.1 (0.04)
Other reason (not listed)	19.0 (0.04)
Sample Size[a]	**126**

Source: 2009-2010 Exit Interview.

Notes: Means weighted to represent all exiters from the 1-year-old Cohort. Other reasons listed on the exit interview form included, for example, being asked to leave by the program for a reason other than attendance and not needing the services anymore. Family-supplied reasons for leaving not listed on the form included, for example, employment and income issues, such as not working or no longer attending school, or having an income that exceeded program eligibility limits.

[a]Total number of exit interview respondents (unweighted).

[106] Respondents and nonrespondents were similar on baseline characteristics. We use weights to correct for any observed differences at baseline and to make our sample representative of early exiters who were enrolled at age 1.

A small number of families identified a variety of other reasons, including being asked to leave the program for a reason other than attendance (3 percent) and no longer needing the services (3 percent). A few families provided additional reasons involving employment (such as not working) or not attending school.

Programs Help Exiters Find Other Arrangements

The exit interview also solicited information on where families go after leaving Early Head Start. Twenty-three percent of exiting families moved on to another early childhood program: 6 percent (standard error = 0.03) enrolled in another Early Head Start program, and 17 percent (standard error = 0.04) obtained services from a different early childhood program.

Many families report that Early Head Start helped them to find other child-care arrangements. Seventeen percent (standard error = 0.04) of exiting families overall, and 33 percent (standard error = 0.10) of those reporting that their children are in another early childhood program, said that the Early Head Start program they left helped them find another program. Most of these families (88 percent, standard error = 0.09) indicated that the Early Head Start program they left helped by providing referrals for or identifying other child care arrangements.

Summary of Key Findings

- More than one-fifth of children leave Early Head Start before they become ineligible.
- Children in home- and center-based options exit at similar rates.
- Most children leave programs in the summer and fall.
- Early exiters had attended programs with characteristics similar to those continuing participants attend; exiters' programs, however, have smaller staff-to-child ratios.
- Early exiters and continuing participants experience similar levels of classroom and home visit quality.
- Staff members serving early exiters have similar levels of education, experience, and depressive symptoms as those serving continuing participants.
- Early exiters and continuing participants share similar program attendance rates and child outcomes at age 1.
- Continuing participants' staff members rate staff-parent relationships slightly but significantly better than exiters' providers.
- Early exiters come from families facing more maternal risks, driven by differences in receipt of public assistance and teen motherhood rates.
- Most families say they are very satisfied with their Early Head Start programs.
- The most common reason cited for leaving Early Head Start is moving out of the program area.
- About one-quarter of early exiters move on to another Early Head Start or early childhood program.
- Early Head Start helped many early exiters find other child care arrangements.

IX. KEY FINDINGS AND NEXT STEPS

In this closing chapter, we summarize important findings and conclude with a look ahead to the areas we will explore in future reports.

Key Findings about Children and Families

Through interviews with parents, in-home direct child assessments and video-recorded interactions, and the family services tracking (FST) system, this study offers a rich set of data on enrolled families. We highlight here a few of the findings that have particular relevance for program planning.

- ***Many Early Head Start families leave by the time children are 2 years old.*** Weekly FST data provided a more complete picture of how families use the program and when they tend to leave. By age 2, one in five of the 1-year-old Cohort children had left the program. Moving away was the reason for leaving most commonly cited in the exit interview (31 percent), and others left for a variety of other reasons, (such as being too busy, or finding center hours or home visit times inconvenient). There were few differences between those who stay and those who leave in terms of program option, staff qualifications, quality of centers or home visits, amount of services received, or child development. We did, however, find that early exiters tended to be in programs with fewer staff per child (although the differences are small). Continuing participants reported more positive staff relationships and were less likely than early exiters to be or have been a teenage mother or to receive public assistance.

- ***Children and families receive relatively consistent levels of services.*** A child in the home-based service option received on average about three home visits per month, and a child in the center-based option attended on average a little more than three days per week (or about 88 percent of days they were expected to attend). Service receipt varied somewhat, in that families with mothers neither employed nor in school received more home visits than families with employed mothers, and dual language learners attended fewer center days than English-speaking children. Importantly, program directors reported an overall low level of attendance problems in centers, and two-thirds of program directors reported having in place policies and strategies to address attendance issues. When such strategies fail, program directors also reported thresholds at which families with attendance problems become disenrolled.

- ***By age 2, children are lagging their peers in language development.*** According to reports by parents and staff, and direct assessments, 2-year-olds in Early Head Start are scoring behind peers in expressive and receptive language skills. Both parent and staff reports on the Communicative Development Inventories (CDI) showed that children score below parent reports from the Early Childhood Longitudinal Study-Birth Cohort (ECLS-B). Similarly, direct assessments with the Preschool Language Scale–Fourth Edition (PLS-4) show that both English and Spanish speakers score more than one half of a standard deviation below norms (the bilingual conceptual scores were slightly higher but still below the Spanish norms). Scores on the Early Communication Indicator (ECI) were similarly about half of a standard deviation below norms. Nevertheless, more than half of parents reported having at least 25 children's books in their homes, and 90 percent reported reading to their child at least once a day. Sixty percent read more than once a day, although 8 percent neither read nor tell stories at least once a day.

- ***Parents provide supportive environments for their children.*** The home environments that parents report can be generally characterized as low in disorder and disorganization (chaos), and providing warmth and stimulation for children's development. This characterization is based on both parent reports and independent observations by the assessor during the in-home visit. Assessors rated the home interior as generally well organized and parents as displaying high levels of warmth and low levels of harshness in their interactions with their children. Coded parent-child interactions showed that parents displayed generally positive behaviors at a rate consistent with or slightly better than findings in other studies with similar populations. Negative behaviors were low, although slightly higher than observed in the Early Head Start Research and Evaluation Project (EHSREP).

Limitations

Baby FACES is a descriptive study, and as such, although findings may suggest relations and associations, we cannot draw causal conclusions. That is, we cannot say that A causes B. However, findings that are consistent with expectations and theory may provide programs and the Office of Head Start with information useful for planning and technical assistance.

Next Steps/Looking Ahead

This report sets the stage for a final report on 3-year-olds to follow. The next report will include information collected in spring 2011 and 2012, and will include all study children who remain in the program through age 3. The final report on 3-year-olds will focus on understanding and modeling the longitudinal aspects of the data to offer insight into relations among family/child and staff characteristics, service uptake, service quality, program characteristics, and outcomes. A series of short reports and program-friendly four-page briefs will address other topics of interest such as our efforts to measure program implementation.

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