Encouraging Positive Parenting in Early Childhood

LESSONS FROM A COMMUNITY CHANGE INITIATIVE

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Introduction and Summary of Findings

CHAPTER I

Our youngest children are the nation's most impressionable and vulnerable. What happens in these early years sets the stage for every other phase of life. Thus, establishing a firm foundation for healthy growth and development during this critical time, and ensuring that children have the opportunity to thrive is of interest to us all—parents, schools, community leaders and policy-makers.

Unfortunately, for a range of reasons, many young children do not receive the nurturing that will enable them to enter school healthy and ready to learn. Parents' interactions with their children are a primary driver of healthy development during these crucial early years. Yet research finds that parents who are financially or socially unstable often feel overwhelmed by the responsibilities of parenting and struggle to provide the engaging opportunities and interactions that will foster healthy social, emotional, cognitive and motor development. Individual programs that provide high-intensity education programming for parents,[1] nested in broader support for families, have shown evidence of successfully improving parenting practices.[2] Little is known, however, about whether such programs can be scaled up to serve entire communities and still maintain their effectiveness.

This report examines one initiative's attempt to improve parenting practices across a city, in the context of a larger effort to improve the health and well-being of its young children. Although the initiative has proven successful on a number of other fronts—such as improving the quality of center- and family-based child care, increasing rates of early lead screening among medical practices serving infants and toddlers, improving other preventive medical care practices and increasing home visiting programs in the city (as documented in earlier reports[3])—it was not able to produce measurable changes in parenting practices citywide. This report suggests potential reasons why and, as such, provides important lessons for those who are funding, implementing and evaluating future initiatives designed to serve parents of very young children—or indeed any initiative that aims to foster broad scale community change.

The Children's Futures Initiative

Children's Futures: Improving Health and Development Outcomes for Children in Trenton, N.J. (CF) was launched in 2002 in Trenton, N.J.—a city with high rates of poverty, unemployment and single-parent households.[4] Funded by the Robert Wood Johnson Foundation, the initiative focuses on young children and their families, with the goals of improving children's health and well-being and ensuring their readiness to enter school.

When CF began, its leaders set out to test whether a citywide effort to boost early childhood outcomes using evidence-based strategies could: 1) improve parenting practices; 2) improve the city's childhood development programs (including in-home and center-based child care); 3) strengthen preventive health care services for children, and 4) increase families' access to those services. The initiative adopted many strategies from programs with established track records of effectiveness, including the *Nurse-Family Partnership*, Healthy Families and Reading Is Fundamental, and used the well-regarded HighScope Curriculum to train child-care providers and others in early childhood development and care.

A nonprofit organization, Children's Futures, Inc. (CF, Inc.), was established in 2001, after several years of planning, to lead the multi-agency community effort. CF, Inc., is responsible for disbursing the foundation's funds, securing technical assistance and training, convening community meetings and facilitating communication among the many public and private agencies—more than 20—involved in the initiative. Between 2002 and 2010, local, regional and statewide nonprofit organizations received approximately $35 million in CF grants.[5]

These funds supported direct services for Trenton's families and technical assistance aimed at improving the quality of those services, as well as the operating expenses of CF, Inc.

The Evaluation

In 2002, the Foundation engaged Public/Private Ventures (P/PV) to conduct an evaluation of CF's implementation and outcomes. In the first five years, the evaluation focused on providing CF with information to help drive continuous program improvement; it also sought to illuminate broader lessons that might inform community change efforts taking place around the country.

A set of reports, disseminated at the end of the first five years, documented the initiative's accomplishments and challenges across the broad range of policy, program and parent and child outcomes it sought to affect.[6] Among CF's most successful efforts, to that time, were those to improve the quality of child-care provided in day-care centers and family child-care homes throughout the city; domestic violence education for agency and program staff; and efforts to improve preventive health services provided to young children (such as better asthma management, on-time immunizations and lead screening). We also observed state-level policy changes that were arguably influenced by CF over the years.

As the evaluation and initiative entered their second five-year phase, substantial changes were taking place: In early 2008, after a strategic planning process, the focus of CF's direct services shifted from home visiting to a mix of home visiting and center-based group programs. The evaluation design also changed accordingly. Instead of focusing on a broad range of outcomes, including birth, health, child development and parenting outcomes, the evaluation was both narrowed (to focus on a specific set of outcomes related to parenting behaviors) and widened (to examine the implementation of the new center-based activities and to provide guidance about several larger issues that emerged as important in CF's new direction).[7]

Finally, an initiative-wide database system was put in place in mid-2007, but it could not be fully implemented until after the shift to center-based activities occurred (in early 2008) and center-based outcomes were identified (in mid-2008).

CF's efforts to improve parenting practices at a city-wide level are the focus of this report. Specifically, it addresses the following questions:

1. Is there evidence to indicate that CF was able to change parenting practices at the community level?

2. What strategies did staff at the centers use to change parenting practices?

3. What successes and challenges did CF face in changing parenting practices at the community level?

The report's findings rely on four primary sources of data (described in more detail in Appendix A): the CF initiative database, where the many collaborating agencies regularly enter data on enrollment and participation; phone surveys of primary caregivers in the Trenton community, conducted at three points in time (2002, 2008 and 2010);[8] interviews with program staff; and observations of center-based programming.

Children's Futures Programming Aimed at Improving Parenting Practices

From the beginning, one of CF's major goals was to increase positive parenting practices and decrease negative ones among parents[9] of Trenton's youngest children. CF programming aimed at increasing positive parenting practices would be implemented through "neighborhood parent-child development centers," operated by local community-based organizations throughout Trenton's five wards (i.e., city divisions). (One organization later received state funding to implement a "Family Success Center," which had a slightly different focus than CF. That organization combined CF funding with its state funding to sustain two centers. We refer to both types of centers as "centers" in this report.)

Parent-Child Centers

Children's Futures' Parent-Child Centers were designed as places where parents could drop in during the day, even if structured parenting activities were not being offered. Staff at the centers placed a priority on creating spaces that were comfortable and attractive. As a result, most centers were furnished with cozy sofas and armchairs for group activities (which included activities for parents only and those that included parents and children). Centers developed child-friendly spaces with age-appropriate toys and books and offered child care for parents who were engaged in parents-only activities. Centers also included private spaces where parents could meet one-on-one with staff if desired.

The centers focused their programming on improving parenting, family safety, parent-child bonding, family literacy, access to health care, and more; they also provided links to a wide variety of community-based health and social services for children and parents.

The initiative's planners had originally envisioned a dual strategy to improve parenting outcomes, in which the centers would develop and provide programming via home visiting–a staff member going into the community and meeting with a parent in his or her home–as well as group-based parent education programs that would take place at the centers themselves. However, during the initiative's first five years, the partner agencies faced challenges in their attempts to provide group activities at the centers and focused primarily on serving families through home visiting programs.

There were several reasons for this: First, the staff members implementing the Healthy Families home visiting program were also responsible for implementing group-based parenting education. Although the initiative budgeted for an additional supervisor and a half-time site director to coordinate center-based activities, people in both roles placed a priority on home visiting. This may have been because, at the time (mid-2002 through 2007), the work at the centers was directed primarily by the Trenton Division of Health, which had combined CF funds with a federal Healthy Start grant that prioritized prenatal and birth outcomes. Home visiting was the strategy most likely to influence those outcomes, and the leadership at the Division of Health was arguably more knowledgeable about and interested in home visiting than in center-based activities. Also, the home visiting programs used by CF had clear benchmarks for the services that needed to be provided to clients, while such benchmarks had not been set for group programs in those early years.

As a result of these combined pressures, center staff tended to focus less on group programs than on home visiting. But it became apparent that the number of families who could be served by one-on-one home visiting was limited to about 350[10] at any given time–a tiny fraction of Trenton's estimated 5,000 families with children between birth and three years. Therefore, as CF prepared for its second round of funding, the Foundation directed its leadership to find ways to serve a larger proportion of Trenton's children.

In response, the initiative greatly expanded its group programming in 2008, introducing an additional center where programs would take place and adding more programs at each of the five existing centers. At the same time, CF, Inc., scaled back its home visiting efforts and localized them out of one center. This strategic change permitted CF, Inc., to reduce funding to the centers (in response to decreasing foundation funds and a major economic downturn in 2008, during which fundraising became increasingly challenging) while increasing the number of parents who could be served, including more parents who did not meet the eligibility requirements of the home visiting programs (such as parents who enrolled in services when their children were more than a few months old).

Thus, beginning in earnest in 2008, the centers implemented a variety of programs aimed at improving parenting outcomes, including:

- Music and emerging-literacy programs;
- Nutrition programs;
- Programs in early child development, guidance and discipline;
- Other activities designed to strengthen parenting skills and children's language development; and
- Behavioral health programs (e.g., support groups in both English and Spanish on depression, stress/anxiety, parenting, relationships, substance abuse and domestic violence, as well as individual counseling).

Group programs were designed not only to impart knowledge and skills, but also to foster relationships among parents—and, by extension, the kinds of social supports that research has found to ameliorate the negative effects of poverty.

Summary of Findings

Enrollment data analyzed from the CF database show that the initiative's shift to center-based programming indeed allowed it to reach more parents than it had in earlier years—some 2,000 parents with young children were served over a two-year period.[11] Nevertheless, analysis of the community survey data provide no evidence that CF's parenting interventions contributed directly to citywide changes in parenting practices. Additional analyses suggest that parents who reported higher levels of parenting distress (e.g., saying that "being a parent is not manageable") consistently reported using fewer positive parenting practices, across many of the outcomes measured.

Based on analyses of CF participation and implementation data, several implications for similar community-change initiatives emerged. In no particular order they are:

- **Good information—and strong capacity to work with data—is needed to monitor programs effectively.** Although the use of Web-based databases and a greater focus on accountability have resulted in better program monitoring in recent years, tapping real-time data for program improvement remains challenging. In collaborative efforts, information about participant services is complex—participants may be enrolled in multiple programs across multiple agencies. Strong data management and analysis skills, along with the skills to train staff to collect and use information are necessary.

- **Staff need intensive training and ongoing feedback as they work to implement evidence-based practices.** In fields where front-line staff have varying levels of education and experience, and where turnover is common, up front training is not enough. Instead, ongoing training and support are needed to help staff implement high-quality programs.

- **Programs must pay close, ongoing attention to both *program quality* and *participation*.** Parent education interventions—and indeed most social programs—are effective only when levels of participation over time are reasonably high.

- **Programs would benefit from additional support to translate evidence-based programs and practices into on-the- ground programming.** Policy-makers, intermediary staff, and others are increasingly confronting the challenge of adopting evidence-based programs and practices. Contextual issues, such as the culture of the local population, the mission and culture of implementing organizations, and the skills of the local workforce play key roles in determining how the process of adoption unfolds. Ongoing assessment of the process and addressing challenges as they occur may ease program adoption.

- **Targeting people who will benefit from the intervention, and ensuring alignment between the intervention and the needs of the population are crucial and ongoing challenges.** Programs and initiatives should regularly ask, "Are we serving the population we intended to serve, and if not, why not?" "Are new populations with specific needs growing in the community, and if so, does that indicate a need to re-assess local strategies?

Structure of the Report

Changing a behavior as fundamental as parenting, and doing so at the community level, is a tall order for an initiative, and effectively evaluating whether community change has indeed occurred and whether it can be attributed to an initiative's efforts is a perplexing challenge.[12] CF took on these challenges, and a number of lessons can be drawn from the experience–both about how to implement community-wide programming and how to measure its impact. This report examines the initiative's efforts to improve parenting practices, at a citywide level, and is organized as follows:

- Chapter II describes the population served, the CF programming and instructional strategies used, and participants' levels of engagement in programming.
- Chapter III describes the factors that were found to be related to positive parenting.
- Chapter IV discusses the results and potential reasons for them.
- Chapter V suggests several key implications that may be drawn from the study's findings.

Why Focus on Early Childhood?

Given the importance of the early childhood years in shaping healthy development, funders and policymakers invest a significant amount of both private and public resources in early childhood initiatives; these funding streams often support interventions that target parents or primary caregivers of very young children. The impetus for this rests on several key lines of research and reasoning, discussed below.

Positive parenting strategies are crucial for healthy early childhood development. Very early childhood is well recognized as a vital developmental stage.[13] Numerous studies have shown that positive parenting strategies during this time strongly influence healthy brain development,[14] cognitive/intellectual growth and social development in young children.[15] In particular, it is well documented that positive parenting practices—such as warm and engaging parent-child interactions (reading, playing games, etc.), positive discipline strategies and preventive health care—are associated with important outcomes for children, including kindergarten readiness, language development, health, and social skills.[16]

Living in poverty and other stressors challenge parents' capacity to engage in positive parenting strategies. Extensive research has also found that many factors—high among them poverty and job instability—can increase parents' stress[17] and negatively affect their ability to engage in the types of positive behaviors and interactions that are so beneficial to their children's healthy development.[18] These are, in fact, the very same positive parent-child interactions that might help children overcome other negative effects of poverty and instability. Indicators of parenting stress, [19] in particular, have been used by early childhood program staff to identify parents in need of intervention, because of its strong association with negative parenting practices [20] and its relationship to children's current and future behavioral and emotional adjustment.

Research has identified a number of factors that can affect parenting stress and thus positive parenting interactions. These include: parents' mental health,[21] the degree of social support a parent can rely on[22] and the extent to which a parent feels confident in his or her ability to parent a young child (i.e., parenting efficacy).

Children's Futures' Participants, Programming and Engagement

CHAPTER II

Over the course of this study, which focuses on the years following the shift to more center-based programming, *Children's Futures* provided services through five centers located across Trenton. In this chapter, we present detailed information drawn from the CF initiative database, as well as interviews with staff and observations of CF programs (conducted in 2009 and 2010), to describe the participants and how they were reached, the programming offered and its quality, and the level of engagement among participants.

As described in this chapter, the initiative was able to reach Trenton parents who appeared to be at risk for developing poor parenting practices, based on their demographic profile and their low ratings of confidence in their parenting. The shift in 2008 to more center-based programming greatly increased the number of parents enrolled in CF. But, while the initiative was successful at bringing parents to the centers, once there, it seems that most parents did not participate with sufficient intensity to derive the intended benefits, particularly when measured at the community level. In addition, variability in the implementation of the curriculum, along with uneven quality in the instructional strategies used by program staff, emerged as likely roadblocks to achieving CF's goals.

Participants

Data analyzed from the CF initiative database suggest that the initiative's shift to center-based programming indeed allowed it to reach more parents than it had in earlier years.

Approximately 2,000 parents[23] participated at least once in CF center-based programming over a two-year period (January 2009 to December 2010), most of whom were female, Latina and single. As Table 1 displays, the vast majority (92%) were female, more than half were Latino, and just over a quarter were African American. A major portion (53%) were single. They were a fairly young group, with nearly half between the ages of 21 and 30, and another 15 percent who were under 20. The total number of parents served represents a significant

Table 1

Participant Demographics

	n=2,051	Percentage
Gender		
Female	1,891	92.2%
Male	160	7.8%
Age		
16–20	317	15.5%
21–30	987	48.1%
31–40	335	24.2%
Older Than 41	118	5.8%
Missing Data	133	6.5%
Marital Status		
Married	406	19.8%
Domestic Partner	221	10.8%
Single	1,079	52.6%
Other	61	3.0%
Missing Data	284	13.9%
Race		
Latino	1,057	51.5%
African American	585	28.5%
White	179	8.7%
Other	104	5.1%
Missing Data	126	6.1%

Source: CF Initiative Database

increase over the early years of the initiative, when parents were reached primarily through home visiting, and only about 350 parents could be served at any given time.

A high proportion of participants reported low confidence in their parenting abilities and moderate levels of parental distress, indicating that CF is reaching parents who might benefit from support. When parents enroll, CF programs collect information on psychological factors that can affect how they interact with their children. This includes assessments of parents' confidence that they can handle a range of parenting situations effectively and ratings of how stressful parents find their role (e.g., "I feel trapped by my responsibilities as a parent"). A large proportion of parents (42%) reported low confidence in their ability to handle parenting well. A small, albeit important, proportion of parents–9 percent–indicated they felt a high level of stress in their responsibilities as a parent, and as we will show in the next section, parents who reported higher levels of parenting stress were also more likely to use physical punishment and less likely to engage in positive interactions with their children. These scores indicate that the programs are reaching parents in need of the kind of support that center-based programming was designed to offer.

Outreach and recruitment were essential in reaching more parents via center-based group programming. Staff at the centers employed a number of recruitment strategies, including providing needed goods and services to low-income parents. For example, all centers provided free pregnancy testing and referred families who needed furniture to local charities. Most had a supply of diapers. One center operated a food pantry. Another partnered with a local hospital to run a program that provided pregnant Latinas with information about pregnancy, delivery and the hospital's services. Centers also relied heavily on word-of-mouth and referrals from other agencies.

Programming

When the initiative initially expanded center-based programming in early 2008, centers were given considerable leeway in selecting the activities they wanted to offer parents. However, in early 2009, CF, Inc., required that they provide programming in three core program areas: teaching parenting skills to build parental self-efficacy–or self-confidence that the parent could care effectively for his/her child; guidance and discipline practices; and early literacy practices. Centers were responsible for tracking attendance in each of these three areas. Center staff also agreed to track activities in two additional areas where they were focusing their time: child development and health, and behavioral health (e.g., support groups on depression, stress/anxiety, parenting, relationships, substance abuse and domestic violence). (See Appendix B for specific attendance information in these five areas.) Two centers received state funds to operate Family Success Centers that addressed not only parenting skills, but also parents' economic and other social needs. As a result, the range of activities offered across the centers was diverse.

CF programs generally reached large numbers of parents, serving an average of 169 participants per program area over a two-year period–though some areas drew more participants than others. The early literacy programming (which included popular parent-child reading and music activities) and child development and health programming drew the greatest number of participants, across all centers (serving roughly 200 to 400 per program at each of the centers, over a 24-month period). Child guidance and discipline programs and behavioral health programming tended to draw the fewest parents (closer to 100 per program).

The curriculum selected as a proven strategy was implemented quite "loosely." Centers were asked to use the evidence-based Nurturing Parenting Curriculum,[24] which includes a range of information about child development, guidance and discipline, and self-efficacy. However, group facilitators had a tremendous amount of discretion in how they used the curriculum, selecting some modules and not others, facilitating the modules out of order and often supplementing the curriculum with other material.

Despite efforts to train staff in the use of the curriculum, effective instructional strategies were not implemented consistently, and program quality suffered. CF programs were designed to educate parents as well as model positive parenting strategies, and they drew on a curriculum that had been proven effective in other settings. Research has long indicated that changing individuals' behavior requires a combination of approaches, of which providing information is only one–and insufficient on its own.[25] Other approaches–such as modeling positive behavior, reinforcing positive behavior, appealing to people's values and emotions to generate the desire to change, and identifying self-reinforcing strategies that are simple to learn and produce immediate outcomes–may also be necessary to sufficiently change behavior. Further, instructional techniques involving interaction–and not simply the presentation of information–are important to keep participants engaged with the material. Agencies made inconsistent efforts to train their staff in how to combine these instructional techniques. Unfortunately, interviews and observations of programming both suggest that there were systematic differences across centers in the quality of staff's work with parents.

Staff at the centers tended to divide into two groups: highly educated staff with master's degrees in social work or similar fields, and staff who were less well-educated but often shared a cultural background with the clients served by the centers. During interviews with staff, we found that those with lower educational levels tended to focus on providing information, believing that if people knew more they would behave differently. Several also reported using scare tactics, telling parents that if they did not change their behaviors with their children, their children would end up in the child welfare system. More highly educated staff, in contrast, tended to report using a greater number of strategies to change behavior and using more strategies that have evidence of effectiveness. These differences (see tables in Appendix C for specific differences in rates) suggest that inadequate training and lack of ongoing support and feedback on instructional strategies may have limited staff's effective use of the curriculum.

Participation Levels

Past research suggests that effective parenting programs tend to be long-term and intensive in nature.[26] But it proved challenging for CF to keep many of its participants engaged over time. (See Appendix B for details about these analyses.) As a result, participants who attended center-based classes may not have done so often enough for the initiative to make a measurable difference in parenting practices, particularly when examining changes in these practices citywide.

On average, though the programs drew large numbers, the number of times parents attended programming at the centers (i.e., the intensity of their participation) was low. Over a 24-month period, average attendance ranged between one and nine days, depending on the center. More than half of those who attended at all attended fewer than five days over the course of six months, with many attending only one day. On the other hand, a small group of participants, 5 to 15 percent across the five centers, participated regularly, attending about once a week or more over a six-month period. While the group activities reached more parents than home visiting programs had, the frequency and duration of con- tact with participants was much lower.

Getting parents to attend programming more than just a few times was an ongoing challenge for the initiative, for a variety of reasons. First, parents may have gone to the centers for specific activities, and once they engaged in them, they felt no need for additional services. Second, some of the more popular activities, such as the music and early literacy activities, ran on relatively short cycles (for example, some cycles were 10–12 weeks), and there was little attempt to position these programs as ongoing opportunities, instead of "one-shot" activities. Third, many of the participants were challenged by unstable, often short-term living arrangements and uncertain transportation. Interviews with staff over the years suggest that parents' moves to different neighborhoods often disrupted their participation at the centers. Fourth and finally, the quality of program activities and the extent to which staff members used instructional techniques that engaged participants was uneven and probably contributed to varying levels of participation.

Monitoring the intensity of program participation at the initiative level was a challenge. The CF initiative database contained detailed information about program participation, entered by the collaborating agencies. However, it did not readily lend itself to producing and using information about participant engagement on a citywide level, though this information was available. Standard reports generated from the database focused on enrollment (not attendance), which tended to be strong, and staff generally didn't query the database for information beyond what was being produced in these reports. Furthermore, in many programs, there were small groups of parents who participated intensely. It was easy for staff to assume–given strong enrollment and a core group of dedicated parents–that participation levels were adequate.

At the initiative level, no one was given the explicit responsibility for taking a nuanced look at participation *across centers or over time*. Although the evaluation team had set up the data system and monitored its early use, both initiative and evaluation staff agreed that it was important for CF, Inc., to develop its internal capacity to monitor data, and it was in its early stages of doing so. Therefore, it went largely unnoticed that most parents across the initiative were attending infrequently. Without careful and focused attention to this information and its potential to impact the initiative as a whole, it was difficult to monitor participant engagement across the multiple agencies inputting data, and a critical opportunity to address the issue was lost.

In sum, the changes in the initiative's direction that began in January 2008 had been intended to broaden its reach beyond parents eligible for particular home visiting programs. It succeeded in doing so–but, with the exception of approximately 5 to 15 percent of parents across centers who consistently attended programs, active participation in group-based parenting programs (as documented between early 2009 and late 2010) was too low to expect changes in parenting practices over that same time period.

Factors Related to Positive Parenting

CHAPTER III

Evaluating the effects of a community initiative is difficult for a number of reasons. Community initiatives attempt to change the outcomes and behavior of an entire community. Thus, to ascertain whether CF caused any observed community changes, one would ideally compare the outcomes and behavior in CF communities with the outcomes and behavior in comparable communities without CF. Unfortunately, it is very difficult to find communities that are comparable and remain comparable over a 5- to 10-year period–the time frame for most serious community initiatives. As an alternative evaluation strategy, the CF evaluation tracked changes in attitudes and behaviors of primary parenting figures through a survey of residents (one conducted in 2002, prior to the launch of the initiative, and others in 2008 and 2010). Individual community residents were not followed over time; rather, at each year of data collection, a new sample of respondents was interviewed.

Surveys of community residents included questions about a range of parenting practices, particularly those the CF initiative had identified from its inception as being important contributors to healthy development and kindergarten readiness for very young children. The parenting practices tracked included:

- Positive parent-child interactions (e.g., reading to the child),
- Discipline strategies (e.g., not using physical punishment),
- Access to and use of health care (e.g., number of well-child visits to the doctor) and
- Breastfeeding.

These four areas had been the focus of the initiative's activities from the beginning. Through the home visiting programs, the Trenton Division of Health, which was overseeing those programs, hoped to improve families' use of health care and increase breastfeeding rates, as well as improve parent-child interactions and discipline strategies. Even when the initiative revised its parenting outcomes in 2008 to examine early literacy practices and parental self-efficacy, staff running the home visiting programs continued to measure breastfeeding and use of health care, though those two elements were not a focus of center-based activities. The research team, therefore, also continued to collect that information through the community surveys, though they were no longer primary outcomes of interest.

In each survey, parents were asked a series of questions to provide an indication of parents' behaviors in these areas, as well as how much being a parent was experienced as a stressor in their lives (i.e., parental distress). (See Table 2 for a summary of specific outcomes tracked and Appendix D for specific measures.)

In 2010 only, survey respondents were also asked about their confidence in their ability to effectively parent their child (i.e., parenting efficacy) and their belief that there were individuals on whom they could rely for practical/tangible and emotional support (i.e., social support). The additions to the survey in 2010 reflect the changes in the initiative's focus over time.

The survey data allowed us to examine whether CF changed parenting practices in Trenton over time[27] and whether psychological factors identified in other research as important (parental distress, parental efficacy and social support) help explain variations in parenting practices among those surveyed.

Given that few parents attended CF classes with any regularity or intensity, and that the instructional quality was uneven, it is not surprising that we did not find evidence to suggest that CF changed parenting practices among Trenton residents during the course of the study. We did, however, identify one key psychological factor–parental distress–that was tied to less positive parenting, which has implications for program practice. (See Appendix E for details on the analyses conducted and specific findings.)

Changes in Parenting Practices

There is no evidence to suggest that changes in parenting behaviors in Trenton could be attributed to CF programming.[28] None of the outcomes were found to change more over time in a positive direction for the participant group compared with the nonparticipant group.

The Role of Psychological Factors

In line with other research, a greater level of parental distress was associated with less positive parenting practices. Parents who reported higher levels of parenting distress (e.g., feeling that parenting is not manageable) reported lower levels of positive parenting on five of the seven outcomes that measured positive parent-child interactions. High levels of parenting distress were also linked with greater use and frequency of negative discipline strategies, lower ratings of overall child health and more frequent visits to the doctor for illness and accidents. Parenting distress was not associated with rates of breastfeeding. (See Table 2 for a summary.) We found that parental distress mattered, even when taking into account other factors that might influence parental distress and parent-child interactions, such as employment status, educational level, child gender and age, and primary caregiver gender and age.

Contrary to what other studies have found, there was no evidence of a relationship between social support or parenting efficacy and parenting practices.[29] Parents who felt they had access to social supports were no more or less likely to use positive parenting practices than parents who did not feel they had access to such supports. Additionally, we checked to see if individuals with higher levels of social support experienced the same negative relationship between parental distress and parenting outcomes, and we found that they did. These findings run counter to the parenting literature that has typically found that higher levels of social support correspond with more positive parenting practices. It is possible that our measure of social support, which looked at whether respondents felt they had social support and not the size or proximity of their social networks or the characteristics that people within their network had, may not have been sensitive enough to detect the differences in social support other studies have found. It is also possible that there was a group of parents with high need who had garnered a great deal of social support in the hopes of addressing that need. If that social support had not yet benefitted those parents, then their presence in the sample might obscure a relationship between social support and parenting practices.

In the case of parenting efficacy, we found that those with greater confidence in their parenting abilities were no more or less likely to report engaging in positive parenting practices. Because respondents to the community survey overwhelmingly reported very high levels of parenting efficacy, it may be that the survey did not capture enough respondents with low levels of parenting efficacy to be able to detect its relationship to parenting practices.

In Sum

We conclude from these findings that there was no evidence to suggest that CF contributed to changes in parenting practices, when measured broadly among Trenton residents. In the next chapter, we discuss why this may have been the case.

Table 2

Relationship Between Parental Distress and Parenting Practices

(Parents who report higher levels of distress)

Parent-Child Interactions (n=1,600)
Sing songs and nursery rhymes to their children less often than less distressed parents
Hug their children less often than less distressed parents
Play games with their children less often than less distressed parents
Read books with their children less often than less distressed parents
Play with toys with their children less often than less distressed parents
Are not different from less distressed parents in how often they take their children to the park
Are not different from less distressed parents in whether or not they have a regular bedtime for their children
Discipline Strategies (n=1,600)
Are more likely to use physical punishment as their main form of discipline than less distressed parents.
Are more likely to report that they use only one discipline practice compared with less distressed parents.
Health of Child (n=1,600)
Reported about the same number of well-child doctor visits as less distressed parents did.
Reported about the same number of dental visits for their children as less distressed parents did.
Reported that they took their children to the doctor more frequently because of illness than less distressed parents did.
Reported that they took their children to the doctor more frequently because of accidents than less distressed parents did.
Reported about the same number of emergency room visits as less distressed parents.
Gave a lower rating to their children's health compared with less distressed parents.
Breastfeeding (n=1,259)
Reported that they breastfed their youngest child at about the same frequency and for about the same length of time as less distressed parents.

Evidence About Implementation Sheds Light on Parenting Outcomes

CHAPTER IV

EVIDENCE ABOUT IMPLEMENTATION SHEDS LIGHT ON PARENTING OUTCOMES

This evaluation provides little evidence that CF had a community-wide effect on parenting outcomes. This finding is disappointing for several reasons: Local agencies committed high levels of energy and resources in the initiative over many years. CF adopted programs–such as home visiting programs–that had been tested in other settings, and it developed strong collaboration and communication across local agencies. When the initiative's implementation was assessed four years after CF was initiated, it looked promising.[30]

The implementation research, which accompanied the outcomes research, sheds some light on the findings. In no particular order of importance, there are several possible explanations for our findings:

- **Loose implementation of a proven curriculum and variation in the quality of instructional strategies both within and across centers may have undermined programs' effectiveness.** Increasingly, strong program quality and consistent implementation are being documented as essential components to achieve desired outcomes in any social program.[31] While CF used a curriculum that had been effective in other settings, staff elected to implement some pieces of it and not others, and often presented the material out of order.

  Inconsistent implementation of CF's parenting education programming may have been driven by varying backgrounds and experiences among CF staff. Centers had a mix of highly educated staff with master's degrees in social work or similar fields and staff with lower educational levels; these two groups reported using different strategies in their work with parents. More highly educated staff reported using a greater number of strategies to persuade parents to alter how they interacted with their children. They also used techniques with more documented evidence of effectiveness, such as modeling behaviors, whereas less educated staff were more likely to report that they simply gave parents information. Unfortunately, research has indicated that providing information is not sufficient, in and of itself, to change behavior.[32] Fostering more consistency in the implementation of the curriculum and its components and strengthening instructional approaches might help CF engage and retain participants, and ultimately enhance the initiative's impact.

- **The intervention approach may not have sufficiently targeted highly distressed parents, or aligned well enough with the needs of the Trenton population, to make a measurable difference citywide.** Beyond CF's uneven quality, a critical element might have been missing from the initiative's design. The community survey data revealed that high levels of parental distress (parents' reports that being a parent was not manageable and was isolating) were associated with less positive parenting practices. That parental distress–and not parental efficacy or social support–had a strong association with many of the outcomes assessed suggests that programs might need to include a greater number of strategies that directly address parental distress and its potentially negative effects on parenting practices. While behavioral health issues (such as stress/anxiety, domestic violence, drug abuse) were targeted by some of the programming, very few participants chose to attend these programs and even fewer continued to come back over time. In addition, only 9 percent of CF participants reported high parenting distress as they entered programming. It is possible that by identifying and drawing in a greater number of parents for whom parenting is stressful–i.e., targeting those most in need of help–the initiative could have a greater impact.

- **Ultimately, parents might have been better served if parenting education activities were offered together with targeted mental or behavioral health services geared toward helping parents feel less stressed and isolated.** Persistent efforts were made throughout the initiative to offer behavioral health services, but providers consistently reported that in the populations they served (primarily low-income African American and Latino), considerable stigma against behavioral health services existed. This could account for the low demand for these services among CF participants. Nonetheless, such services tailored to these specific populations (with the aim of reducing the stigma associated with them) may be helpful.

- **The change in strategy from high-intensity home visiting programs serving a small proportion of Trenton's families to a strategy designed to serve a larger number of families with less intensity occurred in 2008, leaving only about two years to observe community-level effects.** The change was substantial, and it required centers to establish new programs using existing staff who had been working in home visiting programs. Centers needed to establish relationships with providers who could offer activities, train their staff, adjust their recruitment methods and alter their physical spaces to better accommodate group programs. The year 2008, therefore, was one of transition. Investigating changes at the community level after only two years of programming might have been overly optimistic.

- **Low levels of engagement by most of the participants made a strong citywide impact on parenting unlikely.** Even if the fit of the intervention and quality of programming were improved, the intensity of participation would still need to be increased to boost the odds that CF might substantially affect participants' parenting practices, particularly when measured at the community level. In spite of the initiative's redirection to center-based programming, which allowed it to reach significantly more parents (approximately six times as many), the initiative struggled with low levels of engagement in parenting programs. A majority of those who participated attended a total of five or fewer days of programming, with many attending only once.

  In the end, the numbers of individuals reached by CF center-based and home visiting activities may still have been too low to detect a difference among the larger Trenton community. In addition, the intensity of participation among those who did attend center-based activities may have been too limited to foster changes in parenting. Changing any individual behavior is challenging; impacting parenting may be particularly so, since it is quite personal and rooted in one's family and cultural background. A much more intensive program is likely needed to measurably improve parenting. Indeed, existing research on successful parent education programs suggests high-intensity programs have better results than "light touch" programs.[33]

- **The study methodology allowed us to measure change only at the community level, rather than the program level, where results may have been evident for individuals who participated more intensively over time.** Individual participants who were actively engaged in higher-quality programs may have experienced positive changes, even though no community-wide changes could be attributed to the initiative's programming. Unfortunately, the survey of community residents allowed us to examine only participants versus nonparticipants. Therefore, with this study design, we cannot assess whether individuals who attended programming with greater frequency, or who attended a specific profile of programs, for example, had better outcomes than those who attended only once or not at all. It should be noted, however, that even if we had been able to detect change among participants actively engaged in higher-quality programs, the numbers of such participants were relatively low.

In sum, the initiative was able to provide a range of promising programs. But CF's underlying assumptions about how to change parenting practices at the community level was predicated on serving–at a sufficient level of intensity–large numbers of parents who had poor parenting skills with evidence-based or evidence-informed programming that could make a difference in the parents' behaviors. While it is possible that the initiative made a difference in some of the participants' lives–a question that the evaluation does not address–achieving community-wide change was elusive.

Implications

CHAPTER V

Children's Futures was designed to improve early childhood outcomes throughout Trenton, and as other reports from the evaluation describe, it relied on evidence-based practices and programs as it worked toward that goal. When faced with early evaluation results, the initiative instituted a midcourse correction, putting more group parenting programs in place–with the aim of reaching a greater number of parents and more deliberately improving parenting practices.

In spite of this correction, implementation proved challenging. However, information collected about the initiative's implementation provides an opportunity to reflect on several implications for future interventions with parents and, more broadly, efforts to bring about citywide change.

Implications for Community Change Efforts

The CF initiative was designed with clear goals, a commitment to rely on proven strategies, and support and feedback in the form of a nine-year evaluation. As reports from the early years of the initiative have documented, there were numerous successes that arguably resulted from that approach: Child-care centers and family child-care homes showed substantial improvement, strong home visiting programs were implemented, and policy changes regarding health and immunizations were made within local institutions.

In the end, changes in parenting practices were very hard to bring about, and even harder to measure. But several important lessons can be drawn from the CF experience.

Good information–and strong capacity to work with data–is needed to monitor programs effectively. CF's community-wide database contained extensive information about enrollment and attendance, and challenges could have been flagged by mid-2009. However, the standard reports generated by CF, Inc., focused on enrollment but not on attendance in activities that were directly related to programmatic outcomes. Strong enrollment rates (coupled with the fact that many individuals attended once and never returned) appear to have obscured a problem with low-intensity participation.

Although the use of Web-based databases and a greater focus on accountability have resulted in better program monitoring in recent years, most social programs are still not in a position to effectively tap real-time data for program improvement. Staff at all levels need to buy into data collection and analysis; they need to be part of the process of identifying interim benchmarks and indicators of success (which, in the case of CF, might well have included intensity of participation in group-based programs at centers); and they need to feel a sense of urgency about tracking and responding to themes the data reveal as they emerge. In multi-agency efforts, it is also vitally important that leaders examine–and share–data at the initiative level, so trends across programs can be considered in a timely fashion. Although CF, Inc., championed the use of the database, its staff lacked the skills necessary to mine and analyze the data–critical precursors to using the information to truly manage performance.[34]

Programs must pay close, ongoing attention to both *program quality* and *participation*. Parent education interventions–and indeed, most social programs–are effective only when levels of participation over time are reasonably high. CF successfully expanded center-based programming to reach a broader group of parents. But these parents ultimately did not attend programs with enough intensity to effect change. Furthermore, center-based parenting programs were not delivered with consistency either within or across programs. There was considerable variation in the choice of components that curriculum staff selected to use, and when and how they used them. Moreover, staff's accounts of how they worked to change parents' behaviors varied considerably, with many staff using strategies research has identified as ineffective when trying to change behaviors. While we cannot be sure, it is certainly possible that this uneven quality in instruction contributed to the disappointing rates of participation.

Uneven program quality and inadequate participation are common in social programs, and require focused time and attention to correct.

Programs would benefit from additional support to translate evidence-based practices into on-the-ground programming. CF was committed to using strategies with strong evidence of effectiveness. To improve parenting outcomes, the initiative used home visiting programs and center-based parent education classes, including programs and curricula that had both been proven effective in other settings. Implementing evidence-based practices frequently requires that well-honed models be adapted to the differing conditions of local sites and the varying capacities of individual organizations and their staff—all without compromising the essential elements that initially made the model effective. This is an exceedingly complex undertaking, and our study of CF suggests that organizations may need explicit and extensive support to do it effectively.

Staff need intensive training and ongoing feedback as they work to implement evidence-based practices. As noted, there was a great deal of variation in the quality of instruction at CF centers, with less educated staff using fewer strategies overall—and fewer strategies that have any evidence of effectiveness—to influence parents' behavior. In a field where front-line staff have varying levels of education and experience, and where turnover is common, up-front training is not enough. Instead, ongoing training and support are needed to help staff implement high-quality programs. Data about participation and outcomes should be collected regularly and used, together with program observations, to provide staff with constructive feedback and help them better hone their work.

Targeting is crucial—and an ongoing challenge. The vast majority of CF's group-based programs welcomed all parents who showed up for activities. This was in contrast to the home visiting programs, for which there were very specific eligibility requirements. Indeed, the group programming was developed with the explicit goal of reaching more parents in the community, including those who were not eligible for home visiting. In the end, this may have undermined the group programs' effectiveness. The strong relationship we found between high parental distress and poor parenting practices suggests that the initiative may have needed to target and reach a greater proportion of parents who were stressed about the responsibilities of being a parent. Focusing on this subgroup of parents—and providing programming tailored to their needs—may have enabled CF to have a greater impact on its participants.

CF's experience highlights just how challenging it is to target programs effectively in an initiative that hopes to see changes at a community level. Intensive programs that focus on a particular subset of the population may be very helpful for that subset, but if that group is small relative to the overall population, then changes in individuals are unlikely to result in community-wide changes (with some exceptions, such as violence prevention, in which the actions of a small number of people can affect the entire community). Conversely, if that group is large relative to the overall population, then resources may be too limited to reach everyone who needs to be served, which may also result in no observable change at the community level. "Light-touch" interventions, in contrast, are less resource-intensive and can serve more people, but they tend to have more modest results that are also hard to observe at the community level. Either strategy may also ignore the needs of particular subsets of the population for whom the programs are not a good match. And finally, communities are not static entities: Their populations and social and economic dynamics shift over time, which means that targeting effectively will likely be an ongoing task.

Final Thoughts

This evaluation of *Children's Futures*—an ambitious effort to improve child health and well-being in Trenton—offers important lessons about implementing programs that aim to promote positive parenting and ultimately nurture children's development. It also underscores several issues that future initiatives will be wise to address: the need to devote sufficient resources to gather and use data in a timely fashion to inform midcourse corrections; the importance of both program quality and active, ongoing participation; the challenges of importing evidence-based programs and practices into new settings; and the vital roles that both staff training/support and effective targeting can play. None of these issues is easily tackled, of course, but consciously grappling with them while planning, funding and implementing programs will surely increase the odds of success.

Endnotes

1. Zepeda M, Varela F and Morales A. 2004. "Promoting Positive Parenting Practices Through Parenting Education." In *Building State Early Childhood Comprehensive Systems Series*, No. 13, edited by N Halfon, T Rice and M Inkelas. Los Angeles: National Center for Infant and Early Childhood Health Policy.

2. Shonkoff JP and Phillips DA (eds.). *From Neurons to Neighborhoods: The Science of Early Childhood Development.* 2000. Washington: National Academy Press.

3. Two previous reports, *Collaboration and Community Change* and *Early Outcomes for Children and Families in Children's Futures*, examine, respectively, implementation successes and challenges and programmatic, policy and community-level outcomes from the initiative's first five years. An executive summary, *Children's Futures' First Five Years: Lessons and Early Outcomes of a Community Change Initiative*, compiles findings from the two longer reports.

4. The 2000 census counted 85,403 residents of Trenton. Among families with children younger than age 5, 47 percent were led by single mothers. Twenty-eight percent of families with children younger than age 5 were living in poverty, and the median family income in the city was $36,681, significantly less than in the surrounding towns of Mercer County. Of all mothers who gave birth in Trenton in 2003, 71 percent were unmarried, and almost 40 percent had not finished high school. Seventeen percent of all mothers were age 19 or younger.

5. RWJF provided $20 million for the initiative's Phase 1, with Phase 2 funded at $14.5 million, structured on a declining basis. The majority of funds were allocated to direct services provided by partner agencies; CF, Inc., for oversight and technical assistance; and other technical assistance partners. Partner agencies also received in-kind and leveraged support.

6. See three reports by Walker, et al.: *Collaboration and Community Change; Early Outcomes for Children and Families in Children's Futures; and Children's Futures' First Five Years: Lessons and Early Outcomes of a Community Change Initiative.* All available at *www.ppv.org*.

7. Two additional reports will explore broad issues that emerged as important in the course of the CF evaluation. The first examines common challenges that intermediary organizations face and the mechanisms they use to overcome them. The second looks at the development and use of performance management systems in multi-agency environments. Forthcoming and available at *www.ppv.org*.

8. The first community survey took place prior to the launch of the initiative's activities and represents a baseline picture of Trenton residents who identified themselves as primary caregivers. It captured information on outcomes that the initiative hoped to influence, including parenting behaviors and practices. Phone surveys were also conducted in 2008 and then again in 2010. For the 2008 and 2010 surveys, efforts were made to include individuals in the surveys who had participated in *Children's Futures*. It is important to note that individual community residents were not followed over time; rather, for each survey, a new sample of respondents was interviewed.

9. Throughout, we use the term "parents"; this includes primary caregivers, whether they are biological, adoptive, foster or other parents.

10. There were four Healthy Families programs in the city, with a capacity of about 60 each, and one NFP program, with the capacity of about 125. These programs were designed to have participants stay two years.

11. This number represents an unduplicated count of parents who appear in the CF database as attending at least one day of CF programming.

12. Zepeda, Varela and Morales.

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22. McLoyd VC. 1997. "The Impact of Poverty and Low Socioeconomic Status on the Socioemotional Functioning of African American Children and Adolescents: Mediating Effects." In *Social and Emotional Adjustment and Family Relations in Ethnic Minorities*, edited by R. Taylor and M. Wang, 7–34. Mahwah, NJ: Lawrence Erlbaum Associates.

23. Bandy T, Andrews KM and K Moore. 2011. "Disadvantaged Families and Child Outcomes: What Is the Role of Maternal Emotional Support?" Washington: Child Trends.

24. This number does not include the number served by home visiting, because those numbers were not entered consistently into the initiative database. However, we estimate that in the same time period, approximately 200 additional parents may have been served through home visiting.

25. Hodnett RH, Faulk K, Dellinger A, et al. 2009. *Evaluation of the Statewide Implementation of a Parent Education Program in Louisiana's Child Welfare Agency: The Nurturing Parent Program for Infants, Toddlers, and Preschool Children.* Final evaluation report submitted to Casey Family Foundations.

26. Taylor T and A Biglan. 1998. "Behavioral Family Interventions for Improving Child-Rearing: A Review of the Literature for Clinicians and Policy-Makers." *Clinical Child and Family Psychology Review.* 1(1), 41–60; Kaminski JW, LA Valle, JH Filene and CL Boyle. 2008. "A Meta-Analytic Review of Components Associated with Parent Training Program Effectiveness." *Journal of Abnormal Child Psychology*, 36, 567–589.; Mbwana K, M Terzian and KA Moore. December 2009. "What Works for Parent Involvement Programs for Children: Lessons from Experimental Evaluations of Social Interventions." Washington: Child Trends.

27. Zepeda, Varela and Morales.

28. We identified people as CF participants based on survey questions asking about their involvement in certain types of programs in certain agencies. We did not determine when they became participants or how much they participated. That information was available through the CF database but could not be linked to the survey respondents, who were anonymous.

29. To discern the degree to which change over time occurred and might be attributed to the CF initiative, we undertook the following approach to analyzing the three waves of community survey data: First, we examined whether there was significant change over time on each outcome of interest. These analyses let us know whether there were differences over time; however, they did not provide evidence of any link to CF. Next, we assessed whether any change over time that occurred was stronger from one survey administration to the next for respondents who indicated any participation in CF activities on the 2008 or 2010 survey, in comparison to individuals who had no indication of participation. We did this by comparing responses of participants and nonparticipants in 2008 and 2010 to the baseline (2002) measure of each outcome, as well as by examining whether any change on the outcomes of interest between 2008 and 2010 was different for CF participants in comparison to nonparticipants (i.e., an interaction effect). In all of our analyses, we used statistical techniques to take account of changes in the survey population from year to year on demographic and other characteristics that could be related to increasing or decreasing levels of the outcomes of interest. These included taking account of one or more of the following: foreign-born respondent, respondent age, respondent race, respondent gender, if respondent is biological/adoptive parent, respondent employment status, focal child gender and focal child age. We also ran the analyses with and without the sample provided via the ETO database, to check for consistencies in findings across the sampling strategies.

30. We note that we have only one year of data on parent efficacy and social support, in comparison to the three years of data we have to explore the role of parental distress.

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34. Zepeda, Varela and Morales.

35. See forthcoming report by Walker K, Farley C, and Polin, M for guidance on using data in multi-agency initiatives. *www.ppv.org*.

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Appendices

Appendix A: Data Sources

The analyses conducted for this report draw on data collected from three primary sources:

Children's Futures (CF) Initiative Database

The initiative uses a Web-based database system (Efforts to Outcomes or ETO) into which collaborating agencies enter participants' demographic and background information as well as participation data. The data from the database were drawn from the period January 2009 to December 2010 and are used to gauge the number of participants served and describe the characteristics of CF participants and their level of participation in different types of CF center-based programming.

Surveys of Community Residents

The first community survey took place in 2002, prior to the launch of the initiative's activities. Phone interviews with community residents who indicated they were a parent or primary caregiver of a child under age 6 were conducted. The data from the 2002 community survey, therefore, represent a baseline picture of Trenton (primary caregiver) residents on a set of outcomes, among them, parenting behaviors and practices, that the initiative hoped to influence. Phone surveys of Trenton residents that met the same criteria (i.e., primary caregiver of a child under age 6) were conducted again in 2008 and then in 2010.

In 2002, a random digit dialing approach was used. In the latter two years, 2008 and 2010, respondent phone lists were generated from general and targeted phone databanks, similar to what was used to generate the 2002 phone calling list. In addition, because we wanted to be sure to capture individuals who had some connection to CF programming, lists of phone numbers were extracted from the CF ETO database of contacts for individuals who were noted as enrolled in center-based programming or home visiting programs. This strategy was used to ensure that there was representation in the two latter surveys of individuals who had some connection to CF. A total of 654 respondents were interviewed in 2002, 569 in 2008, and 443 in 2010.

The community survey data collection strategy followed a repeated cross-sectional design. That is, individual community residents were not followed over time; rather, at each wave of data collection, a new sample of respondents was interviewed.

Table A1 presents a summary of descriptive characteristics of the community survey respondents, at each year.

Identifying CF Participants in the Community Survey Respondent Sample

In the 2008 and 2010 community survey samples, we identified individuals as CF participants if they 1) were drawn from the CF initiative ETO database or 2) identified themselves as having done one or more of the following, in response to questions on the survey:

- Had a visiting nurse in the last 12 months
- Had a visiting nurse ever
- Attended parenting classes
- Attended fun activities or activities where you play with children

Interviews With Staff and Observations of Center-Based Programming

We visited the programs and conducted interviews with staff who supervised and instructed the parent programs. During each annual visit we conducted approximately 25 interviews with staff from the centers, and an additional 5–10 interviews with staff from other agencies, such as CF, Inc., or the agencies in charge of improving the quality of child care and preventive health care services. Although this report draws primarily from interviews conducted from 2008 through 2010, information collected through interviews prior to 2008 contributed to our understanding of the initiative's shift in strategy.

APPENDIX A: DATA SOURCES

Table A1

Descriptive Characteristics of Survey Respondents, by Year of Survey Administration

	2002	2008	2010	Different by Year?
Child:				
Age	2.4	2.4	2.7	**
Female	52%	50%	52%	No
Parent:				
Age	30.7	32.9	33.9	***
Female	82%	83%	90%	***
Education Level:				
Less than High School	21%	25%	19%	No
High School/GED	40%	33%	37%	No
Post HS, but No B.A	26%	28%	30%	No
College Graduate or More	13%	14%	14%	No
Respondent Income:[a]				
$0	30%	38%	51%	***
$1 – $15,000	23%	14%	11%	***
$15,001 – $25,000	18%	13%	12%	***
$25,001 – $30,000	10%	9%	6%	***
$30,001 – $40,000	10%	10%	8%	***
$40,001 – $60,000	6%	9%	7%	***
$60,000+	3%	6%	4%	***
Race/Ethnicity:				
White	14%	10%	12%	*
Black	51%	49%	55%	*
Latino	32%	37%	29%	*
Other	3%	5%	4%	*
Bio/Adoptive Parent				
	89%	91%	83%	***
Foreign Born				
	32%	36%	29%	No
Work Status:				
Full Time	57%	48%	39%	***
Part Time	13%	15%	12%	***
Unemployed	10%	8%	20%	***
Keeping House	14%	22%	18%	***
School	2%	5%	5%	***
Other	1%	1%	5%	***

Note: The far right column indicates where there were differences in the characteristics of those surveyed by year of survey administration. *p<.05, **p<.01, ***p<.001

[a] This represents the respondent's income only and does not include income from other members of the household.

Appendix B: Participation Rates

To provide a picture of participants' involvement in CF's community-based centers, we relied on data extracted from the CF ETO database. We examined data for participants who identified themselves as caregivers and were active (that is, attended a CF community-based program at least once) between January 1, 2009 and December 31, 2010. We selected this time frame because it represents a point at which agencies were more systematically entering information into the system, as well as the time period when there was a shift to providing a greater number of group parenting activities. It is also the approximate timeframe between which the 2008 and 2010 community surveys were conducted.

The CF staff label each activity offered as falling into one of five different categories:

1. Parent Education in Child Development and Health
2. Parent Education in Child Guidance and Discipline
3. Parent Education in Early Literacy and Other Cognitive Development
4. Group Activity in Parental Self-Efficacy (offered only Between January 2009 and December 2009)
5. Group Activity in Behavioral Health

Rather than looking at participation in every activity, we examined participation rates in the five categories of programs that the sites entered into the CF initiative ETO database.

We present the data separately for each of the five centers (Children's Home Society South, Children's Home Society North, El Centro, Mercer Street Friends, and St. Francis); therefore, the numbers served that are reported may include some duplication, if individuals attended more than one center.

The first set of tables, B1 through B5, provides information on the average number of days attended and the total number of people who attended each program type, over the full 24-month period for which the data were extracted from the CF database. Column 1 lists the program type; Column 2 indicates the number of individuals who attended that program type; Column 3 indicates the minimum and Column 4 the maximum number of days any individual attended a program of that type; Column 5 indicates the average number of days attended across all individuals who attended that type of program; finally, Column 6 indicates the period of time any program that fell under that category was offered, which in most cases was fewer than 24 months. There was no program attendance under the category Group Activity in Parental Self-Efficacy, for example, after December 2009.

The maximum number of days anyone attended any programming during that 24-month period was 69. The average number of days attended, however, was much lower and ranged from 1.8 to 8.8. Parent Education in Early Literacy and Other Cognitive Development had the highest maximum (69) and the second highest (8.2) average number of days.

APPENDIX B: PARTICIPATION RATES

Table B1

Children's Home Society South Point of Service, Numbers of Participants and Days in Attendance

January 1, 2009 to December 31, 2010

Activity	Number of Participants	Minimum Days Attended	Maximum Days Attended	Mean Days Attended	Date Range
Parent Education in Child Development and Health	423	1	24	2.75	6/18/09 to 11/29/10
Parent Education in Child Guidance and Discipline	261	1	15	2.83	6/25/09 to 12/1/10
Parent Education in Early Literacy and Other Cognitive Development	323	1	30	4.05	7/10/09 to 10/27/10
Group Activity in Parental Self-Efficacy	179	1	12	2.55	6/16/09 to 12/16/09
Group Activity in Behavioral Health	200	1	13	2.20	12/1/09 to 12/14/10

Table B2

Children's Home Society North Point of Service, Numbers of Participants and Days in Attendance

January 1, 2009 to December 31, 2010

Activity	Number of Participants	Minimum Days Attended	Maximum Days Attended	Mean Days Attended	Date Range
Parent Education in Child Development and Health	220	1	22	3.69	7/7/09 to 11/9/10
Parent Education in Child Guidance and Discipline	48	1	14	3.69	9/9/09 to 10/26/10
Parent Education in Early Literacy and Other Cognitive Development	211	1	51	5.02	7/7/09 to 12/9/10
Group Activity in Parental Self-Efficacy	113	1	7	1.67	6/6/09 to 12/15/09
Group Activity in Behavioral Health	61	1	11	2.11	7/8/09 to 10/22/10
General Group Social Connection Activities[a]	170	1	50	3.86	9/19/09 to 12/17/10

[a] This code in the *Children's Futures* database was designed to track participation in specific activities intended to forge relationships among participants and staff. Only Children's Home Society North used this code during the time period in question.

Table B3

El Centro Point of Service, Numbers of Participants and Days in Attendance

January 1, 2009 to December 31, 2010

Activity	Number of Participants	Minimum Days Attended	Maximum Days Attended	Mean Days Attended	Date Range
Parent Education in Child Development and Health	210	1	60	5.1	5/26/09 to 12/21/10
Parent Education in Child Guidance and Discipline	96	1	15	3.5	6/30/09 to 10/26/10
Parent Education in Early Literacy and Other Cognitive Development	207	1	62	8.2	7/17/09 to 12/17/10
Group Activity in Parental Self-Efficacy	90	1	23	5.4	7/10/09 to 12/15/09
Group Activity in Behavioral Health	186	1	55	7.0	6/27/09 to 12/22/10

APPENDIX B: PARTICIPATION RATES

Whereas Tables B1 through B5 provide a sense of the numbers served by each type of programming and the degree of intensity of participation that any individual might have been exposed to over a 24-month period, Tables B6 through B10 offer a closer examination of the data from a six-month period, January 1, 2010 to June 30, 2010, in order to provide a sense of the proportion of individuals who experienced 1 day of classes, 2–5, 6–10, 11–20, or 21 or more, over a six-month period. The columns show the proportion who went to activities under each of the four program types offered, with the last column showing the overall proportion of individuals going to programming at that level of participation. Across centers, more than half (between 56% and 77%) attended any class five or fewer times.

Table B4

Mercer Street Friends Point of Service, Numbers of Participants and Days in Attendance

January 1, 2009 to December 31, 2010

Activity	Number of Participants	Minimum Days Attended	Maximum Days Attended	Mean Days Attended	Date Range
Parent Education in Child Development and Health	144	1	27	3.3	3/18/09 to 11/2/10
Parent Education in Child Guidance and Discipline	104	1	39	8.8	1/7/09 to 12/16/10
Parent Education in Early Literacy and Other Cognitive Development	221	1	69	6.5	1/21/09 to 12/15/10
Group Activity in Parental Self-Efficacy	145	1	24	4.4	1/8/09 to 12/17/09
Group Activity in Behavioral Health	126	1	24	4.0	3/26/09 to 12/14/10

Table B5

St. Francis Point of Service, Numbers of Participants and Days in Attendance

January 1, 2009 to December 31, 2010

Activity	Number of Participants	Minimum Days Attended	Maximum Days Attended	Mean Days Attended	Date Range
Parent Education in Child Development and Health	144	1	27	5.7	6/24/09 to 10/5/10
Parent Education in Child Guidance and Discipline	67	1	8	1.8	7/7/09 to 10/28/10
Parent Education in Early Literacy and Other Cognitive Development	270	1	63	7.6	6/23/09 to 12/20/10
Group Activity in Parental Self-Efficacy	103	1	36	6.0	1/26/09 to 12/29/09
Group Activity in Behavioral Health	76	1	51	7.4	8/3/09 to 12/9/10

Table B6

Children's Home Society South Point of Service, Class Days and Class Types Attended
January 1, 2010 to June 30, 2010

Class Days Attended	Group Activity in Behavioral Health	Parent Education in Child Development and Health	Parent Education in Child Guidance and Discipline	Parent Education in Early Literacy and Other Cognitive Development	Overall
1	49 (89%)	87 63%)	86 (48%)	73 (50%)	131 (40%)
2–5	6 (11%)	33 (24%)	66 (37%)	47 (32%)	113 (34%)
6–10	0 (0%)	15 (11%)	22 (12%)	21 (14%)	60 (18%)
11–20	0 (0%)	3 (2%)	6 (3%)	6 (4%)	19 (6%)
21+	0 (0%)	0 (0%)	0 (0%)	0 (0%)	7 (2%)
Total	**55**	**138**	**180**	**147**	**330**

Table B7

Children's Home Society North Point of Service, Class Days and Class Types Attended
January 1, 2010 to June 30, 2010

Class Days Attended	Group Activity in Behavioral Health	Parent Education in Child Development and Health	Parent Education in Child Guidance and Discipline	Parent Education in Early Literacy and Other Cognitive Development	Overall
1	12 (75%)	10 (77%)	9 (24%)	16 (30%)	16 (24%)
2–5	4 (25%)	3 (23%)	18 (47%)	20 (38%)	25 (37%)
6–10	0 (0%)	0 (0%)	9 (24%)	9 (17%)	8 (12%)
11–20	0 (0%)	0 (0%)	2 (5%)	5 (9%)	13 (19%)
21+	0 (0%)	0 (0%)	0 (0%)	3 (6%)	5 (7%)
Total	**16**	**13**	**38**	**53**	**67**

Table B8

El Centro Point of Service, Class Days and Class Types Attended
January 1, 2010 to June 30, 2010

Class Days Attended	Group Activity in Behavioral Health	Parent Education in Child Development and Health	Parent Education in Child Guidance and Discipline	Parent Education in Early Literacy and Other Cognitive Development	Overall
1	31 (30%)	42 (42%)	24 (60%)	11 (12%)	48 (26%)
2–5	43 (41%)	41 (41%)	16 (40%)	34 (38%)	56 (30%)
6–10	20 (19%)	12 (12%)	0 (0%)	24 (27%)	34 (18%)
11–20	10 (10%)	4 (4%)	0 (0%)	18 (20%)	25 (14%)
21+	1 (1%)	0 (0%)	0 (0%)	2 (2%)	21 (11%)
Total	**105**	**99**	**40**	**89**	**184**

APPENDIX B: PARTICIPATION RATES

Table B9

Mercer Street Friends Point of Service, Class Days and Class Types Attended
January 1, 2010 to June 30, 2010

Class Days Attended	Group Activity in Behavioral Health	Parent Education in Child Development and Health	Parent Education in Child Guidance and Discipline	Parent Education in Early Literacy and Other Cognitive Development	Overall
1	9 (39%)	17 (45%)	20 (39%)	7 (21%)	22 (35%)
2–5	10 (43%)	14 (37%)	21 (41%)	13 (39%)	16 (26%)
6–10	3 (13%)	3 (8%)	8 (16%)	7 (21%)	7 (11%)
11–20	1 (4%)	4 (11%)	1 (2%)	5 (15%)	7 (11%)
21+	0 (0%)	0 (0%)	1 (2%)	1 (3%)	10 (16%)
Total	**23**	**38**	**51**	**33**	**62**

Table B10

St. Francis Point of Service, Class Days and Class Types Attended
January 1, 2010 to June 30, 2010

Class Days Attended	Group Activity in Behavioral Health	Parent Education in Child Development and Health	Parent Education in Child Guidance and Discipline	Parent Education in Early Literacy and Other Cognitive Development	Overall
1	25 (46%)	65 (57%)	12 (52%)	13 (57%)	64 (48%)
2–5	14 (26%)	36 (32%)	10 (43%)	10 (43%)	39 (29%)
6–10	8 (15%)	7 (6%)	1 (4%)	0 (0%)	13 (10%)
11–20	4 (7%)	6 (5%)	0 (0%)	0 (0%)	10 (8%)
21+	3 (6%)	0 (0%)	0 (0%)	0 (0%)	7 (5%)
Total	**54**	**114**	**23**	**23**	**133**

Appendix C: Strategies Used in Parent Education Group Programming

We relied on information gathered during site visits (i.e., interviews, observations and information about respondents' education levels) to describe strategies used in parent education programs to influence changes in parent behaviors. We used these data to explore any systematic differences among staff with different backgrounds, education or training.

Strategies Used to Change Behavior

Regardless of education level, information was the most common strategy used to change parenting behaviors (see Table C1). Some key differences did emerge between individuals with a graduate degree and those with a bachelor's degree or less. Individuals with a graduate degree were more likely than those without one to report that they create an environment that encourages good parenting (36% versus 23%), model behavior (43% versus 23%), reframe the issue or experience (29% versus 0%) and tell people what to do (29% versus 15%). Individuals without a graduate degree were more likely to report using negative consequences to change parenting behavior (38% versus 14%).

Individuals with a graduate degree also used a greater number of strategies, employing more than twice as many strategies per person than individuals with a bachelor's degree or less.

Processes to Change Behavior

The most common process used to change parenting behaviors was creating a safe, comfortable, trusting environment (Table C2). Individuals with a graduate degree reported using this process slightly more often than those with a bachelor's degree or less (57% versus 46%). Individuals with graduate degrees were also more likely to try to understand culture (43% versus 0%) and avoid being judgmental (21% versus 8%) to change parenting behaviors, whereas those with a bachelor's degree or less were slightly more likely to report relying on a shared background (23% versus 14%). Again, individuals with a graduate degree employed a greater number of methods to change behavior (1.36 per person versus 0.77 per person) than individuals without one.

Table C1

Strategies to Change Parenting Behavior, by Staff Education Level

	Create an Environment that Encourages Good Parenting	Provide Information	Model Behavior	Enforce Negative Consequences	Reframe the Issue or Experience	Tell People What to Do	Total	Total Number of Strategies per Person
Master's Degree or Higher (n=14)	5 (36%)	9 (64%)	6 (43%)	2 (14%)	4 (29%)	4 (29%)	30	2.14
Bachelor's Degree or Less (n=13)	3 (23%)	10 (78%)	3 (23%)	5 (38%)	0 (0%)	2 (15%)	23	0.72

Table C2

Processes to Change Parenting Behavior, by Staff Education Level

	Avoid Being Judgmental	Create a Safe, Comfortable, Trusting Environment	Shared Background	Understand Culture	Total	Total Number of Processes per Person
Master's Degree or Higher (n=14)	3 (21%)	8 (57%)	2 (14%)	6 (43%)	19	1.36
Bachelor's Degree or Less (n=13)	1 (8%)	6 (46%)	3 (23%)	0 (0%)	10	0.77

Appendix D: Measures

Individuals responding to the community survey were asked a series of close-ended questions over the phone about themselves and about a child in their household whom they parented, who was 5 years old or younger. In this appendix, we present the specific measures that were used in the analyses conducted for this report.

The respondent was asked a series of questions about his or her background and demographic characteristics.

Respondent Characteristics

- Relationship to focal child (i.e., the parental figure is either a biological or adoptive parent or one who has a different relationship, such as foster parent or grandparent)
- Gender
- Age
- Employment status
- Highest education level attained
- Birthplace (foreign born or born in the United States)
- Race/ethnicity

Child Characteristics

- Age
- Gender

The following list presents the specific outcomes tracked from the 2002 baseline to the 2008 and then 2010 follow-up surveys.

Parenting Interactions With Focal Child

- Number of days per week parent sings to focal child
- Number of days per week parent hugs focal child
- Number of days per week parent plays with focal child
- Number of days per week parent reads with focal child
- Number of days per week parent plays with toys with focal child
- Number of days per week parent goes to playground with focal child
- Whether the parent has a regular bedtime for the focal child

Discipline Strategies With Focal Child

- Use physical punishment as main source of discipline
- Use physical punishment as one alternative
- Frequency of physical punishment in prior month
- Number of discipline techniques used with focal child

Access to and Use of Health Care for Focal Child

- Number of well visits parent took focal child to in past 12 months
- Number of times focal child seen when ill in past 12 months
- Number of times focal child seen when in an accident
- Number of visits to the dentist
- Number of times child seen in the emergency room
- Rating of overall health of focal child
- Family has health insurance for child

Breastfeeding for Youngest Child

- Whether respondent breastfed youngest child
- Number of months breastfed
- Breastfed for four, six and 12 months

The community survey also assessed several psychological factors. All three surveys asked respondents questions to assess their level of parental distress. Parental efficacy and social support were assessed only on the 2010 community survey. A subset of the items that make up each of these constructs are listed below.

Parental Distress

(Derived from Abidin, RR, *Parenting Stress Index Professional Manual, 3rd Edition*)

- Being a parent is harder than I thought it would be.
- I feel trapped by my responsibilities as a parent.
- Since having children I feel that I'm never able to do things that I like to do.

Parental Efficacy

(Derived from Karitane, referenced in Rudi Crncec, Bryanne Barnett and Stephen Matthey, "Development of an Instrument to Assess Perceived Self-Efficacy in the Parents of Infants." *Research in Nursing & Health*, 2008, 31, 442–453)

- I feel I am doing a good job as a mother/father.
- I know how to play with my baby/child.
- I can make decisions about the care of my baby/child.

Social Support

(Derived from Sherbourne, CD and A Stewart, 1991. "The MOS Social Support Survey." *Journal of Social Science and Medicine*, 32, 705–714.)

- Someone you can count on to listen when you need to talk
- Someone to give you information to help you understand a situation
- Someone to confide in or talk to about yourself or your problems

Appendix E: Community Survey Data Analysis Approach and Results

Analysis Approach

We combined data across the three years of community surveys and conducted a series of regression analyses to determine 1) whether change over time could be attributed to CF and 2) what other factors help explain differences in positive parenting strategies. In particular, we used regression analysis to determine the degree to which each of the following factors helped to explain differences in positive parenting outcomes:

- Participation in the initiative via center-based activities or nurse home visiting program;
- Economic or demographic factors (e.g., education, employment, foreign born); and
- Psychological factors that other research has found important (parental distress, parental efficacy and social support).

However, there are two key limitations of this data collection and analysis strategy:

We cannot detect changes for individuals. The community survey is considered a "repeated cross-sectional" design, because individual residents were not tracked over time; therefore, we can track only whether changes in parenting practices occurred in the community "earlier" for those deemed participants in 2008 and 2010 versus those who were not deemed participants; we cannot detect whether individuals who participated made more significant changes over time than those who did not.

We cannot directly link CF "dosage" to outcomes. While participants were identified from the CF database as potential respondents for the community survey, their responses on the survey were anonymous and there was no way to link their data to what is available from the ETO database. Therefore, while we can identify individuals from the 2008 and 2010 community surveys as having enrolled in CF programming (because their phone numbers were drawn from the ETO database) or having had contact with CF programming (e.g., if they reported having received home visiting or engaged in specific community-based centers or activities), we cannot determine when, how much or even if they actually ended up attending any programming (or perhaps only enrolled and never attended).

Results of Regression Analyses

Could change be attributed to CF programming?

To discern the degree to which change over time occurred and might be attributed to the CF initiative, we undertook the following approach with our analysis of the three waves of community survey data:

- First, we examined whether there was significant change over time on each of the outcomes of interest. These analyses let us know whether there were differences over time; however, they do not provide evidence of any link to CF.
- Next, we assessed whether any change over time that occurred was stronger from one survey administration to the next for respondents who indicated any participation in CF activities on the 2008 or 2010 surveys in comparison to individuals who had no indication of participation. We did this by:
  - Comparing responses of participants and nonparticipants in 2008 and 2010 to the baseline (2002) measure of each outcome, as well as by;
  - Examining whether any change on the outcomes of interest between 2008 and 2010 was different for CF participants in comparison to nonparticipants (i.e., an interaction effect).

In all of our analyses of the community survey to determine significant changes on the outcomes, we used statistical techniques to take account of changes in the survey population from year to year on demographic and other characteristics that could be related to increasing or decreasing levels of the outcomes of interest. These included taking account of one or more of the following: foreign-born respondent, respondent age, respondent race, respondent gender, if respondent is biological/adoptive parent, respondent employment status, focal child gender and focal child age. In addition, we ran the analyses, both including the ETO-derived participant sample and excluding the ETO-derived participant sample to test the possibility that the different sampling strategy used in 2008 and 2010 might contribute to differences in results.

The analysis of the community survey data over time (run with and without the ETO-derived sample) provided no evidence to suggest that CF's parenting interventions contributed directly to changes in parenting practices among Trenton residents citywide.

We also conducted regression analyses to examine the extent to which parenting stress and parents' demographic characteristics were related to parenting. These included taking account of one or more of the following: foreign-born respondent, respondent age, respondent race, respondent gender, if respondent is biological/adoptive parent, respondent employment status, focal child gender and focal child age.

The results are summarized in Table E1, below.

Table E1

Summary of Regression Analysis Findings Using Parental Distress and Parent's Demographic Characteristics to Predict Parenting Outcomes

Outcome	Adjusted R-Square	Employment Status	Education Level [a]	Foreign Born	High Level of Parental Distress
Parent–Child Interactions (n=1,600)					
Singing and Nursery Rhymes	0.10	FT Less	B.A. + More	ns	Less
Hugging	0.01	ns	ns	Less	Less
Playing Games	0.04	ns	B.A. + More	Less	Less
Reading Books	0.10	FT Less	B.A. + More	Less	Less
Playing With Toys	0.07	ns	ns	Less	Less
Taking to Park	0.04	FT Less	ns	ns	ns
Having a Regular Bedtime	chi-sq[b]	ns	B.A. + More Likely	Less Likely	ns
Physical Punishment Main Form	chi-sq	ns	ns	ns	More Likely
Physical Punishment One Option	chi-sq	ns	>HS More	Less	More Likely
Frequency of Physical Punishment (note n=194)	chi-sq	ns	> HS More	Less	ns
Number of Discipline Techniques	0.12	ns	> HS More	ns	More
Number of Well Doctor Visits	0.09	ns	ns	ns	ns
Taken to Dentist	chi-sq	ns	ns	ns	ns
Number of Times Doctor Seen When Ill	0.01	FT>Else	ns	Fewer	More
Number of Times Doctor Seen When Accident	0.02	ns	No HS > Else	Fewer	More
Number of Times Seen in ER	0.04	ns	No HS > Else	Fewer	ns
Overall Health	0.07	ns	No HS < Else	ns	Lower
Breastfeeding Practice (n=1,259)					
Breastfed Youngest	chi-sq	ns	B.A.+ > Else	More	ns
Breastfed Youngest 4+ Months	chi-sq	ns	B.A.+ > Else	More	ns
Breastfed Youngest 6+ Months	chi-sq	ns	B.A.+ > Else	More	ns
Breastfed Youngest 12+ Months	chi-sq	ns	B.A.+ > Else	More	ns
Number of Months Breastfed Youngest	0.11	ns	B.A.+ > Else	More	ns

[a] HS refers to high school; BA refers to bachelor's degree.

[b] Where chi-square is noted in this column, logistic regression was used and the overall logistic regression was significant.

ns = not significant; that is, there were no differences on the outcomes evident among groups who were different on the predictor variable. For example, no differences for male or female respondents or no differences for individuals employed full- versus part-time or not at all, or no differences for those with less than high school, high school, some college or a college degree or greater.

FT = full-time employment.

To what extent are psychological factors associated with parenting?

On the 2010 survey, we gathered information on social support, parent efficacy and parent distress. We used the 2010 data to conduct regression analyses that included all three measures–distress, efficacy and social support–in order to determine the effect of each, above and beyond the effect of the others. Results of those analyses are presented in Table E2

Table E2

Summary of Regression Analysis Findings Using Parental Psychological Variables on the 2010 Survey to Predict Parenting Outcomes

Outcome	Adjusted R-Square[a]	Distress	Efficacy	Social Support
Parent–Child Interactions (n=1,600)				
Singing and Nursery Rhymes	0.07	Less	ns	ns
Hugging	ns	—	—	—
Playing Games	0.03	Less	ns	ns
Reading Books	0.09	Less	ns	ns
Playing With Toys	0.06	ns	ns	ns
Taking to Park	ns	—	—	—
Having a Regular Bedtime	ns	—	—	—
Physical Punishment Main Form	ns	—	—	—
Physical Punishment One Option	chi sq[b]	More	ns	ns
Frequency of Physical Punishment (note n=194)	ns	—	—	—
Number of Discipline Techniques	0.05	ns	ns	ns
Number of Well Doctor Visits	0.10	ns	ns	ns
Taken to Dentist	chi sq	ns	ns	ns
Number of Times Doctor Seen When Ill	ns	—	—	—
Number of Times Doctor Seen When Accident	ns	—	—	—
Number of Times Seen in ER	ns	—	—	—
Overall Health	0.08	Lower	Higher	ns
Breastfed Youngest	chi sq	ns	ns	ns
Breastfed Youngest 4+ Months	chi sq	ns	ns	ns
Breastfed Youngest 6+ Months	chi sq	ns	ns	ns
Breastfed Youngest 12+ Months	chi sq	ns	ns	ns
Number of Months Breastfed Youngest	0.08	ns	ns	ns

ns = not significant.

[a] In this column, "ns" indicates that the overall regression did not reach a level of statistical significance so we cannot estimate the degree to which any predictor helps to explain the outcome of interest.

[b] Where chi-square is noted in this column, logistic regression was used and the overall logistic regression was significant.

Note: The regression analyses include variables that take into account one or more of the following: foreign-born respondent, respondent age, respondent race, respondent gender, if respondent is biological/adoptive parent, respondent employment status, focal child gender and focal child age.

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