The Future of Children
PRINCETON-BROOKINGS

Universal Approaches to Promoting Healthy Development

VOLUME 29 NUMBER 1 SPRING 2019

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A COLLABORATION OF THE WOODROW WILSON SCHOOL OF PUBLIC AND INTERNATIONAL AFFAIRS AT PRINCETON UNIVERSITY AND THE BROOKINGS INSTITUTION

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Universal Approaches to Promoting Healthy Development: Introducing the Issue

Deborah Daro, Kenneth A. Dodge, and Ron Haskins

How can society best support parents, beginning early in their children's lives?

That's the most basic question we ask in this issue of *Future of Children*. The articles that follow describe several ways that local communities have tried to provide such support, by implementing new interventions, reforming existing systems of care, and improving the coordination and planning of services. The primary assumption underlying these efforts is that unless we can develop programs and strategies with universal reach to help parents at all levels of need, we will fight a never-ending battle to deal with families and children exhibiting individual problems that affect child development and child safety. Perhaps even more important, the efforts we highlight in this issue are showing scholars and policymakers how programs that help all or nearly all families in a community might be developed, tested and used as a platform to employ existing resources more efficiently. The most important point of all is the growing realization that parents rarely succeed entirely on their own, and that providing support from community resources to families in need is a worthy goal of public policy.

Before we turn to briefly summarizing the content of each article, it's useful to consider why the program innovations described in these articles are widely seen as the next step in evidence-based policymaking. Those concerned with children's welfare and safety can no longer be content to support individual families deemed to need assistance only after they have demonstrated serious problems or substantial risk. Our approach must be organized around offering assistance to all or nearly all families in a given community early in children's lives, and trying to bring supports and services at the moment family problems and vulnerabilities are identified or shortly thereafter. We contrast this broader preventive approach with strategies that confront family issues only after serious problems such as abuse or neglect have arisen and seem to pose an immediate or potential risk of harm to children.

If we saw children in a canoe heading for a waterfall, we wouldn't be content to wait at the bottom and mend their wounds

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after they crash; instead, we would climb to the top of the falls and try to stop them from going over the edge in the first place. Similarly, we must begin earlier in children's lives and come equipped to identify family needs and offer assistance in a timely fashion before problems surface. Yet this issue of the journal is not merely about prevention versus treatment—it's about universal approaches that can reduce the population rate of adverse outcomes.

Many questions remain about the appropriate design, implementation and funding of universal strategies. Still, the programs described in this issue suggest that building the infrastructure to support a universal approach involves three important steps. The first is a mechanism that allows all families in a community to be assessed and to receive advice from qualified professionals about how to ensure the healthy development of their children. Second, when giving advice, these professionals must recommend specific prevention or treatment services that are available and accessible in the local community—and, often, help parents gain access to and pay for the services. Third, programs need a way to track families' developmental and other issues, the services they seek and receive, and the results of those services. The various strategies reviewed here illustrate not just how all three steps can be accomplished, but also the advantages of this approach to serving families.

A few words are in order about how child protection currently operates in the United States. Over the past few decades, child protection has been governed largely by the accepted belief that parents should make most of the decisions regarding their children's care and wellbeing. Laws overriding parental preferences are generally limited to cases in which a child has experienced physical harm or neglect, or is at imminent risk. And usually, public concern is triggered only after a parent fails. Unfortunately for parents who have limited access to family support services or who can't navigate a complex social service delivery system, this public concern involves a formal report to child protective services, which can be threatening to parents and may deter them from seeking support.

Overview of the Issue

This issue of *Future of Children* is about changing the point at which public concern comes into play, on multiple levels. It's about moving away from a singular emphasis on "fixing" flawed parents and toward enhancing the context in which parents raise their children. It's about shifting the focus from stopping or preventing the negative to promoting the positive. It's about measuring success in terms of changes, not just among individual participants of a program but also among population-level indicators. It's about creating a framework in which universal strategies contribute to a more equitable and efficient allocation of costly targeted prevention and clinical services. It's about redefining the balance among competing goals: child safety, enhanced child development, and parental autonomy. And it's about expanding the way we learn what works best to promote healthy development, going beyond clinical trials to broader questions of implementation and continuous improvement.

Admittedly, the tension between responses that focus on individual change and those

that adopt a community-wide or population-level perspective is nothing new. Take, for example, the struggle between clinical medicine and public health. Historically, investment in medical research and treatment has heavily favored clinical medicine—which focuses on detecting and curing disease at the level of the individual. But this approach often occurs at the expense of promoting community or contextual change. Efforts to improve clinical interventions, for instance, concentrate on identifying the best match between specific therapies and a patient's socioeconomic and biological characteristics. The hope is that such "precision medicine" will improve population-level rates of illness and death. But, in reality, this strategy offers little insight into the underlying structural conditions that fuel persistent health problems and disparities.

As a recent commentary in the *New England Journal of Medicine* puts it, improving collective health calls for "the vision and willingness to address certain persistent social realities, and it requires an unstinting focus on the factors that matter most to the production of population health."[1] Wealth inequality and racial prejudice—including the legacies of past inequality and discrimination in American society—create conditions in which some individuals are at higher risk for poor health and less likely to have access to a full array of services. Precision medicine has little to say about these structural forces. In contrast, a precision public health framework has much to say about how underlying social conditions govern our policies, our service delivery systems, and the external narratives that contribute to poor outcomes—particularly among our most disadvantaged populations.

The articles in this issue apply the public health perspective to child protection and to the health, nurturing, and growth of parent-child relationships, particularly those established during a child's first few years. We're not the first to suggest this approach. In its 1990 and 1991 reports, the US Advisory Board on Child Abuse and Neglect issued a series of recommendations that centered on creating a public health response to what it termed "a national emergency" in the child protection system.[2]

This issue applies the public health perspective to child protection and to the health, nurturing, and growth of parent-child relationships, particularly those established during a child's first few years.

But our approach differs from earlier efforts in three important ways. First, the precision public health perspective we envision extends beyond current child welfare practice and examines how policymakers could coordinate a broader array of family supports and institutional efforts to reach *all* new parents with offers of help that match their level of need. Of course, changing the way public child welfare systems allocate resources is part of the story. More importantly, the strategies presented in this issue situate child protection in a broader continuum of parent support. Second, we are guided by growing evidence that well-crafted and carefully implemented prevention strategies

can significantly improve parental capacity and child safety while also enhancing child development. Others have doubted the utility of a prevention strategy. But now the evidence—including the rapidly expanding research on universal strategies reviewed in this volume, along with other recently published research on the implementation and efficacy of intensive home visiting programs—allows us to point to several promising pathways worthy of serious consideration and possible replication.[3] Third, we're not suggesting that a universal perspective is a policy panacea that will eliminate poor parenting, ensure optimal development for all children, and render obsolete any mandated interventions, including foster care. Rather, each article proposes a framework or strategy to better align both public and private agencies and move us toward significant change in our collective efforts, with public policies to support all parents, beginning with new parents and young children.

Using these frameworks, communities may be able to build a platform that reaches nearly all new parents, create a unifying normative profile around parenting demands, generate greater integration and service coordination at the local and state agency levels, and distribute information on the pressing needs of today's new parents. We don't know how far this change will go—that will depend on the efforts of public and private agencies at the state and community level, as well as on financial support. And additional research will be key to assessing this new perspective's eventual success. But we do know that current efforts have fallen short, and that a precision public health framework offers a promising evidence-based option for creating collective responsibility for all children while maintaining the privacy of responsible parents.

Summary of Articles

The issue begins with historical context. In "A Shift in Perspective: A Universal Approach to Child Protection," Deborah Daro reviews a Progressive Era policy that offered support to all new parents. Daro then traces the shift toward more targeted interventions over the next 50 years, as child welfare and child maltreatment prevention systems evolved. In contrast to early Progressive policies, which emphasized universal or common needs among all pregnant women and newborns, later treatment and prevention systems to support parents operated independently. Policymakers have paid little attention to the continuum of risk and variability among families with respect to adequate support and early intervention. Disparities in access to services, often shaped by race and class, mean that a disproportionate number of minority and poor families receive far fewer and often more punitive service options.

The divide between mandated and voluntary parental assistance stands in sharp contrast to the way other systems, particularly health care and education, carry out their mission. Daro notes that when a patient is diagnosed with precancerous cells, she isn't immediately offered chemotherapy or told to go away until the disease becomes Stage IV cancer. Rather, she's offered an intervention appropriate to her condition. Early medical treatment isn't viewed as intrusive; it's seen as an important first step in protecting health and avoiding more complex and costly therapy. Unfortunately, Daro argues, the policy response to parental shortcomings isn't comparable. There's no adequate early assessment when people become parents,

and child welfare agencies typically offer assistance only after a parent fails to meet expectations or a child is harmed.

Highlighting inefficiencies found in both the parent support and intervention systems, Daro suggests the time is right to align both systems through a universal approach that reaches out to all new parents, offering each family a level of assistance commensurate with their needs. State child welfare agencies that adopt the Family First, Welcome Baby, or First Born frameworks, for example—all discussed in this issue—can work with those implementing evidence-based prevention services, and with state public health and welfare agencies, to create a broad network of services. Such a partnership can minimize the longstanding gap between mandated and voluntary parental assistance, and can build an integrated, more effective child protection system. For this partnership to be truly innovative, Daro argues, it will need to move toward a community-owned universal assessment strategy that's offered to all new parents.

This universal platform wouldn't replace a community's mandated reporting system, nor would it be managed by the child welfare agency. Daro suggests that a delivery system to accomplish this objective should include promoting public recognition that raising children presents challenges for all parents. It should also strengthen cross-system staff and agency collaboration, and build a database categorizing the types and levels of support sought by families.

"Universal Reach at Birth: Family Connects," by Kenneth A. Dodge and W. Benjamin Goodman, offers a compelling example of what could be accomplished by following Daro's recommendations for a universal system of prevention services. Dodge and his team at Duke University developed a program now called Family Connects. In this article, Dodge and Goodman report the results of three studies using the Family Connects model that illustrate its feasibility and show the strengths it could bring to broader implementation. The first trial encompassed nearly 5,000 children born in two hospitals in Durham, NC, between July 1, 2009, and December 31, 2010. Half the babies and their families were randomly assigned to an experimental group, the other half to a control group. To contain costs, a random sample of 664 experimental and control families was selected for data collection; 80 percent of these families agreed to participate.

The Family Connects program consists of three pillars: home visiting, community services, and data and monitoring. During the home visiting portion, a discussion took place between a parent, usually the mother, and a program nurse. The interview was conducted in the family home during the first few weeks of the child's life and lasted from 90 to 120 minutes. The visiting nurse assessed family risk in 12 domains, and then the mother and nurse developed a plan to promote the child's development and wellbeing. Where necessary, and when agreed to by the mother, the nurse arranged visits to community agencies. Birth records were used to record family needs and services received.

The results of the intervention are encouraging. First, while 94 percent of the families had at least one need that merited intervention, most were minor or moderate. Only 1 percent of the families required immediate intervention because of serious need; about half had serious to moderate

needs that could be resolved by home visits, brief counseling, or other nonemergency services; and 44 percent had serious needs that required connection with community resources, such as treatment for substance abuse or depression, or intensive home visiting programs and other social services. Because Family Connects reaches the full population of birthing families in a community, it can reinforce targeted home-visiting programs by becoming a primary source of referral to them. In Durham, for example, Family Connects is the single most frequent source of referrals to Early Head Start and to Healthy Families Durham (an affiliate of Healthy Families America, the national model that offers intensive home visiting to new parents who have multiple sources of stress). One important finding was that a month after the nurse's involvement ended, 79 percent of families said they'd followed through to make a community connection. Even more impressive, 99 percent of the families involved with Family Connects said they would recommend the program to other new mothers.

A longer-term follow-up was conducted when the children were six months old. In this study, when compared with control group mothers, those in the experimental group reported 16 percent more community connections; reported more positive parenting behaviors and higher-quality father-infant relationships; were nearly 30 percent less likely to show signs of clinical anxiety; and reported 35 percent fewer serious injuries or illnesses among their infants that required hospitalization. Throughout their first year of life, infants of experimental families had many fewer emergency medical episodes than did control babies.

In addition to these positive findings, the Dodge team examined records of Child Protective Services over the children's first five years. Their review showed that children in the program group received 39 percent fewer protective services investigations than children in the control group.

Family Connects conforms to what the editors of this issue assume will characterize nearly all intervention programs with universal potential: namely, a mechanism for examining large (even universal) populations to detect problems in child development and parent-child relations, another mechanism to treat those with moderate and serious problems, and a data system to follow the families over time, keeping track of the results as well as the need for additional intervention.

A major challenge for a universal approach is the expense required to provide treatment programs to every family in a population. We assume that in most cases, this challenge can be reduced or solved by employing the approach taken by Dodge and Goodman: *providing infrastructure to better use and link targeted programs with the most appropriate recipients*. This is an example of the precision public health approach we discussed earlier—to achieve population impact, it individualizes interventions but reaches the entire population. In Family Connects, nearly every family with a new birth in a community is interviewed, and those who appear to need services get help finding them. This approach offers both the prevention advantages of universal coverage (or at least coverage among families who don't refuse the initial interview) and the financial advantages of limiting the most

costly services to the families in greatest need. Illustrating the potential of Family Connects for broad implementation, the program is now in place at 16 US sites, and negotiations are in progress with several more.[4]

Turning to another home visiting program with broad reach in a community, Christina Altmayer and Barbara Andrade DuBransky—in "Strengthening Home Visiting: Partnership and Innovation in Los Angeles County"—outline how Los Angeles County is developing an integrated prevention system for parents with babies. The authors discuss how a universal offer of assistance establishes a foundation on which public and private agencies can plan meaningful systemic reform—and spark incentives for greater investments in services directed to vulnerable families.

The vision builds on Welcome Baby, the county's universal home visiting program funded by First 5 LA, which provides as many as nine contacts to pregnant women and new parents until a child's ninth month. Three contacts occur before birth, one at bedside in the birthing hospital, and five afterward in the home.

Piloted in one hospital in 2009, the program is now available to new parents delivering in 14 hospitals throughout the county. These facilities deliver more than a third of all births in the county, and almost 60 percent of births occurring in the county's highest-risk communities. As of June 2018, the program had reached more than 59,000 families.

Since initiating Welcome Baby, First 5 LA has supported a range of evaluation studies to track early impacts of the pilot project and to document the quality of the program's expansion. The authors report on how the results of these studies have been used to refine the program's structure and content and to facilitate its replication. One evaluation of the pilot program compared Welcome Baby participants to new parents in the same communities who didn't access the program; it found favorable impacts on parental capacity, child development, and service utilization up to three years following program enrollment. A randomized trial of the program is currently being conducted to provide a more rigorous account of its effects.

Welcome Baby and other related investments in home visiting are part of a broader story unfolding in LA County. The authors describe an important policy shift underway, moving both public and private providers toward an integrated universal and targeted home visiting system. In December 2016, the county's Board of Supervisors adopted a unanimous motion instructing the Department of Public Health—in collaboration with First 5 LA and other programs and departments—to "develop a plan to coordinate, enhance, expand, and advocate for high-quality home visiting programs to serve more expectant and parenting families so that children are healthy, safe and ready to learn." Though Welcome Baby remains an important first step for addressing needs common to all new parents, the county's action plan calls for significant investments in new parent support and responsiveness from multiple county-level agencies, as well as the development and expansion of multiple home visiting models to meet the needs of the county's diverse population.

Altmayer and DuBransky summarize the responses of county agencies and private providers. Recommendations include streamlining referral pathways to ensure

maximum participation, especially in the county's highest-risk communities; filling service gaps for high-risk populations; increasing access to voluntary home visiting for families at high risk for involvement in the child welfare system; creating a common data collection system to improve outcome reporting; and maximizing the use of current resources while generating new revenue.

The authors aren't naive. They cite the many challenges faced by county leaders in developing this more integrated service system. These include the fact that Welcome Baby is available only in certain communities, the eligibility restrictions that decide who can access intensive home visiting services, LA's multitude of cultures and ethnic groups, the shortage of therapeutic and other resources required by families at high risk for maltreatment, and the critical need for workforce development. To help with funding shortfalls, the county has partnered with state leaders to expand the use of dollars from Medi-Cal (California's version of Medicaid) to support home visiting services. Leaders have also secured substantial new investments in intensive home visiting programs through the state's Temporary Assistance for Needy Families program and the county's Department of Mental Health. A newly created Collaborative Leadership Council is overseeing this expansion, focusing on integrating services, training and retaining qualified home visitors and supervisors, and building a sustained commitment to long-term system change.

As the authors note, systems don't change overnight. The service expansion underway in LA County is the result of long-standing, thoughtfully designed investments in home visiting, as well as community and county partnerships. These efforts are creating a political and policy context that's spurring elected officials to accelerate the system-building process.

In "Home Visiting for First-Time Parents: Community Innovation," M. Rebecca Kilburn and Jill S. Cannon report on the development, implementation, and outcomes of First Born, a targeted universal home visiting program that serves all first-time parents in several New Mexico communities. Created by local service providers in response to a lack of support for pregnant women and new parents in small towns and rural communities, First Born is a hybrid model that draws on several evidence-based programs in responding to conditions common to high-need, low-resource communities, including a shortage of nurses and other health professionals.

To promote early childhood health and development, First Born educates parents and helps them access community resources. It builds on a three-pronged approach to promoting child and family wellbeing, with teams of parent educators, registered nurses, and other health professionals visiting families in their homes during a child's first three years. The aim is to enhance life and social skills and to identify those who need more specialized services for issues like substance dependency, family violence, and developmental delays. Home visitors also help lead community service networks, which aids coordination and data sharing.

In contrast to other universal efforts discussed in this issue, First Born focuses on enrolling women pregnant with their

first child, drawing on formal and informal referral sources. The program also works with hospital maternity ward staff to identify eligible participants who were missed during pregnancy. It offers at least 40 weekly home visits during the child's first year; the frequency of visits diminishes during the child's second and third year.

A registered nurse or other licensed health care professional visits the home both before and after the child's birth, but most of the visits are made by paraprofessional parent educators who have at least a high school degree and some human services experience. All staff members receive extensive training in the First Born curriculum, as well as in child development, culturally competent practice, and more. Supervisors who observe the work of home visitors provide them with ongoing coaching and information on such topics as new health insurance eligibility standards and new aspects of the First Born curriculum.

First Born has used several types of evaluation to assess implementation and outcomes. According to Kilburn and Cannon, the first evaluations focused on clarifying core program components, defining common implementation indicators, and articulating early outcomes. Those studies have been used to guide program replication and enhance implementation quality.

The authors also report on a recent randomized clinical trial in which the study design took advantage of a natural experiment in Santa Fe, where service needs significantly outpaced service capacity. Using a lottery system, the team randomly assigned participants to intervention and control conditions, ultimately enrolling 244 families between June 2011 and October 2013.

The evaluation produced mixed results. On the positive side, children in the treatment group were a third less likely than control group children to visit a hospital emergency department, and 41 percent less likely to have visited a primary care provider nine or more times. These health outcomes, which occurred for families at all levels of risk, suggest that the parents were using well-baby care appropriately. But no significant differences were found for hospitalizations or for injuries requiring medical attention.

The First Born experience offers a cautionary tale for those who would adopt a universal approach. In Grant County—where the program was first implemented, 20 years ago—average outcomes for newborns have improved, but only modestly. Many factors account for this outcome of the program. Home visiting programs are typically voluntary, and not all families use the services effectively. Beyond program-specific issues, community levels of risk are sensitive to changes in the local economy, reductions in public services, and migration in or out of the area. As Kilburn and Cannon note, it's easy to explain why a universal program might not improve population-level indicators, but advocates of universal services commonly expect that such programs will lead to upticks in these indicators.

First Born also illustrates the challenge in getting a new idea to market. Although funders strongly prefer to support evidence-based programs, programs can only achieve evidence-based status after they've been tried. Kilburn and Cannon argue that in the current evidence-based investment climate, the cost of achieving evidence-based status and supporting quality replication is daunting, and beyond the reach of many communities. Fostering innovation and

continuous quality improvement in home visiting programs may require a more diverse approach to funding, one that rewards the ongoing evaluation and refinement of a program's innovations and adaptations.

In "HealthySteps: Transforming the Promise of Pediatric Care," Trenna Valado and her colleagues Jennifer Tracey, Jonathan Goldfinger, and Rahil Briggs offer the promise of pediatric care as a way to deliver psychosocial parent and infant support. They argue that pediatric care is non-stigmatizing, nearly universally accessed, and prevention oriented. The American Academy of Pediatrics already urges pediatricians to screen for adverse childhood experiences, maternal depression, behavioral and developmental risk, and even the effects of poverty on children. The authors note that while most pediatricians would like to extend their narrow health care mandate to broader social-emotional and behavioral care and education, they're constrained by issues of time and reimbursement.

Valado and her colleagues offer a solution to those constraints: a program called HealthySteps, which inserts a skilled child development professional into the pediatric practice to deliver eight core components that include screening for child developmental risk and family needs, a child development support line, consultation with individual families, and care coordination. The HealthySteps program is universal in its potential reach to all families in a pediatric practice, though it targets services to the highest-risk subgroup.

The evidence supporting HealthySteps comes from several national studies conducted by a team at Johns Hopkins University.[5] The most important evaluation covered 15 sites. At six of these, families were randomly assigned to receive HealthySteps services or not. At the other nine, families in a HealthySteps practice were compared with families in other, nonrandomized practices. The studies found that staff members at HealthySteps sites developed more awareness of the families' needs, and that families receiving HealthySteps were more likely to receive screening and services. The authors report some positive impact on children and parents over time, though they characterize the impact as "modest." The HealthySteps team is continuing to evaluate implementation, training, impact, and cost as the program spreads across the nation.

The HealthySteps model has made an important contribution by opening up the idea of using pediatric care to bring a broader array of screening, prevention, and intervention services to a community's full population of children. How such a model should be financed, and whether health insurance could and should pay for it, are questions that still remain.

In "A Population Approach to Parenting Support and Prevention: The Triple P System," Ronald J. Prinz offers another important innovation in universal approaches to prevention. Triple P is a universal parenting support program that aims to impact the population by lowering community rates of child abuse and improving parenting behavior. It was developed decades ago by Matt Saunders at the University of Queensland in Australia, where it joined a cadre of interventions based on social-learning theory aimed at improving parenting skills in families with children who displayed behavior problems. These interventions were targeted either at individual families or at small groups

of families. The apparent success of such psychological skills training programs led Triple P developers to consider how to bring the philosophy of parent training to a population level, without trying to force every parent into a therapeutic program.

To reach all families in a community and increase the number of parents who have critical parenting skills and knowledge—as a way to reduce child abuse rates and improve overall child behavior and outcomes—the Triple P developers arrived at a tiered system. Each successive tier engages parents more intensively in response to perceived need, at greater cost but with fewer numbers than the tier below. The first tier is a media and communication strategy, intended to change norms and values at a population level with a "light touch" intervention. The second tier is a set of community seminars that educate large groups of interested parents, as well as one-time consultation sessions for parents. The third tier reaches individual parents with as many as four contacts through individual sessions or online. The fourth tier increases the number of individual parent training sessions for those who need more. The fifth tier involves intensive family intervention over several months.

The tiered system is a way to reach the entire population while allowing families to choose varying doses of intervention. The levels are connected by a similar philosophy, guiding theory, and messaging about parent skills.

Triple P's implementation and impact have been extensively evaluated for 20 years. Many rigorous studies of its individual components have shown that each adds positive value. Evaluating population impact is harder, because the unit of evaluation is effectively the entire community. A trial of Triple P in South Carolina started by randomly assigning 18 counties to receive Triple P or not.[6] Outcome measures were drawn from administrative records of substantiated child maltreatment cases, out-of-home placements into foster care, and hospital admissions for injuries. Prinz and colleagues found that Triple P had large positive impacts on all three measures. They conclude with insights about the issues facing population-level interventions, such as cost, maintaining quality of implementation while making local adaptations, conducting rigorous evaluation, and generating public support.

In "Every Child Deserves a Permanent Home: The Permanency Innovations Initiative," Mark Testa and his colleagues Kristen Woodruff, Roseana Bess, Jerry Milner, and Maria Woolverton describe a program that differs in several respects from the other projects covered in this issue. Most importantly, whereas the other projects begin with an intervention program that's then implemented and evaluated, the Permanency Innovations Initiative (PII) tests the results of an elaborate program with several stages. Implemented in six sites—in Arizona, Illinois, Kansas, Nevada, and two in California—the program aimed to follow a four-stage model for selecting and testing interventions that could be used in child protection programs. The stages include:

- *Exploration and installation:* choosing promising innovations to install in real-world settings, based on the best available research evidence of past success.

- *Initial implementation and formative evaluation:* confirming a program's usability and statistically testing whether its outputs and primary short-

term outcomes are trending in the desired direction.

- *Full implementation and summative evaluation:* supporting implementation as planned (with integrity) and rigorously evaluating whether the intervention creates practical improvements in primary long-term outcomes that can plausibly be attributed to causal effects of the intervention.

- *Replication and adaptation:* spreading evidence-supported interventions and assessing whether similar positive outcomes can be reproduced with diverse populations at different time frames and in different settings.

All six projects agreed that the primary outcome measure was stable placement, defined as children exiting foster care into reunification, adoption, or guardianship lasting for at least six months.

Four of the six projects selected intervention programs that had been reviewed by the California Evidence-Based Clearinghouse for Child Welfare (CEBC; see http://www.cebc4cw.org/, which includes references to the evaluations); two of these four selected two intervention programs. Only one of the six programs was judged by CEBC to be "well supported' by program evaluation data; three were judged "promising," a lower score; and two were scored "not able to be rated," meaning that the programs lacked enough evaluation data to yield a reliable indication of success. The two PII sites in California didn't use CEBC-rated programs. Instead, they developed new intervention programs and used those to guide their work with the young people and families in their projects. Though untested, these two programs may have been of high quality.

The results weren't encouraging. Due to implementation issues, the Arizona site and both California sites decided not to move to PII's full implementation phase. The Illinois, Kansas, and Nevada sites did move to full implementation and evaluation, but the level of participation was a problem at all three sites. In Illinois, about half the sample failed to participate in any session. About 25 percent participated in multiple sessions and completed the full course (10 to 12 sessions), 16 percent competed three to nine sessions, and 12 percent completed only one or two sessions. In Nevada, about one-third of families didn't even provide contact information, and the level of missing outcome data reached 70 to 80 percent, preventing investigators from assessing the intervention's impact on short-term outcomes.

In Kansas and Illinois, no significant differences in achieving stable and permanent homes for children were found between experimental and control groups. In Nevada, experimental-control differences were significant but favored the control group. Again, these results for the primary outcome variable aren't encouraging.

Their "principal finding," the authors conclude, is that "none of the promising innovations tested in this initiative yielded meaningful improvements in … stable permanence when rigorously evaluated." Discussing the implications of PII for child welfare programs in general, they raise a fundamental issue: should child welfare programs primarily aim to prevent abuse, or deal with it once it has occurred? Everyone understands that child welfare must do both,

but preventing abuse through universal programs could keep many children out of foster care in the first place. The failure of the PII programs suggests that once children have been removed from their families, it's hard to design programs that will help them return home or achieve another permanent placement.

Can the Results of These Studies Be Replicated?

Summarizing the current status of universal services, three lessons predominate. The first is that so far, the goal of seeking population impact and the means of achieving it are well received across communities. The programs described in this volume are being disseminated across the country because community leaders recognize the need and are searching for solutions.

Second, the development of these innovative programs with community-wide reach is still at an early stage. Many challenges lie ahead if we're to develop these programs in a way that maximizes their potential for serious impacts. Innovation and rigorous evaluation remain pressing needs, especially because most of the programs examined have demonstrated no more than a modest reduction of the problems children and families face in their communities—and some have shown no impacts. It's particularly important to replicate the findings from initial trials and to conduct more studies of the conditions under which these programs flourish or flounder. If they are to survive, these programs must evolve, and we hope the next generation of programs will have even greater impacts.

Third, paying for the programs will be an issue for the foreseeable future. Communities will likely work out many individual solutions, but most will involve combining funds from several sources, with both public and private dollars playing a role. Organizations like the ones that sponsor the interventions described in this issue can expect to spend much time and energy developing ways to help finance their programs.

Endnotes

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A Shift in Perspective: A Universal Approach to Child Protection

Deborah Daro

Summary

In the United States, two approaches have developed to exercise collective influence on how parents raise their children. One is mandatory public intervention in families who have placed their children at risk, exemplified by the child welfare system. The other is voluntary offers of assistance, for example, child abuse prevention services that place responsibility on parents to determine whether they'll accept the advice they receive and change their behavior.

In this article, Deborah Daro traces a shift in emphasis from a Progressive-Era policy that offered common supports to all new parents to a more bifurcated prevention system that emphasizes public investments primarily for those parents and children at highest risk. Moreover, she writes, for the past 50 years, voluntary and mandatory parental assistance have operated independently, with minimal shared agenda setting and planning. She contrasts this to the health care system, where early assessment and diagnosis mean that people receive a continuum of care, based on their level of need. Early medical treatment isn't viewed as intrusive; it's seen as an important first step in protecting health and avoiding more complex and costly therapy.

Unfortunately, Daro argues, the policy response to parental shortcomings isn't comparable. There's no adequate early assessment when people become parents, and child welfare agencies typically offer assistance only after a child is harmed. She suggests that the time is right for a universal approach that reaches out to all new parents, offering each family a level of assistance commensurate with their needs. Ideally, she writes, "Seeking out and accepting formal public services to help meet parenting demands should be as acceptable as using preventive health care."

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Shared child-rearing standards are rare, particularly in a multicultural society that values the rights of parents to determine their child's best interests. In setting common standards, policy makers struggle to balance three aspirational, but often competing, values—child safety, healthy child development, and parental autonomy. Mandating public schooling exemplifies a generally accepted, shared child-rearing standard. Mandating specific parental techniques, on the other hand, is far more controversial and subject to reasonable legal and normative disagreements.[1] Even when a society can agree on what it wants for the next generation, government's role in ensuring these goals veers between helping parents to do the right thing and assuming parental responsibilities if they do not.

Given these societal and legal disagreements, two pathways have developed to exercise collective influence on how parents raise their children: mandatory public intrusion and voluntary offers of assistance. The public child welfare system illustrates the first approach. This system limits public intervention to parents who have harmed their children or who have placed their children at risk. Once government identifies these at-risk children, it subjects parents to a set of rules and statutes that can determine their future relationship with their children. By contrast, child abuse prevention services are voluntary and place responsibility on parents to determine when they will allow others into their private sphere, and whether they'll accept the advice being given and ultimately change their behavior. For the past 50 years, these two systems have operated independently, with minimal shared agenda setting and planning. Policy makers have paid little attention to the continuum of risk and variability among families' opportunities for adequate support and early intervention. Disparities in service access, often shaped by race and class, mean that a disproportionate number of minority and poor families receive distinctly fewer and often more punitive service options.

This divide between mandated and voluntary parental assistance stands in sharp contrast to the way other systems, particularly health and education, carry out their mission. For example, when a patient is diagnosed with precancerous cells, she is neither immediately offered chemotherapy nor told to go away until the disease reaches Stage IV cancer. Rather, the patient is offered an intervention appropriate for her condition. Early medical treatment isn't viewed as intrusive; it's seen as an important first step in protecting her health and avoiding more complex and costly therapy. Unfortunately, the policy response to parental shortcomings is not comparable. Our public response lacks an adequate early assessment when people become parents, and we often offer the appropriate level of assistance only after a parent fails to meet expectations or a child is harmed.

The Family First Prevention and Services Act (FFPSA), coupled with a significant expansion of prevention services focusing on new parents, represents an opportunity to build an alternative approach that can bridge these two systems. Such an approach is not entirely novel. Integrated treatment and prevention is not only a hallmark of our current approach to health and education, but also has roots in how we approached supporting new parents in the Progressive Era. Rather than operating in isolation, child welfare and targeted prevention programs have an opportunity to reignite

the spirit of universal service delivery that marked maternal and child health reforms in the early twentieth century. Creating a shared understanding that treatment and prevention are mutually reinforcing would move us closer to a more equitable and just balance among the goals of child safety, child development, and parental autonomy.

The Progressive Policy Response

In the late nineteenth and early twentieth centuries, state and local coffers supported most public investments in social services, health care, and education, often working closely with local charitable and religious associations.[2] The Children's Bureau, established in 1912, represented a new federal presence in child care and family support, operating new programs and underwriting research on the nation's infant mortality rate.[3] This research examined the primary causes of infant mortality and explored why the US rate exceeded the rate observed in other advanced economies.[4] It suggested, among other things, that infant mortality could be reduced not just by changing the public service infrastructure and enhancing environmental safety, but also by providing information and health services to pregnant women and new parents, particularly those living in rural areas.

The Sheppard-Towner Act

The Sheppard-Towner Act of 1921 created the first federal investment in explicitly promoting prenatal and infant care education and health services for families.[5] This policy generated significant debate. Opponents included the American Medical Association, which defined the effort as "an imported socialist scheme unsuited to our form of government." Some legislators viewed the act as part of a Bolshevist conspiracy. Others feared that it represented an attempt to remove children from the care of their parents by "turning control of the mothers of the land over to a few single ladies holding Government jobs in Washington."[6] But with women now having the right to vote and elected officials wondering how this new voting block might influence political alignments, the bill passed easily. It gave states incentives to establish a Bureau of Maternal and Child Hygiene that would manage the funds and institutionalize the public response for maternal and child health.

The Sheppard-Towner Act created the first federal investment in explicitly promoting prenatal and infant care education and health services for families.

The act was structured to be universal. Sheppard-Towner didn't require beneficiaries to be both "needy and deserving." Although it emphasized expanding services in rural areas and small towns, it didn't establish eligibility requirements for individual participants. Qualified recipients included any pregnant women or new parents who needed information or assistance for themselves or their newborns. Participants responded positively to this universal offer of assistance and, in the words of one author, often expressed pride in "raising their babies in the government way."[7]

The Sheppard-Towner Act authorized modest investments: $1.48 million in its first fiscal year and $1.23 million per year

for the next five years ($19.4 and $17 million, respectively, in 2018 dollars). Of this sum, each state received $5,000 ($70,000 in 2018 dollars) with the option to get an additional $5,000 if the state generated matching funds. All but three states—Massachusetts, Connecticut, and Illinois—eventually adopted the program.

The initiative supported nurse home visiting; midwifery education and professional development programs; construction and staffing of public health centers; removal of environmental hazards; prenatal care and child health care conferences; and informational letters to pregnant women regarding "scientific" or "modern motherhood methods" to improve pregnancy outcomes and guide early infant care.[8] All direct services were voluntary. The law expressly prohibited providers from entering a home uninvited or to take charge of a child without legal consent.

Although the initiative ended in 1929, detailed information provided by the states to federal monitors suggests that Sheppard-Towner yielded notable results. In seven years, local health officials held 183,252 health conferences and constructed 2,978 permanent prenatal health care centers, primarily in rural areas that historically lacked such services. State personnel distributed over 22 million instructional pamphlets and prenatal letters to pregnant women and new parents, many of whom embraced the guidelines in caring for their infants. In the initiative's final four years, more than four million infants and 700,000 expectant mothers were reached by some form of public health work conducted under the Sheppard-Towner Act.[9]

Impacts on Infant Mortality Rates

Between the act's passage in 1921 and its expiration in 1929 (when Congress failed to reauthorize it), the overall US infant mortality rate fell from 76.2 to 67.6 per 1,000, an 11 percent drop.[10] Proponents of the bill claimed this finding as empirical evidence that the act's investments produced the desired outcome. Opponents posited that the decline simply reflected a trend that began earlier. Indeed, the infant mortality rate had dropped 35 percent between 1915 and 1921, and it fell another 26 percent in the ten years immediately following Sheppard-Towner's termination.[11]

Inconsistent record keeping and the rudimentary nature of social science research at the time makes it hard to determine the act's impacts. Massive infrastructure improvements in sanitation and water quality, among other factors, had raised safety standards and eliminated key factors that contributed to early child deaths. Recently, two economists at Rutgers University examined state and federal archival records on how states invested their Sheppard-Towner funds alongside aggregate data on state level infant mortality rates. To isolate the potential impact of Sheppard-Towner, the authors controlled for prior state trends in infant mortality and any other so-called *fixed effects* that might have influenced trends at both the national and individual state levels. Keeping in mind that the data set and the study's methodology had notable limitations (uneven documentation of other state-initiated public health investments and an underreporting of infant mortality rates among blacks, for example), the authors estimated that the Sheppard-Towner Act may have accounted for 9 to 21 percent of the decline in individual state infant-mortality rates, primarily due to its impacts on white infant mortality.[12]

The study found, not surprisingly, that state investments in less patient-focused interventions, such as conferences, health fairs, and midwifery education, had less impact on a state's overall infant mortality

rate than did investments in nurse home visiting or the expansion of health clinics. Material distributed at public fairs or left in clinics for women to take home had less impact than child care information mailed directly to new mothers. States that invested in building health clinics where pregnant women and new mothers could receive follow-up services, as opposed to states that did not invest in permanent infrastructure, saw more sustained reductions in infant mortality.

[The Sheppard-Towner Act's] success hinged on local ownership of the idea.

Implications for Current Policy

The Sheppard-Towner Act's structure and implementation offers three important cautionary tales for those crafting today's parent support policies. First, the legislation's success hinged on local ownership of the idea. Infrastructure improvements and matching state investments yielded better outcomes over time. Though critics called the act an attempt to socialize medicine and create a federal wedge into the private family, the legislation contributed to common standards around child rearing by offering services to all pregnant women and new parents, regardless of income or race. And by educating the public about the value of prenatal care and various child-care techniques, it articulated a shared, common understanding among new mothers on how to help each other in times of stress.

Second, the legislation demanded state accountability, including documentation on the types and number of activities provided and the number of families reached. Perhaps reflecting the emphasis on scientific charity that was common during this period, agency directors accounted for how they invested funds, who the funds served, and what impacts the funds had on targeted outcomes. It's hard to know the consistency and quality of these data, but this early emphasis on linking efforts to outcomes established an important precedent for documenting the level of effort and making a case for future investments.

Third, the program underscored that it's important to use a combination of strategies. Public awareness efforts and education, infrastructure and professional development, and participant-level interventions all played a role. Success didn't hinge on a single strategy or silver bullet. Most important, all pregnant woman and new parents could access services and find appropriate follow-up care if they needed it. In this respect, the Sheppard-Towner Act served as a conduit for changing standards of care and expanding local service capacity.

Sadly, the universal, unqualified nature of helping all parents died with the Sheppard-Towner Act itself. Scholars have noted that the act was a bridge between the Progressive Era reforms and the New Deal.[13] Indeed, the Social Security Act of 1935 significantly expanded federal investments in maternal and infant health and wellbeing, as well as support for families unable to care for their children. Over 80 percent of the new funding targeted services for "crippled children" (11 percent) and nonmonetary aid and social services to "dependent children" (72 percent). Though it reached a larger proportion of poor children, this policy eliminated any notion that children have

universal needs and parents face universal challenges. The assumption that only poor or disadvantaged families would require public assistance became standard.

The Modern Child Welfare System

C. Henry Kempe and colleagues' 1960s research established a clear and compelling need for a formal child protection system.[14] They examined hospital emergency room X-rays in 70 hospitals and surveyed 77 district attorneys. Over a one-year period, emergency rooms in the sample treated over 300 cases of suspected maltreatment, and district attorneys prosecuted 447 cases. Among the cases treated in hospital emergency rooms, 11 percent of the children died and over 28 percent suffered permanent brain damage. In response, Kempe recommended a uniform system across all states that would let professionals and other concerned individuals report suspected cases to local law enforcement or child protective services. By 1967, all states had adopted some sort of formal reporting standards, many of them mandatory, and had outlined investigative and response procedures.[15]

Some cases identified through these state systems mirrored the intentional mistreatment and significant physical injury that Kempe and his colleagues observed. The majority, however, more closely reflected the profiles documented in early population-based incidence studies.[16] This research confirmed that child abuse and neglect reflected poor parenting skills. However, the research also found that even minor parental shortcomings became magnified when families had limited access to quality health care, early supportive services, and adequate income. Maltreatment victims included both children intentionally harmed by dysfunctional parents and children who might be described as collateral damage from a chaotic and poorly resourced environment that impacted not only their own wellbeing but often their parents' as well.[17]

Early Framing

Despite growing evidence that child welfare cases disproportionately included low-income families, those promoting the Child Abuse Treatment and Prevention Act of 1974 explicitly emphasized the universal potential for maltreatment across all segments of society. Facing opposition from the Nixon Administration and resistance from legislators to anything perceived as "another poverty program," advocates portrayed child abuse as an individual problem that could affect any parent.[18] In addition to articulating a uniform child abuse reporting system, the act allocated half of its resources for research to learn more about maltreatment's causes and consequences, as well as promising clinical strategies to address it. This dual emphasis on doing and learning proved politically savvy, and the bill passed with little opposition. But the policy response didn't match the political rhetoric. Because the response system largely centered on investigating identified cases and providing case management, it minimized the variability in parental capacity across the socioeconomic spectrum. The act and the response system it proposed also vastly underestimated what would be required for many parents to avoid subsequent abuse or neglect and to retain custody of their children.

Based on the modest number of reports initially filed (about 60,000 per year), carefully assessing all identified families seemed feasible. And cases where children needed to be permanently removed from

their homes due to serious physical injury or abandonment would be self-evident. But as the number of reports grew, it proved far more difficult to determine which parents should be offered supportive services and for how long. Further, child welfare workers found themselves in the difficult position of judging parental intent with a population often overwhelmed by contextual burdens.[19] Child welfare caseworkers offered their clients a rather narrow range of parenting education, household management, and counseling services. They didn't manage eligibility standards or the availability of income maintenance programs, housing subsidies, or health care services—the very services many parents needed to safely care for their children.

As the number of reports grew, it proved far more difficult to determine which parents should be offered supportive services and for how long.

On one level, the absence of a holistic approach to child maltreatment makes it rather surprising that foster care rates didn't immediately increase. Within a few years, though, foster care rates did in fact rise, as did suspected maltreatment reports. More than two million reports were documented in 1987, representing a 225 percent increase over 1976. By the mid-1990s, the number of children reported as potential victims of abuse or neglect exceeded three million annually.[20] During this same period, the number of foster care placements grew. By 1990, 400,000 children were spending some time in foster care; by 1995, the number had risen to 567,000.[21]

Federal Legislative Reforms

Child welfare's core outcomes—safety, stability, continuity, wellbeing, and permanence—represent a tall mission. Child welfare workers are asked both to keep families together and to keep children safe. If children need to be removed, they must be reunited with their families, or given a permanent alternative, as quickly as possible. In addition to safety and permanency, child welfare workers are expected to monitor and manage children's physical, cognitive, and behavioral health needs. This caseload complexity has led to multiple federal reforms over the past 40 years. Beginning with the Adoption Assistance and Child Welfare Act of 1980 through the recently approved Family First Prevention and Services Act, policy makers have set high expectations, asking the child welfare system to balance the resources necessary to both protect children and preserve families.[22] Strategies promoted to support one or more of these policy goals have included:

- Investments in family preservation programs that provided child welfare services to children at risk for placement while they remained in their own homes
- Investments in differential response systems that offer voluntary prevention services to families reported but not substantiated for maltreatment
- Specific timelines for making decisions about permanent placement and accelerating the adoption process

- Incentives for adoption and extended Medicaid eligibility for children placed with relatives who agree to serve as guardians, rather than as adoptive parents

- Extended Title IV-E assistance for foster care, adoption, and guardianship payments to youth up to age 19, 20, or 21

Each reform minimized one issue, often at the cost of complicating another. When more children entered foster care, the policy emphasis shifted to strengthening and expanding services for child welfare cases in which parents retained custody of their children. When the proportion of children reunited with their families within 12 months declined, workers focused on expanding alternative placements through adoption assistance or permanent placement with relatives. Poor educational and mental health outcomes for children served by the system called attention to the need to expand services for behavioral health. Developing a network of interventions within a single agency to address myriad objectives created fluctuating priorities and notable operational challenges.

Funding Reforms

Although only a fraction of children served by the child welfare system are removed from their homes, these cases consume the lion's share of the resources.[23] Of the close to $8.7 billion federal dollars allocated for child welfare activities in fiscal year 2016, most flowed to states through two sections of the Social Security Act. Under Title IV-E, state agencies received $7.8 billion (90 percent of the total) to reimburse a portion of the funds they spend on foster care, adoption assistance, and, where applicable, permanent placement with relatives. In addition, these funds can be used for youth who age out of foster care or are expected to age out without permanent placements. Under Title IV-B, state agencies received an additional $668 million (8 percent of the total) to support services intended to protect and promote children's welfare primarily through supportive services. Recipients include parents with children in foster care to facilitate reunification, families who have retained custody of their children but remain under the supervision of child welfare workers, and families identified through differential response systems as being at risk of future abuse or neglect.

Between fiscal years 2012 and 2016, the federal investment in Title IV-E—the funding pool that covers the costs of foster care and adoption services—increased by 16 percent. During this same period, the general child welfare–services budget, Title IV-B, declined by 8 percent, while total investments in other child welfare programs remained flat.[24] The high cost of foster care, adoption, and other alternative-placement services has historically limited the resources available to expand investments in the clinical and therapeutic services needed to support families and promote positive child development.

In response to demands for greater investments in supportive services for families to prevent foster care placement, the Child Welfare Waiver Demonstrations offered the possibility of shifting resources from foster care payments to direct clinical interventions. Conceived as a strategy to generate new knowledge about innovative and effective child welfare practices, these waivers give states flexibility in using federal funds, particularly Title IV-E money. They

have been available to states on and off since they were initially authorized in 1994. Though the waivers don't increase the total amount of federal dollars a state can receive for child welfare expenditures, states can reallocate any savings that result from their investments in non-foster care services, supports, and innovations.[25]

Waivers are currently being used by 28 states, the District of Columbia, and one Native American tribe. States can use them to implement established or emerging evidence-based programs to improve participant wellbeing and track the impacts of such services on placement and reunification rates.[26] A review of how the waivers affected child welfare agency practice, by the National Research Council Study Committee on Child Maltreatment, found that in many instances the waivers alone didn't give states sufficient incentives to implement and sustain a solid continuum of high-quality, evidence-based clinical interventions.[27]

Shift toward Prevention

The Family First Prevention and Service Act, approved by Congress as part of the Bipartisan Budget Act of 2018, offers state child welfare administrators yet another opportunity to craft meaningful reforms. As with the Title IV-E waivers, the act encourages states to expand investments in time-limited services designed to reduce the need for foster care, particularly in cases that stem from drug abuse, mental health problems, or a lack of parenting skills.[28] In contrast to the existing waivers, this legislation gives states greater financial incentives to adopt the strategy. Under the original waiver program, states received a 50 percent reimbursement for the services they provide only in cases where the child's family earns less than the amount that would have qualified them for Medicaid reimbursements in 1996. This standard is met, on average, in only 40 percent of cases. By contrast, Family First lets states claim partial reimbursement for the services they offer any child. It also extends the family preservation and support services funded under Title IV-B beyond the current 12-month limit, allowing states to work with families longer before having to determine whether foster care placement is necessary. Last, the act limits federal reimbursements for youth placed in group homes rather than with foster care families to the first two weeks of their placement.

The legislation is not without controversy. Not all advocates believe the policy will improve the lives of children entering the system, and many fear it will compromise the resources and options available to foster care residents.[29] Others applaud it and hope most states will develop plans to invest a greater proportion of their Title IV-E funds to expand mental health and substance use prevention and treatment services, as well as in-home skill-based programs such as parent education, home visiting, and individual or family counseling.[30] All supported interventions must have some empirical evidence of their efficacy, though they don't have to meet the highest evidentiary standard, that is, repeated randomized trials.

Commenting on Family First's potential to change the child welfare system, Jerry Milner, acting commissioner of the US Administration on Children, Youth and Families, suggested that his agency's primary mission should be to strengthen family resilience: "We need to change the focus of child welfare to primary prevention of maltreatment and unnecessary removal of children from their families. We should

prioritize the importance of families by ensuring that when foster care is necessary, it operates as a support for the family rather than as a substitute for the parent."[31]

Considering child welfare services as an agent for primary prevention is difficult to square with its operating system and statutory mission. Families enter the child welfare system through a reporting system activated only when someone observes and acts to identify parents who have maltreated a child or who have demonstrated a high likelihood of doing so. Further, Family First prioritizes services for children in foster care or at high risk of placement. This standard presumably favors a child with a history of maltreatment, not those who qualify for primary prevention under any definition of the term.

That said, several well-defined clinical interventions have been proven effective in reducing later maltreatment and improving a child's physical and behavioral health, even in cases where parent-child relationships are seriously compromised.[32] However, it's less certain that this strategy can reduce placement rates enough to make major investments in clinical services cost neutral. If more resources are directed to children in or at risk of foster care placement, what will happen in cases where families are unable or unwilling to care for their children? Will comparable investments be available for children who have no option but to spend some time, and perhaps even a significant proportion of time, in out-of-home placements? As child welfare systems seek to significantly reduce or even phase out group homes, what new service, staffing, and funds will be required to adequately support foster care parents or others forms of alternative placement?

Several well-defined clinical interventions have been proven effective in reducing later maltreatment and improving a child's physical and behavioral health, even in cases where parent-child relationships are seriously compromised.

Child welfare administrators have shown little willingness to make the major investment shifts that would be needed to decisively alter the array of therapeutic services available to children both in and out of the foster care system. Their reluctance is understandable. Child welfare will always be pulled between the need to demonstrate system outcomes, such as reducing later maltreatment, lowering placement rates, and reunifying families more quickly, and the need to demonstrate measurable improvements in child wellbeing and parental capacity. And as one seasoned child welfare observer notes, "state [child welfare agencies] would be hard pressed to maintain cost neutrality if they were to undertake innovations to enhance child wellbeing alone."[33] As child welfare reforms again introduce a prevention mission, they exacerbate the tension between providing sufficient therapeutic interventions to allow children to remain with their parents and optimal interventions for children in care. Improving child welfare's performance requires new thinking and reframing of its partnership with local networks of prevention services. If child welfare agencies want to

play a role in primary prevention, we also need a new, earlier identification system to reach the most challenged families before patterns and consequences of poor parenting materialize.

The Prevention Response

In addition to advocating for a child abuse reporting system, Kempe promoted primary prevention, calling for, among other things, a universal home-visiting program for all new parents, regardless of family circumstances.[34] He described this intervention as "an expected, tax-supported right of every family along with fire protection, police protection, and clean water—societal services that we all deserve to have and from which no one can be excluded."[35] Indeed, a mandated reporting system made sense to Kempe only in a context that included comparable prevention investments. Unfortunately, early interest in prevention didn't keep pace with interest and investments in the public child protection system. Kempe's seminal textbook on child abuse, *The Battered Child*, lacked a specific section on prevention until the third edition, published in 1980. Commenting on what the authors' viewed as a significant addition to their book, Kempe and his coeditor, Ray Helfer, included the prevention section with "great hope and expectation." "Prevention programs," they wrote, "are beginning to yield results. The future looks bright."[36]

The Prevention Continuum

Efforts to prevent child abuse didn't start with a unified, national public policy or substantial federal investment. Rather, local advocates led the charge, focusing their attention on raising public awareness around the problem's scope and impact. National nonprofit organizations, such as the National Committee to Prevent Child Abuse, the Kempe Center for the Prevention and Treatment of Child Abuse, and the Children's Division of the American Humane Association, created public awareness campaigns reminding the public that "it shouldn't hurt to be a child" and urging parents to "take time out; don't take it out on your kid."[37] Embracing the idea that maltreatment can occur across the socioeconomic spectrum, these messages held parents responsible for making changes—child abuse can be prevented in all families only if parents have the knowledge and support they need.

Perhaps to avoid a direct link with efforts to reduce poverty or social inequities, child abuse prevention advocates rarely focused on policy changes that could affect a family's economic wellbeing, such as higher wages, better child care, enhanced housing policies, or more generous income maintenance programs.[38] Rather, they coalesced around a suite of programs to improve key gaps in parents' knowledge of child development, the demands of parenting, and home and child management; the quality of the parent-child relationship as observed in the emotional ties and communication between parent and child; parents' skill in coping with the stresses of infant and child care, as well as the care of children with special needs; and peer support systems to reduce parents' isolation.[39] These programs targeted potential perpetrators and focused on reducing the incidence of physical abuse, neglect, and emotional maltreatment. By contrast, efforts to prevent child sexual abuse focused on reducing the vulnerability of potential victims. These programs, generally universal in reach, offered education and support on inappropriate touching to all children enrolled in schools, early care facilities, and youth recreational and service organizations.[40]

Because child maltreatment lacked a unifying causal theory, dozens of programs sprang up in communities across the country. Each had its own funding streams and practice standards.[41] Advocates solicited funds to support these efforts from foundations, local governments, and individual donors. Beginning in 1980, advocates worked to establish state Children's Trust and Prevention Funds to generate a modest, common funding stream through state legislative authorizations, surcharges on birth or marriage certificates, personal income tax line-item contributions, and private fundraising. The legislation that established mandatory reporting in each state (the Child Abuse Prevention and Treatment Act of 1974, or CAPTA) is the sole consistent federal support for prevention services. In contrast to the nearly $8.7 billion federal dollars allocated for child welfare activities in fiscal year 2016, however, CAPTA, which has maintained a modest level of funding over the past 40 years, in the same fiscal year allocated about $40 million to support community-based prevention services.[42]

Every community had a publicly funded child protection system, but no community had a coordinated, easily identified prevention system. The content, characteristics, and structure of parent support services reflected each community's interests and unique funding opportunities. Program selection often had more to do with style than substance. Program evaluations, when they were done at all, lacked strong designs or measures, paying minimal attention to such issues as selection bias, preexisting conditions, and external factors that might account for suggested program effects.[43] Families often accessed an intervention not because it was the best fit for their needs but because it was the sole option available. And with wide variation both across and within states regarding who offered these services and their eligibility criteria, it was hard for parents to know where to look for assistance or what help they might receive. The prevention continuum did a good job in creating a service market, but it didn't create a preventive system that could attract and retain families unable to manage this market or who faced the greatest challenges.[44] Reaching families at high risk required not just more services but services that understood how various chronic and acute circumstances might influence, in different ways, parents' perceptions of their children, their capacity to care for those children, and their willingness to change.

Every community had a publicly funded child protection system, but no community had a coordinated, easily identified prevention system.

Shift to Early Intervention and Evidence-Based Practice

Two trends in the 1990s gave rise to a more consistent prevention response: neurological research documenting how early experiences affect a child's life trajectory and a policy shift toward directing social service investments to programs proven to be effective through rigorous research. In the first instance, advances in neuroscience provided vivid imagery of how early trauma and a lack of adequate emotional care affects an infant's developing brain.[45] Translated for popular consumption by the Carnegie Foundation's

Starting Points report and lengthy feature articles in *Time* and *Newsweek*, these images proved as powerful as Kempe's initial work in generating public interest in the issue.[46] In response, the child abuse prevention field, as well as the broader early childhood community, shifted toward strategies to strengthen early parent-child attachment and promote healthy child development.[47]

The growing evidence that high-quality early intervention programs could make a difference in a child's developmental trajectory proved equally important in changing the prevention landscape. Studies of early childhood programs implemented in the 1960s and 1970s that followed participants into adulthood found marked improvements in long-term educational outcomes and adult earnings compared to children not enrolled in these programs.[48] Most relevant for child maltreatment, David Olds and his colleagues published the results from a randomized clinical trial of a nurse home visiting program first implemented in Elmira, NY. His research documented program impacts on a range of child and parent outcomes, including a reduction in substantiated child maltreatment.[49] Follow-up studies on the original population, as well as additional randomized trials of the model in Memphis and Denver, further supported the program's efficacy.[50] At the same time, practice and political interest in early home visiting grew as other national and state home visiting models extended their reach. The Government Accounting Office (GAO) issued a report in 1990 summarizing research on an array of home visiting and early child development programs. The GAO concluded that home visiting, when well implemented, improved both the short- and long-term health and wellbeing of families and children.[51]

Drawing on this report, as well as the history of early home visiting in many European counties and the state of Hawaii's success in implementing universal screenings of all newborns, the US Advisory Board on Child Abuse and Neglect called for a universal system of home visitation for newborns and their parents. "Complex problems do not have simple solutions," the Board wrote. "While not a panacea, the board believes that no other single intervention has the promise that home visitation has."[52] Though the board's report didn't have a measurable impact on federal policy at the time, it galvanized advocates working on child-maltreatment prevention, family support, and early childhood around a shared mission. Rather than calling for investments in a broad range of strategies, prevention advocates began to emphasize investing in supports for pregnant women and new parents.[53] Early home visiting became the best—and in some communities the only—bet for preventing child maltreatment, improving parental capacity, and fostering optimal child development. A network of early home-visiting programs emerged across the country, creating a consistency in child-abuse prevention that would have been unthinkable a decade earlier.[54]

Over time, the focus on a single prevention strategy raised some concerns. As an example, compare the conclusions from two *Future of Children* issues on the topic. The first, published in 1993, lauded the strategy, recommending that the "use of home visiting be further expanded. This could be done through demonstration projects in particular communities or through large-scale, national initiatives."[55] Six years later, initial optimism had waned. Given the intervention's rapid spread and a corresponding increase in evaluative data, the editors had anticipated

that revisiting the topic would justify their early enthusiasm. Unfortunately, the editors said, the new research was "sobering." Writing in 1999, they recommended that "any new expansion of home visiting programs be reassessed in light of the findings presented in this journal issue. We further urge that existing programs focus on program improvement, that practitioners and policy makers recognize the inherent limitations in home visiting programs and embrace more modest expectations for their success, and that home visiting services [be] funded as part of a broad set of services for families and young children."[56]

In response, the developers of national home visiting models sharpened their performance expectations, sharpened the number and structure of direct service practices that replication sites had to adopt, and strengthened their monitoring, supervisory standards, and accountability systems. Despite concerns over the lack of uniform efficacy within and across all models, prevention advocates continued to value the goal of reaching pregnant women and new parents and giving them the necessary knowledge and skills to enhance their parental capacity. Home visiting programs became more widely available, often integrated with a community's system of early childhood care. And the face of prevention and parent support became more consistent across communities and more visible to child welfare administrators.

Shift toward Treatment

The Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV), authorized as part of the Affordable Care Act of 2010, solidified home visiting's central role in preventing child abuse and promoting child wellbeing. Though it wasn't the first attempt to direct significant federal resources to early home visiting, MIECHV's initial $1.5 billion investment, and its reauthorization in 2018, established a sizable and stable funding stream for early home visiting and identified an entity to manage the program in each state.[57] Like the Sheppard-Towner Act, MIECHV extended services into underserved areas, such as rural counties, tribal communities, and US territories. More communities now offer early home visiting as part of their prevention continuum, and nearly 70 percent of the states are replicating multiple models, offering new parents more opportunities to access early support.[58]

MIECHV's emphasis on replicating proven, evidence-based programs and setting common performance standards has ushered in a new level of rigor and expectations for prevention. MIECHV grantees are required to report common aggregate information on the number of parents and children served, the demographic characteristics of program participants, and various service characteristics (for example, the specific evidence-based program being implemented, or the proportion of families who successfully complete the program). It has also extended the mission of early home visiting far beyond the notion of preventing child maltreatment. Home visiting is increasingly viewed as the universal elixir for a range of child and maternal health and behavioral problems. States, through home visiting, are expected to improve maternal and newborn health; reduce child injuries, abuse, and neglect; improve school readiness and achievement; reduce crime or domestic violence; improve family economic self-sufficiency; and improve coordination and referral for other community resources and supports. These goals have been embraced by other initiatives

calling for a consistent set of outcome indicators around home visiting, such as those developed by the Pew Home Visiting Data for Performance Initiative, which states are advocating to document the collective impacts of all their early intervention efforts.[59]

Home visiting programs feel significant pressure to use more aggressive outreach strategies and limit enrollment to parents who are struggling.

MIECHV has improved service availability and measurement, but sadly, it's also contributing to the notion that prevention services, like child welfare services, are best limited to parents at high risk for failing their children. MIECHV-funded home visiting programs feel significant pressure to use more aggressive outreach strategies and limit enrollment to parents who are struggling with problems like opioid addiction, homelessness, poor maternal mental health, or family violence. This is not a new focus for prevention investments. Certain early home visiting programs were designed for and have proven effective with this population. Some programs reach this population by screening a broad range of potential recipients and prioritize those with prior trauma or psychological challenges. Others capture this population by establishing eligibility criteria that limit access to parents with certain demographic or descriptive characteristics suggesting higher need (first-time mothers, teen parents, low-income families).[60] All of the models engage a proportion of high-risk parents and, in certain cases, find that their impacts are strongest with these families.[61] But families that face significant challenges represent only part of prevention's target population. Families commonly access home-visiting programs through other health and social-service providers with whom they have an existing relationship. There is no question that many new parents who enroll in these services struggle because of abuse, neglect, or other adverse childhood experiences, instability in their current living conditions, limited education, or lack of social support. However, many also have various strengths, such as supportive extended families, a capacity to navigate complex service systems, and a desire to identify and access available resources. Indeed, these and similar strengths often contribute to their successful enrollment and retention in voluntary services.[62]

The question is not whether primary prevention programs should be offered to families at highest risk. Rather, the challenge is to discern whether focusing on the highest-risk families will maximize the strategy's population-level effects and how this shift will impact operations and public perception of who might want these programs. Assuming that staff can be armed with the tools they need to address the complex personal and parenting challenges that high-risk families face, other questions remain: How many families can a home visitor successfully engage, particularly when a program is asked to enroll more troubled families? What are the implications of a higher-risk target population for home visitor qualifications, training, and supervision? What does this mean for the cost per participant to deliver these programs? What goals should home visitors directly address, and when do they need to refer families to

others for meaningful assistance? How can home visiting programs that were designed to enhance parental capacity tackle other behavioral or contextual issues without compromising their original mission?

Some very high-risk families can and will successfully engage and thrive in voluntary programs, assuming both the program and its community referral network are sufficient to meet their needs. Other parents won't be able to fully participate in a voluntary parenting program that they may not see as particularly valuable or worth their time given their daily struggles. Improving the reach and efficacy of early home visiting and comparable prevention programs requires more nuanced planning with other systems that serve the highest-risk families, particularly local child welfare agencies. We need new thinking about how to assess parents and direct them to a level of service best suited to their needs and their capacity to stay enrolled.

Building an Integrated System

Brookings Institution scholar Gilbert Steiner began his 1976 book on how to structure family policy with a quote from Grace Abbot, the first director of the Children's Bureau. Writing in 1938, Abbot noted that "all children are dependent but only a relatively small number are dependent on the state."[63] Reflecting on this quote, Steiner characterized the "lucky child" who avoids dependency on the state as one whose "biological parents provided a home for them; who spent their preschool years and after school hours in or around their homes; had adequately and reasonably nutritious meals at home; and were examined and treated periodically by private physicians and dentists."[64] If we applied these standards to today's children, we could label many children in the United States as "unlucky." And the proportion of unlucky children would grow exponentially if we added such qualifiers as stable homes, safe neighborhoods, or consistent and affordable health care. In truth, all families need outside help; the question is how best to direct them to such assistance in ways that value parental autonomy but also embrace a public commitment to child safety and wellbeing.

Broad policy initiatives, such as raising the minimum wage, extending child-care credits, offering paid family leave, enacting comprehensive health care reform, and providing stable housing, are frequently mentioned as strategies to reduce the parental stress associated with poverty and to create a context more hospitable to parents who are seeking to do right by their children.[65] But even if we initiated all these reforms, child rearing would still be challenging. Many parents manage the challenges through personal networks or community resources. The initial CAPTA debate failed not because policy makers were reluctant to link child maltreatment to poverty but because they failed to design a system that recognized and tried to alleviate the inequities in parental capacity that inevitably surface when parents have unequal access to supportive services and contexts.

As the nation's child welfare system seeks to minimize the need for costly and often harmful out-of-home placements, and as early home-visiting programs ponder how to identify, recruit, and retain the most challenged new parents, we have the opportunity to create a new paradigm that explicitly recognizes parents' universal need for support. But to do so, we must weave together today's fragmented public and

private, voluntary and mandatory resources into a comprehensive system of care—a tall order. It would require making all parents comfortable with asking for and using help, particularly when informal support is limited. Seeking out and accepting formal public services to help meet parenting demands should be as acceptable as using preventive health care. We also must recognize that the appropriate level of assistance will vary depending on parents' needs and skills. For some parents, voluntary prevention programs may not be enough, just as certain medical and health conditions require more intensive therapy. Asking for help may lead to the need for mandated services or child welfare involvement. The gold standard in this new system should not be to avoid the child welfare system entirely. Rather, we need to ensure that our parent support and child protection systems are fair and efficient, allocating the most costly, intensive, and (in some instances) intrusive options only to families who have exhausted other opportunities.

We have the opportunity to create a new paradigm that explicitly recognizes parents' universal need for support. But to do so, we must weave together today's fragmented public and private, voluntary and mandatory resources into a comprehensive system.

What would this new system involve?

First, we need to change the way we view the nation's parent support and child protection mission. That means a shift from seeing offers of assistance as intrusions into family life to viewing them as opportunities to level the playing field. Early public initiatives, such as the Sheppard-Towner Act, centered on the belief that improving outcomes for all children meant addressing common needs and creating a context to help parents do the right thing. In essence, a public health approach to problem-solving is the science of protecting and improving the health of people and their communities. It focuses on preventing problems not simply by altering individual behaviors but by creating an environment in which desired behaviors are easier to adopt and maintain.[66] This approach to problem-solving works if we accept the notion that collective goals are best realized when individuals act in ways that support their own health and the health of others.[67] Preventing child maltreatment and strengthening parental capacity requires more than a single public agency and service strategy, or even a series of targeted prevention services. It requires a system of care that recognizes that all parents face common challenges and that these challenges require both a collective and individual response. A universal commitment to help all parents care for their children establishes the foundation necessary to efficiently allocate scare public resources and create a social context that is more respectful of parental autonomy and more responsive to child safety and wellbeing. Waiting for parents to fail before justifying offers of collective support becomes unacceptable.

Creating this shared understanding will require new strategies that encourage rather than mandate individual involvement. In framing this problem around the adoption of a universal year of service, Isabel Sawhill of the Brookings Institution suggests that

although we can certainly mandate such a policy, a more prudent path would be to create "a strong expectation that every US resident give one year of service and be provided a structured opportunity to do so."[68] In others words, raise the expectation and set the standard while creating a system that is inviting, accessible, and capable of completing the task at hand. The current child welfare reporting system is fundamentally flawed in this regard. It acts as a gatekeeper to a system designed to determine whether parents have the capacity to keep their children. We need a universal and consistent method to discern both what families need and their capacity and willingness to use the available help. In most cases, their needs will be met through voluntary services or informal support networks. But in some percentage of cases, the best fit for families may be the services offered and managed by local child welfare agencies. As other authors report in this issue, we know from models that have already been developed and tested that universal offers of support to all new parents can be crafted in ways that produce high levels of acceptance and measurable change at both the participant and population level. That is, we can offer preventive services without creating a sense of intrusion.

What we haven't tested yet is how well such a system will operate if one possible outcome is a family being directed to the child welfare system, where services may be mandatory or, at a minimum, there are clear consequences for families who refuse assistance. At present, we have limited data about how best to make these determinations and how to introduce this concept to a community already leery of its public child welfare system. However, a referral to child welfare need not be viewed as a failure on the part of the family or even the system. Rather, child welfare needs to be viewed as an alternative intervention system in which placement may be required to realize the important goals of child safety and healthy child development. We have a reporting system and mandated child welfare interventions because we need them. This need can never be totally eliminated. To suggest that foster care represents failure or that children entering this system have had their life trajectory forever damaged is to fuel anger at the system and intensify public distrust. Removing children from their parents is not ideal. But we can minimize the need to do so by having universal conversations with all parents and by offering help at key points in a child's development, beginning at birth. And if preventive services aren't enough and temporary placement or alternative care becomes necessary at any point, these options can be enhanced and harm minimized through high-quality therapeutic and educational services for both parents and their children.

State child welfare agencies that adopt the Family First framework have an opportunity to work in partnership with those implementing evidence-based prevention services, as well as state public health and welfare agencies, to create a broad network of services. Such a partnership can reduce the longstanding gap between mandated and voluntary parental assistance and can build an integrated, more effective child-protection system. For this partnership to be truly innovative, it will be equally important to move toward a community-owned, universal-assessment strategy, initially reaching all new parents. This universal platform would neither replace a community's mandated reporting system nor be managed by the child welfare

agency, and it would not be a case-finding tool. Rather, it would be a tool to enhance parental capacity and would have three goals: reaching all new parents; engaging parents in a conversation about their concerns and their available supports; and helping parents access the supports they need to meet their parenting expectations. In implementing this system, local service providers can build a consensus around shared parenting expectations and can identify ways that current eligibility criteria, referral links, and capacity limit public agencies' responses.

Through strong, sustained partnerships across agencies that support all aspects of family life, including not only traditional child welfare and family-support services but also preventive health care and an array of primary supports that all or most parents use (such as child care, adequate housing, sufficient income, support from family members and friends), we could shape the public understanding around collective parenting and improve both participant- and population-level outcomes. The data generated through a common assessment of the resources all parents have available and the extent to which these resources adequately address their needs would give communities rich, real-time information on what parents say they need the most, as well as on the community's collective capacity to meet those needs. Such data would offer both child welfare and preventive services an empirical basis to assess their investment strategies and to redirect their efforts to reinforce one another's missions. Under this scenario, child protection would become a broadly shouldered responsibility in which child welfare is but one player in a network of institutions committed to shoring up parents and ensuring the safety and wellbeing of all children.

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Universal Reach at Birth: Family Connects

Kenneth A. Dodge and W. Benjamin Goodman

Summary

How do we screen all families in a population at a single time point, identify family-specific risks, and connect each family with evidence-based community resources that can help them overcome those risks—an approach known as *targeted universalism*? In this article, Kenneth A. Dodge and W. Benjamin Goodman describe Family Connects, a program designed to do exactly that.

Developed and tested in Durham, NC, Family Connects—now in place at 16 sites in the United States—aims to reach every family giving birth in a given community. The program rests on three pillars. The first is *home visiting*: trained nurses (or other program representatives) welcome new babies into the community, typically at the birthing hospital, then work with the parents to set up one or more home visits when the baby is about three weeks old so they can identify needs and connect the family with community resources. The second pillar, *community alignment*, is an assembly of all community resources available to families at birth, including child care agencies, mental health providers, government social services, and long-term programs for subgroups of families with identified needs, such as Healthy Families and Early Head Start. The third pillar, *data and monitoring*, is an electronic data system that acts as a family-specific psychosocial and educational record (much like an electronic health record) to document nurses' assessments of mother and infant, as well as connections with community agencies.

In randomized clinical trials, Family Connects has shown promising results. Compared to control group families, families randomly assigned to the program made more connections to community resources. They also reported more positive parenting behaviors and fewer serious injuries or illnesses among their infants, among other desirable outcomes. And in the first five years of life, Family Connects children were significantly less likely to be subject to Child Protective Services investigations than were children in a control group.

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Since University of Colorado pediatrician Henry Kempe first identified battered child syndrome in 1962, most of the nation's efforts in this area have been directed toward protecting and treating children after the fact of maltreatment. This is a never-win situation because the maltreated children keep on coming. More recently, researchers, service providers, and policy makers have been shifting toward prevention of maltreatment. But most of these efforts have been underfunded or have targeted a small number of children in a community. Frustrated by the modest (at best) overall impact of child protection programs that serve only a small number of families in a community, policy makers and scholars have called for new approaches that seek *population impact*—that is, lowering the maltreatment rate for all children and families in a particular area, such as a state, county, city, or school system.[1]

Achieving population impact requires more than simply scaling up a proven intervention that had been delivered to only a small number of children. It requires an approach that involves the entire community of service providers, policy makers, and population of families from the outset. To illustrate this point, in this article we identify challenges that occur when attempting population impact by developing and scaling up programs targeted only to small subgroups. Next, we introduce the theoretical model for Family Connects, a program that seeks to overcome these challenges and to improve population indicators of infant health, wellbeing, and child maltreatment through collaboration with the community of intervention providers, brief postnatal home visits to all birthing families, and family-specific connections between families and community resources. We then describe findings from three independent evaluations of Family Connects. These findings suggest that the program can be implemented with broad reach, high quality, and positive impacts for infants and families. We conclude by discussing possibilities and challenges for disseminating and sustaining the model, as well as future opportunities for innovation.

Challenges to Scaling Up Targeted Interventions

Several major early intervention programs, such as Nurse Family Partnership and Early Head Start, are long-term, intensive, and expensive.[2] To save money, they limit eligibility to a subpopulation based on demographic characteristics. The logic behind child abuse prevention programs that target a demographic subgroup is efficiency: if we can identify a subgroup that is known to be at high risk for maltreatment, then restricting intervention to that subgroup should save money because the intervention won't be "wasted" on a low-risk group that would most likely have a healthy outcome even without costly intervention. This is a sensible strategy when three criteria are met:

1. The targeted subgroup includes a high proportion of the problem outcome cases;

2. Intervention can encompass a high proportion of this targeted group; and

3. Intervention effectively lowers the rate of problem outcomes in this group.

These criteria are not easily achieved in child maltreatment prevention programs. The first problem with targeting subgroups of participants in child maltreatment prevention is that risk exists across all

demographic groups.[3] Even though relative risk may be higher in some subgroups than in the rest of the population, risk still accrues in supposedly lower-risk groups. And because these lower-risk groups are larger, they account for most child maltreatment cases. This is an example of the "prevention paradox" first noted by epidemiologist Geoffrey Rose in 1981, in which the majority of cases of a negative outcome occur in populations at low or moderate risk for that outcome, because those at highest risk represent only a small portion of the population.[4] In the case of child maltreatment, imagine a targeted subgroup (for example, low-income, first-time mothers) that constitutes perhaps 20 percent of the full population and has a two-fold higher risk for child maltreatment than the rest of the population. In this scenario, two-thirds of all maltreatment cases will occur in the nontargeted 80 percent that will never receive intervention. Even if an intervention with the targeted subgroup is highly effective (say, cutting maltreatment in half), the full effect would be to reduce population-level maltreatment by only 17 percent. Many problem cases will be missed if the intervention is restricted to one subgroup and the impact on the population as a whole will be small.

Because lower-risk groups are larger than higher-risk groups, they account for most child maltreatment cases.

The second problem is that intervention with targeted subgroups rarely has a high *penetration rate* (the proportion of all families in the targeted group who actually receive the intervention). Although randomized controlled trials (RCTs), in which a group of families who receive the intervention are compared to a control group of families who don't, often report a high participation rate, families in such trials represent a unique subgroup of the targeted population—they are the ones who have provided prior written consent to get into the study. Nonconsenting families never get into the study, but they are still part of the targeted population. When targeted interventions are rolled out and scaled up in a community, the participation rate is typically lower than during the trials, a loss described as the "scale-up penalty" by Northeastern University criminologist Brandon Welsh and Nurse-Family Partnership developer David Olds.[5] One reason for the low penetration rate is that stigma makes some families hesitant to participate. If the targeting factor is high risk for abuse, some families might not want to be identified as being in that group.

Another challenge in reaching all families in the targeted group is that funding rarely allows for saturation of the targeted population, partly because the cost would be prohibitively high.[6] Penetration rates will drop even further because targeted programs rarely have the funds to saturate the eligible population. Even more worrisome, limited funding opens the door to cherry-picking participants so that the families that enroll in the program are at relatively low risk because they are high in compliance or motivation, and the highest-risk and most needy families are left out.

Another problem with interventions that target a small subgroup is that the intervention must have a large impact to achieve population-level outcomes. Although

numerous targeted programs achieve a statistically significant impact compared with a control group, the size of the intervention effect may not be large enough to affect the full population.

Attractiveness and Challenges of Universality

The problems with targeted interventions we describe don't mean that they fail to help a subgroup of families promote their infants' healthy development. A targeted strategy has advantages, of course. Risk among the target group is indeed higher, by definition. Also, the content and focus of the intervention can be tailored to a relatively homogeneous group of families that may have common needs and may respond in a similar way. Further, not all families in a community are likely to need the long-term, intensive services that such programs provide. Some families may respond favorably to short-term programs or alternate interventions that meet their particular needs. The challenge is to reach all families in a population and then quickly triage and match interventions to a family's clinically assessed needs. Rather than force communities to choose between universal and targeted intervention, the best strategy may be to embed targeted interventions in a universal strategy that reaches the entire population while offering intensive interventions for targeted subgroups. A useful analogy is our health care system for young children: pediatricians see children universally for well-baby visits, during which they screen and triage children to identify subgroups that could benefit from specialized services, such as neurosurgery, speech therapy, or ear tubes. Candidates for neurosurgery are not selected based on demographics but on clinically assessed need. Targeted interventions like the Nurse-Family Partnership are the neurosurgery of child abuse prevention, and universal approaches are the well-baby pediatric care. We need both to achieve a comprehensive system of developmental psychosocial-educational care.

A universal approach to early intervention has several advantages.[7] Programs restricted to the poor are, rightly or wrongly, popularly considered "poor programs." Unless participation brings outright cash payments, potential participants might may not join at high rates. Popular and political support is more likely if a program is offered to everyone in the community giving birth, rather than a select few, and such support increases the likelihood of funding. Over time, universal reach means that popular support is more likely to continue and funding is more likely to be sustained. Because of economies of scale, universal reach means that the per-family cost can be reduced and recruitment can be less complicated, less ambiguous, and less awkward and stigmatizing.

A universal goal leads to a very important shift in aspiration and focus. If an intervention is directed at an individual family or only a small subset of families, it necessarily prioritizes helping the family respond to a fixed system of community resources: such an intervention teaches a parent how to be first in line for the best child care facility, cash payments from government, and health services. The intervention makes no effort to improve the overall quality of childcare in the community or the efficiency with which families in general can connect to community resources. If an evaluation of the intervention's effectiveness compares a small number of participating families to families in a control

group, it is plausible that the intervention could be shown to improve the lot of these families. What happens when this program is brought to scale and every family tries to be first in line? Only when universality and population impact become the goals will program developers find it cost-effective to direct intervention not only at individual families but also—to encourage better-coordinated efforts to support children and families—at community agencies.

Whether child policy should be targeted or universal was the central question when public schooling was first considered two centuries ago. Some advocates argued that middle-class families would find ways to get tutoring and other schooling for their children even without government support, and that tax dollars should be conserved. Other advocates argued that universal public education would be of higher quality. Universal public education won out, of course. It's difficult to imagine a well-functioning public education system that doesn't include children from all backgrounds, even recognizing that many affluent families send their children to private schools.

Universal reach doesn't necessarily mean a single program with a single funding source and mandatory attendance by all. Pediatric care again provides an analogy and an example of near-universal reach in a voluntary system in which cost and funding are challenges. In the United States, pediatric care is supported with multiple funding sources, both public (like Medicaid and CHIP) and private (like health insurance). For universal programs that aim to prevent child maltreatment and promote healthy development, funding will be an important issue, pushing clinicians to develop approaches that are both cost-beneficial and that minimize total cost to make the approach palatable in challenging financial and political times.

In addition, universal reach doesn't mean that every family receives the same intervention program and the same dollar expenditure. Returning to the analogy of pediatric care, universal reach is achieved by matching every child with a primary care physician at birth. If families don't voluntarily identify a pediatrician, the birthing hospital typically matches them with a provider, even if that means a clinic. Then the family is encouraged to attend a series of age-related well-baby visits that include physical examination and assessment; brief, universal, developmentally appropriate interventions (for example, "Have your baby sleep on her back"); brief, family-specific interventions (for example, discussion of breast-feeding and its challenges); and referral to specialists when problems are identified (for example, ear tubes for otitis media or an oncology referral for leukemia). Of course, not every child gets neurosurgery, which is reserved for the few whose clinical diagnoses show it is needed.

What Families Need at Birth

It would be fortuitous if developmental science could identify a single environmental or family factor at birth that predicts the majority of variance in important child outcomes. But empirical evidence indicates that many factors, ranging from family financial instability to parents' mental health problems, provide unique incremental predictions. One factor, such as a mother's substance abuse, might account for a maltreatment outcome in one family, whereas a different factor, such as financial

instability, might account for maltreatment in another.[8]

The task becomes one of engineering: How do we screen all families at a single time point, such as birth, identify family-specific risks and needs for intervention, and connect each family with evidence-based community resources to address that family's risk?

These findings suggest that no single intervention can successfully resolve risk in all families.[9] Instead, different interventions will be necessary for different at-risk families. Some prevention programs rely only on demographic characteristics to identify a subgroup for targeted intervention (for example, low-income first-time mothers), but the evidence indicates that clinical characteristics such as maternal depression or parental substance abuse provide a stronger basis for targeted interventions.

The task becomes one of engineering: How do we screen all families at a single time point, such as birth, identify family-specific risks and needs for intervention, and connect each family with evidence-based community resources to address that family's risk? This sort of *targeted universalism* has been pioneered in other areas. For example, it describes the state of optimal health care delivery in which a general pediatric practitioner sees every family, assesses child-specific risk, and then refers the child to a specialist, such as a urologist or surgeon who can deliver targeted intervention when needed. This model forms the basis for Family Connects.

The Family Connects Model

Family Connects aims to reach every family giving birth in a community so that it can identify family-specific risks and needs and then connect each family with the community resources to meet those needs, strengthen and enhance the parent-child relationship, and improve parent and child wellbeing.[10] For communities to afford implementing the model universally, the per-infant cost must be modest. Costs are contained by guidelines that restrict the number of intervention contacts (in-person visits, phone calls, etc.) to a maximum of seven and by limiting the time period to the first 12 weeks (except in unusual circumstances, such as a long-term stay in a neonatal intensive care unit). The program isn't a continuous intervention or a case management system. Instead, it consists of time- and cost-limited outreach in the spirit of a public health model. In implementations thus far, the total cost has averaged between $500 and $700 per infant birth, an amount we believe is affordable in communities where the cost of public education totals more than $8,000 per older child annually. Of course, funding for public education comes from a combination of local, state, and federal sources; we believe funding for public health approaches like Family Connects can also come from combined local, state, and federal sources if community leaders can figure out how to braid these resources. Because the program's fixed-cost infrastructure expenses are relatively large, it can't be implemented at modest cost

with only a small subgroup of families in a community.

The program rests on three pillars. The first pillar, *home visiting*, is a system to reach all families giving birth in a community, typically at the birthing hospital. A trained public health nurse (or other program representative) welcomes the baby into the community. The nurses invite themselves to one or more home visits (when the baby is about three weeks old) so that they can identify needs and connect the family with community resources. The second pillar, *community alignment*, is an assembly of all community resources available to families at birth, including child care agencies, mental health providers, government social services, and programs for subgroups of families, such as Healthy Families, Parents as Teachers, and Early Head Start. The third pillar, *data and monitoring*, is an electronic data system that acts as a family-specific psychosocial and educational record (much like an electronic health record) to document nurses' assessments of mother and infant, as well as connections with community agencies.

Nurse Home Visits

Nurses or program representatives greet the mother at the birthing hospital to congratulate the family and to welcome the baby into the community. They deliver the message that the community wants to partner with the parents to support their child's long-term success in health, education, and wellbeing. They also tell the parents that research shows every parent can be successful but that at the same time, every parent can benefit from support. In that spirit, the nurse would like to visit the parents in their home when the infant is about three weeks old to understand and help with their family-specific needs. The visits are flexibly timed to avoid disrupting community standards of care, such as well-baby visit schedules. The nurse also aims to accommodate family situations, for example, by delaying a visit because of extended stays by relatives or by speeding up a visit to attend to urgent needs. The nurse promises to bring "goodies," such as free diapers, to make the visits more attractive.

Ideally, both the mother and her partner (usually the father) are present during the visit, although the nurse takes the mother's lead in deciding whether the partner's presence is appropriate. During one pilot of Family Connects, the nurses assumed that partners would participate and went to great lengths to invite them. But this strategy sometimes led the mother to withdraw, presumably because of conflict between the parents or difficulty in scheduling a convenient time. Because of this, the protocol was changed: now the nurse listens to the mothers' advice on whether to include their partners, who participate about half the time.

The initial home visit typically lasts between 90 and 120 minutes. The nurse is trained to conduct a structured clinical interview that includes several hundred scored items and covers a diverse set of topics in a conversational tone. The topics aren't covered in a preset order; typically, the nurse follows the mother's interests. The oral interview responses are supplemented by standardized screening for particularly sensitive or high-risk circumstances, such as substance abuse. The nurse assesses risk in 12 key domains (see table 1) that predict adverse outcomes among children. Consistent with an ecological approach to health and wellbeing, these domains encompass not only the needs of individual family members, but also the

family's needs within its environment.[11] The domains include child characteristics, such as temperament or health risk, which may make an infant more challenging to care for; family characteristics, such as parents' substance use, parent-child relationship quality, or household safety; and community characteristics, such as neighborhood violence or access to resources.

Risk in each domain is scored quantitatively on a simple four-point scale: 1 indicates no risk; 2 indicates risk that can be resolved through a brief intervention by a nurse (for example, if the parent has no knowledge about how to select out-of-home childcare, the nurse educates her and helps her identify childcare plans); 3 indicates significant ongoing risk that requires a connection with a community resource to resolve, such as a mother's substance abuse problem requiring professional treatment; and 4 (used in less than 1 percent of cases) indicates an emergency requiring crisis intervention (for example, imminent risk to the infant's health or infant maltreatment).

At the end of the interview, the nurse summarizes the findings with the parents, and together they develop a course of action based on the needs identified. The plan may include follow-up home visits, phone calls, or contact with external agencies. This approach encourages parent buy-in and protects them from stigma in several important ways. First, the course of action is grounded in the needs identified by the parents and nurse during the home visit, rather than presumed needs based on family demographic characteristics. The experience is similar to, say, having high blood pressure identified during a routine physical and working with a doctor on a course of action to treat the problem. Second, because the plan is collaborative rather than directive, the parents are active participants in determining what's best for their family.

After developing a course of action and gaining parental consent, the nurse communicates in writing with the infant's pediatrician and the mother's primary care provider to create a bridge to ongoing care after the nurse's work ends. Four weeks after closing the case, the program makes a follow-up phone call to check on the family's progress and to determine whether referrals to community agencies were successful.

Table 1. 12 Risk Factors Assessed and Scored in Family Connects Nurse Home Visits

Domain	Risk Factor
Parenting and child care	Child care plans
	Parent-infant relationship
	Management of infant crying
Family violence and safety	Material supports
	Family violence
	Mother's past experience of being maltreated
Parent mental health and wellbeing	Depression and anxiety
	Substance abuse
	Social and emotional support from others
Health care	Parent health
	Infant health
	Health care plan, medical home, and insurance

When families report an unsuccessful community connection, Family Connects staff members either make another attempt to get the family and the agency to connect (if desired) or to help the family access alternative community resources. If an agency has high rates of missed connections, program staff also work with it directly to reduce systemic barriers.

Alignment with Community Agencies

To make efficient referrals, nurses need to understand the array of community agencies that serve families with young children. The second pillar of the program is alignment with these agencies. A Family Connects staff member reaches out to as many agencies as possible to recruit their participation; to document agency goals, service capacity, eligibility criteria, fees, wait-list time, and evidence of effectiveness; and to assemble agencies into an annotated electronic directory for the nurses to use. In Durham, NC, for example, the program's directory includes over 400 agencies, ranging from childcare facilities and volunteer parent groups to professional intervention services. Staff prioritizes identifying evidence-based programs. And although in many communities the array of agencies includes a wide variety of government and professional services, as well as nonprofits, identifying informal resources, such as faith-based giving closets or food pantries, is equally important, especially in underfunded and rural communities. In communities with fewer formal resources, or communities in which formal services lack high quality, informal resources may be a critical source of support for families with young children.

Coordination with community agencies is helped along by one (or more) advisory boards. One board consists of community leaders and agency directors who guide program direction, and a second board consists of frontline agency workers who work to solve problems, such as long wait lists and misunderstandings, as they arise.

Integrated Data System

Family Connects staff document all their work in a family case record created from birth reports. The record begins with attempts to schedule a home visit; it also includes the nurse's clinical interview, screening instrument responses, scoring of risk, referrals made to community agencies, interventions received at the agencies, and parents' "consumer satisfaction" responses to follow-up calls.

The case record serves three important functions. First, it's a key clinical tool that integrates information from many sources to guide intervention decision-making. The family-specific case record helps the nurse match family needs with known evidence-based interventions in the community. It incorporates information from the agency, such as whether the family entered intervention and made progress. Much of this information is communicated to the infant's pediatrician at the end of the program. However, all information sharing requires the parents' consent, so that they remain in control.

Second, the case records are scrubbed of identifying information and aggregated to provide a summary about each community agency. If the case records include almost all births in a community, these agency records will be fairly comprehensive. They can be used to document agency service to families, the quality of that service, and parents' satisfaction with the agency. Family Connects uses the aggregated information

to communicate with agencies about their performance and to solve problems like chronic long waiting lists or excessive dropouts.

Third, the family case records are aggregated to create population-level indicators of family needs, and the agency records are aggregated to map community assets and resources. The collective family-needs information is then matched with the aggregated community resources to identify gaps in a community's ability to serve all its families. For example, in one community the case records indicated that 11 percent of all birthing mothers had a substance abuse problem meriting external intervention. But the asset map indicated that the community had resources to serve only 3 percent of mothers. The program passed this information on to county commissioners, who were able to fund additional substance abuse treatment for mothers who needed to be home with a newborn.

The aggregated information also provides population-level indicators of family functioning at birth and can be used to track community progress across cohorts of parents and children. In this way, the integrated data system not only serves the needs of individual families and agencies but also advances public health.

Training, Supervision, and Fidelity

The Family Connects program requires training of each staff member, certification of nurses in the protocol, ongoing supervision, and documentation that implementation adheres to the program model (known as *fidelity*). After qualified nurses are hired, their training begins with reading detailed manuals. Then they observe expert nurses during home visits and conduct practice home visits that are observed by a supervisor. They are tested on how well they adhere to the way questions are posed to parents and how reliably they score risk in each of the 12 domains. Finally, they receive certification that they're ready to implement the program. Nurses from remote areas travel to the national site, in Durham, NC, for several days of training. Back in their home communities, an onsite nurse supervisor works with a national site overseer.

Nurse supervisors conduct quarterly fidelity checks with all home visiting nurses at their site, in which the supervisor accompanies nurses to parents' homes and evaluates adherence to 62 components of the visit. These items include properly administering health assessments for the mother and baby; completing all assessment queries across the 12 domains of family risks and needs; teaching about infant care and safety; and developing of a course of action with the family. Supervisors also evaluate family risk in each of the 12 domains and compare their ratings with those of the home visiting nurse to ensure consistency. After initial scoring, all records are stored electronically at the national office in Durham so that rates of adherence to the model can be tracked over time both within and across program sites.

Nurse supervisors conduct quarterly checks with all home visiting nurses, accompanying the nurses to parents' homes and evaluating adherence to 62 components of the visit.

Family Connects Evaluation

To be eligible to receive funds from the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program, or to become known as "evidence-based," a program must undergo a rigorous RCT to demonstrate its impact when implemented in a research setting, and we report findings from two such community-level RCTs. Less commonly completed but just as important is an evaluation of how well a program is implemented and how much of an impact it has when it's scaled up and brought to new communities. We offer such a field evaluation of Family Connects.

In these three trials, we were interested first in whether the program could be implemented at scale with high quality. Indicators of quality included:

- *penetration rates*, that is, the proportion of all families giving birth that were recruited into and successfully completed the program;
- *fidelity of implementation*, defined by the portion of families for whom quantitative scores were completed for nurses' adherence to the protocol (as a percentage of all possible items) and the reliability of nurses' scoring of risk factors (computed as chance-corrected agreement with an independent supervisor's scoring of the same protocol), and;
- *connection rates*, defined as the portion of all families for whom need was identified, the portion of all families for which an external agency connection was proposed, and then the portion for whom a successful connection was established.

We were also interested in impact, which was determined by comparing outcomes for intervention families to those for control families in the domains of connectedness to the community, parenting quality, parent mental health, infant maltreatment, and use of emergency health care.

First RCT

The first RCT included all 4,777 resident children born at the two hospitals in Durham County, NC, between July 1, 2009, and December 31, 2010.[12] About 40 percent were European American, 37 percent were African American, and 23 percent belonged to other groups or were multiracial. Twenty-six percent reported Hispanic ethnicity, 62 percent received Medicaid or had no health insurance, and 56 percent were not married.

Families of babies born on even dates were assigned to receive the intervention and those born on odd dates were assigned to be controls. The evaluation was based on intent-to-treat status, meaning that nonparticipants were included and that recruitment into the intervention was part of the intervention itself. The intervention began at birth and almost always ended by the time the child was 12 weeks old. For a subset of analyses, interviews and in-home observations of parenting and the home were completed when the infant was about six months old, at least three months after the Family Connects program had been completed. To contain costs, a randomly selected, representative sample of 664 intervention and control families were recruited for data collection; 549, or 80 percent, agreed to participate. In addition, administrative records were retrieved from emergency departments for counts of emergency room visits and overnight stays in a hospital, as well as

Table 2. Implementation and Impact Findings across Three Trials

Population	*RCT I* All resident county births at two Durham County, NC hospitals (July 2009–Dec. 2010)	*RCT II* All resident county births at one Durham County, NC hospital (Jan. 2014–June 2014)	*Field Trial* All resident county births in four low-income, rural counties in eastern NC (Feb. 2014–Dec. 2015)
FC Implementation sample	***2,327***	***456***	***994***
% minority	70%	72%	67%
% Medicaid or no health insurance	61%	68%	69%
Penetration rates			
Initial participation rate	80%	76%	84%
Of those initiating, completion rate	86%	84%	77%
Program completion rate	69%	64%	64%
Fidelity			
Adherence to protocol	84%	90%	87%
Agreement in assessing risk factors	k=.69	k=.75	k=.78
Community connection rates			
% of families with at least one referral	45%	42%	54%
% of referred families for initiating service	79%	83%	94%
Impact			
Connectedness			
Number of community connections	I > C**	I > C**	I > C**
Parenting and parent mental health			
Number of positive parenting behaviors	I > C**	I = C	I = C
Father-infant relationship quality	I = C	I = C	I > C**
Maternal anxiety/depression rate	I < C**	I < C**	I = C
Infant health and wellbeing			
Number of emergency care episodes			
Birth to 6 months, administrative records	I < C**	I = C	Not assessed
Birth to 6 months, mother's reports	I < C**	I = C	I < C**
6–12 months, administrative records	I < C**	I = C	Not assessed
Birth to 24 months, hospital records	I < C**	I > C**	Not assessed
Child protective services investigations	I < C**	Not assessed	Not assessed

*Cohen's kappa coefficient is a statistic that measures agreement between raters after accounting for the possibility of agreement by chance. Kappa values greater that 0.60 are considered to be substantial.
**Intervention group (I) average differs from the control group (C) average. There is a greater than 95% likelihood that this difference is not due to random chance or error (p<.05).

from Child Protective Services for counts of child maltreatment investigations and substantiations.

Evaluation of Implementation

Penetration rates. As table 2 shows, of the 2,327 families that gave birth on an even date, 1,863 (80 percent) were successfully recruited into the program, which required that they listen to the goals and framing of the program, interact with a Family Connects staff member (usually at the birthing hospital), and schedule an initial home visit. Of the recruited families, 86

percent successfully completed the program, including receiving referrals to community resources when appropriate, yielding a population-wide full completion rate of 69 percent.

Fidelity of implementation. Adherence to the protocol manual is essential for program quality. In this trial, an independent quality-control expert accompanied nurses on 116 randomly selected home visits and independently documented whether a nurse correctly completed each of 62 model elements. Overall, nurses adhered to 84 percent of all elements, which is considered high. The quality-control nurse also independently scored each of the 12 risk factors to ensure consistent family risk assessment. Because each of the 12 factors was rated on a scale with only four possible entries (1 through 4), the expert and the home visiting nurse might have had a high rate of agreement on factors score by chance, as they would be expected to agree some of the time simply by guessing. To overcome this problem, the nurses' reliability in assessing risk was evaluated using Cohen's kappa coefficient, a statistic that measures agreement between raters after accounting for the possibility of agreement by chance.[13] Kappa values greater than 0.60 are considered to be substantial. For the current trial, chance-corrected agreement across the 116 observed home visits was 0.69.

Risk and connection rates. Ninety-four percent of all families were scored as having at least one need that merited intervention. In 1 percent of families, the need was a crisis requiring immediate emergency intervention; 49 percent had modest to moderate needs that the nurse could resolve through additional home visits and brief counseling (for example, through breastfeeding consultation or education about how to find high-quality child care); and 44 percent had serious needs requiring connection with a community resource, such as substance abuse treatment, depression treatment, or social services. One month after the nurse terminated her involvement with the family, Family Connects staff telephoned each family to find out whether they had successfully made a community resource connection. Of the families referred to a community resource, 79 percent reported they had indeed followed through to initiate the connection.

Satisfaction with Family Connects. During the phone call, family members were asked whether they would recommend Family Connects to another new mother, and 99 percent said yes.

Evaluation of Impact

To evaluate the impact of Family Connects, interviewers visited a representative subset of intervention and control families when the infant was six months old. To avoid potential bias, interviewers weren't told which families had been eligible to receive Family Connects, and participating families weren't told that the primary study goal was to evaluate Family Connects. Consent was obtained to access administrative records, and hospital and Child Protective Services records were accessed then and later. Findings are summarized in table 2.

Connectedness. Six months after the birth, intervention mothers reported 16 percent more community connections than did control mothers.

Parenting and parent mental health. Intervention mothers reported more positive parenting behaviors than did control

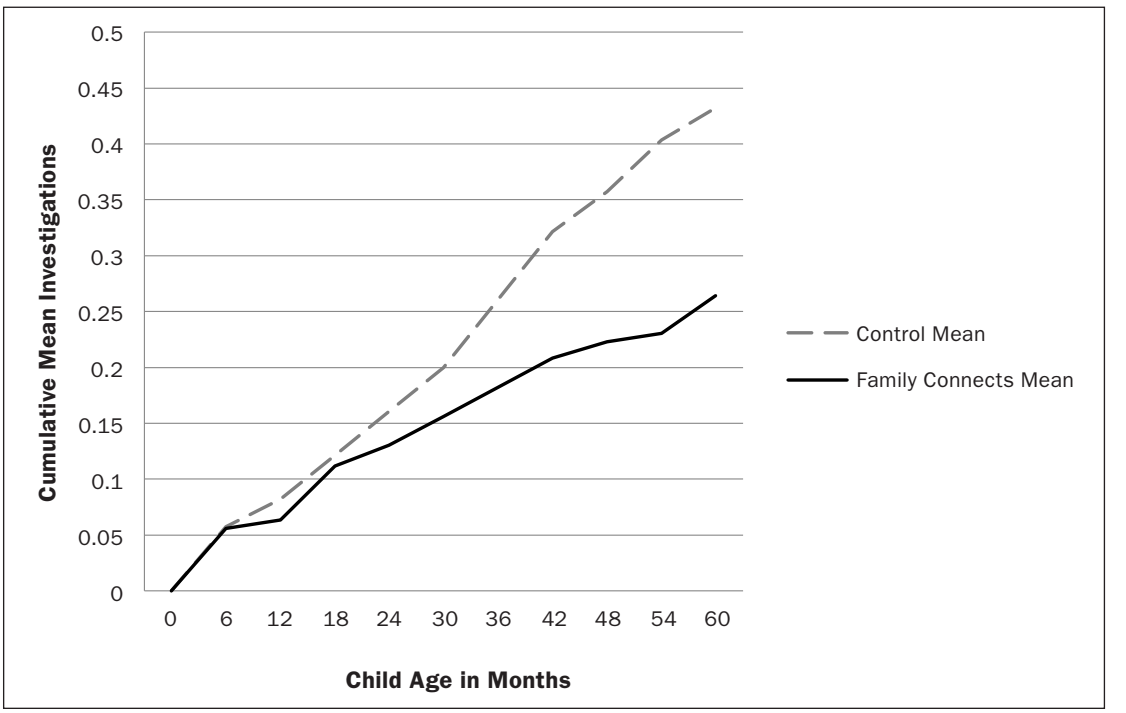
mothers, and a higher-quality father-infant relationship. Screening indicated that intervention mothers were 28 percent less likely than control mothers to exhibit signs of clinical anxiety.

Infant health and wellbeing. Compared to control mothers, intervention mothers reported 35 percent fewer serious injuries or illnesses among their infants that required emergency department care or hospitalizations. Administrative records from the two community hospitals indicated that from birth to age six months, intervention infants had 59 percent fewer emergency medical episodes than did control infants. Between six and 12 months, intervention infants had 31 percent fewer such episodes.

Follow-up analyses examined whether Family Connects had a positive impact for various subgroups. Even if it had a favorable impact on the population as a whole, it might have had no impact on some groups of families. Instead, the additional analyses, which focused on emergency care episodes through age 12 months, found positive impact for every group studied. Though both groups benefited, infants with one or more birth risks had stronger intervention impact, defined as the difference between intervention and control infants, than did infants with no birth risks. Similarly, infants with Medicaid or no insurance experienced stronger intervention impact than infants with private insurance. The program's impact was stronger for majority than for minority families, and stronger for boys than for girls, but in both cases significantly positive for each group.

Recent analyses have explored the program's impact on children's involvement in the Child Protective Services system over the children's first five years.[14] After accounting

Figure 1. Child Protective Services Investigations through Age 60 Months: RCT I.



for demographic risk factors, including birth complications, Medicaid status, minority status, and single parent status, results indicate a 39 percent reduction in the rate of total child protective service investigations for suspected child abuse or neglect (see figure 1).

Second RCT

Often, early-years intervention programs initially show positive impacts that aren't replicated when a second independent trial is conducted. We initiated a second RCT in Durham in 2014.[15] Because one of the two original hospitals changed its policies and now prohibits patient contact with non-hospital staff, births at this hospital were excluded from the new trial. As a result, the trial was conducted with all resident births at one hospital from January to June of 2014. This time, the 456 families giving birth on an odd date were assigned to the Family Connects intervention, and the 479 families giving birth on an even date were assigned as controls. Interviewers completed outcome assessments with a subsample when the children were four to eight months old. Again, to avoid potential bias, interviewers weren't told which families were eligible to receive Family Connects, and participating families weren't told that the primary study goal was to evaluate Family Connects.

Evaluation of Implementation

Penetration rates. As table 2 shows, of the 456 families who gave birth on an odd date, 349 (77 percent) were successfully recruited into the program; 84 percent of these successfully completed the program, yielding a population-wide completion rate of 64 percent. These figures are slightly lower than those for the first RCT, but they show that the program reached a large percentage of families across trials and time.

Fidelity of implementation. Nurses adhered to 90 percent of all elements, considered very high. And when the quality control nurse scored each of the 12 risk factors, chance-corrected agreement as assessed by Cohen's kappa was found to be high at 0.75.

Risk and connection rates. Ninety-five percent of all families had at least one family need meriting intervention, according to nurses' scores. One percent required emergency intervention, 52 percent had modest to moderate needs that could be resolved by the nurse, and 42 percent had serious needs requiring connection with a community resource. In follow-up phone calls, 83 percent of the families referred to a community resource reported that they had initiated the connection.

Evaluation of Impact

Connectedness. As in the first trial, intervention mothers reported more community connections than did control mothers—in this case, 17 percent more.

Parenting and parent mental health. Unlike in the first trial, in which intervention mothers fared better, in the second trial intervention and control mothers had similar levels of positive parenting behaviors and father-infant relationship quality. As in the first trial, intervention mothers were less likely than control mothers to exhibit signs of clinical anxiety—in this case, 20 percent less likely.

Infant health and wellbeing. Unlike the first trial, in which intervention infants fared better, in the second trial intervention and control infants had similar rates of serious,

emergency medical care episodes between birth and six months. In the first trial, the intervention group had a mean of 1.5 episodes per family by 24 months of age, and the control group had 2.4. In the second trial, the intervention group's mean was 1.1, which was lower than the mean in the first trial. Yet the control group mean was lower still, at 0.9 episodes. We have no explanation for the precipitous drop in these episodes among the control group. Involvement with child protective services hasn't yet been evaluated for the second RCT.

Field Trial

The first two RCTs were conducted in Durham, NC, where the program was developed. It's plausible that implementation quality could be higher at this site than in other places, and that its impact elsewhere could be lower.[16] We sought to complete a rigorous evaluation of the program's implementation and impact when it was brought to new sites and implemented by local staff members.[17]

After winning an Early Learning Challenge Grant from the US Department of Education's Race to the Top program, North Carolina allocated funds to Family Connects. Beginning in 2014, Family Connects was introduced in four low-income, rural counties in northeast North Carolina (Beaufort, Bertie, Chowan, and Hyde). Conducting an RCT didn't meet the grant's goal of delivering services to all children and families in the four counties, so we evaluated program impact through what's called a natural comparison design. Specifically, we compared outcomes for families of infants born from February 1, 2014, through July 31, 2014—before Family Connects came to their county—with outcomes for families of infants born during implementation, from September 1, 2014, to December 31, 2015. To reduce potential participation and response bias, all intervention group families participating in the impact evaluation were recruited without regard for their participation status. The evaluation was also double-blind: families didn't know that the survey's primary goal was to examine how Family Connects affected child and family wellbeing, and interviewers didn't know which families actually had completed the Family Connects program. Because we were comparing families of infants born in different time periods, we had to consider the possibility that time-related factors, such as the state of the global economy, could account for any differences that would otherwise be attributed to Family Connects.

The four rural counties in the trial had relatively few institutional community resources upon which nurses could draw. However, the community alignment organization phase of the implementation revealed many informal resources, such as an intervention program administered by the Rotary Club, social groups at the Veterans of Foreign Wars, and church-related support. Because nurses had to drive great distances to some families' homes, we anticipated that the program would have a lower penetration rate. Thus, the field trial presented an important opportunity to advance public health, public policy, and early childhood home visiting by evaluating the dissemination of a low-cost, universal home visiting program to rural communities characterized by very low resources and chronic poverty.

Evaluation of Implementation

Penetration rates. As table 2 shows, of the 994 families with a child born during the implementation period, 770, or 77 percent,

were successfully recruited into the program. Of these families, 83 percent successfully completed the program through the step of making connections with community resources, yielding a population-wide full completion rate of 64 percent. These figures are similar to those for the first two RCTs, again showing a high penetration rate across trials and time.

Fidelity of implementation. Nurses adhered to 87 percent of all elements, and chance-corrected agreement in scoring risk using Cohen's kappa was high at 0.78.

Risk and connection rates. Nurses scored 99.5 percent of all families as having at least one need meriting intervention. Less than one percent of families required emergency intervention, 45 percent had modest to moderate needs that could be resolved by the nurse, and 54 percent had serious needs requiring connection with a community resource. In follow-up calls, 83 percent of the families referred to a community resource reported that they had initiated a connection.

Evaluation of Impact

The comparison group of 343 infants born from February 1, 2014, to June 30, 2014, was close in demographic and community characteristics to the Family Connects group born from September 1, 2014, to December 31, 2015

Connectedness. As in the first two RCTs, intervention mothers reported greater community connectedness than did control mothers.

Parenting and parent mental health. Intervention and control-group mothers reported similar levels of positive parenting behaviors, but father-infant relationship quality was significantly higher for intervention families. No significant differences were observed for possible clinical anxiety among mothers, although intervention mothers reported 18 percent lower levels of possible clinical depression.

Infant health and wellbeing. The Family Connects intervention had consistent, positive impacts on whether infants received emergency medical care. Specifically, intervention mothers reported that between birth and infant age six months, they had sought emergency medical care for their infants 25 percent less often.

Dissemination, Innovation, and Policy Engagement

Family Connects recently established a national office to support three missions: broad dissemination, research and innovation, and policy engagement.

Dissemination Challenges

The Family Connects model is now being disseminated in over two dozen communities across the United States. These communities range from midsize cities to small rural communities. Almost all of them requested that Family Connects come to their community, rather than responding to marketing. Recently, though, the program has adopted a new strategy of reaching out to selected communities to help them consolidate community support for Family Connects and find sustainable funding.

A major challenge of most of these communities is finding a way to sustain funding over time.

Communities have found financing for the Family Connects program in many ways. Sources include local public funding, state grants, private philanthropy, for-profit health care organizations, Medicaid reimbursement, and federal funding awarded to states through MIECHV. Most communities use funding from multiple sources.

A major challenge for most of these communities is finding a way to sustain funding over time. Philanthropic funding, especially, is typically awarded in the short term or year to year, making long-term planning difficult and slowing the process of getting community agencies to buy in to the communal effort. One strategy is to take advantage of numerous federal funding mechanisms, such as the new Family First Prevention Services Act. The long-term answer, though, may be policy change at the federal and state levels to make funding for early childhood programs as much of a priority as it is for later childhood and elder care.

Research and Innovation

The Family Connect program's second mission is research and development. All dissemination sites are required to evaluate the implementation as part of initial certification and ongoing monitoring, and plans are under way to aggregate data across sites to understand natural patterns in implementation quality over time and across sites. Coupled with this is a new study of implementation cost that could help explain variation in quality. Each new site presents an important opportunity for impact evaluation and continued learning. Rigorously designed impact evaluations won't be possible at all sites, but alternate designs can be used, and several sites could offer opportunities for new RCTs.

Continued evaluation faces challenges, however. First, communities often lack funding to conduct rigorous evaluation. Second, their willingness to do so may also suffer due to difficulties with partners or funders, or the fear that negative findings could result in loss of funds for services that they believe are helping families in their community. Ultimately, we need the political will to increase funding to support continued implementation of additional program replication trials, to require evaluation as a condition of receiving funds for new programs, and to establish evaluation as a tool for continued learning and quality improvement.

Some innovation plans derive from findings from the three trials already conducted. For example, positive impact on fathers was found in two trials but not the third; thus one innovation will be to focus more on fathers and evaluate what happens rigorously.

At several sites, innovation is related to topics that a community wants to prioritize. For example, one community received funding as part of a broader effort to improve trauma-informed services, that is, services for children and families that have experienced various forms of trauma; in this community, a module of enhanced training of staff members, assessment of trauma, and intervention is being planned. This additional component will be layered on top of Family Connects so that implementation isn't compromised. Other topical modules may target nutrition and early literacy.

Another innovation—conducted collaboratively with other nationally known home-visiting models—is an effort to apply a similar rationale for universal screening in the prenatal and postnatal periods. And one more goal is to understand how Family Connects

can collaborate more closely with pediatric care.

Policy Engagement

The concept of universal reach at a critical point in the lifespan, coupled with assessment and individualized connection with community resources to support a young child's healthy behavioral development and to prevent child maltreatment, has a long way to go before it becomes routine for every family in the United States. To push this movement forward, program developers and researchers will need to work with policy makers at the local, state, and federal levels. They need to understand what drives policy so that they can frame their case in a way that reaches attentive ears. They will need to conduct benefit-cost analyses and analyses of financing models, and they will need to keep providing rigorous empirical evidence about program implementation and impact. Finally, they will need to understand how state and federal funding streams, such as Medicaid, MIECHV, and the Title V maternal and child health services block grant program, may be used to help communities make such programs financially sustainable.

Conclusions

The story of Family Connects offers promise for population-level impact on the prevention of child abuse and neglect. But the history of innovation and rigorous evaluation in this field shows a mixed pattern: some implementations are positive, and some are disappointing; some evaluations show positive impacts, and some show none. To make true headway, evaluators and program developers need to acknowledge the full range of findings about a program's implementation and impact, and they must embrace continued research rather than cutting it off after favorable findings emerge. At the same time, funders of research and implementation in the public, philanthropic, and private sectors should exercise patience, thus easing any pressure to produce favorable findings. With a committed partnership between programs and funders, we are optimistic that we're not far from achieving population impact in reducing child abuse and neglect.

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Strengthening Home Visiting: Partnership and Innovation in Los Angeles County

Christina Altmayer and Barbara Andrade DuBransky

Summary

Los Angeles County's experience, write Christina Altmayer and Barbara Andrade DuBransky, shows how a universal offer of assistance can establish a foundation on which public and private agencies can plan meaningful systemic reform—and spark incentives for greater, more effective investments in services directed to vulnerable families. The county's vision for a universal, voluntary, integrated system of home visiting offered in 14 targeted communities builds on Welcome Baby, a universal home visiting program that provides as many as nine contacts to pregnant women and new parents until a child's ninth month. Piloted in one hospital in 2009, Welcome Baby is now available to new parents delivering in 14 hospitals throughout the county, reaching approximately one-third of all births in the county annually. As of June 2018, the program had reached more than 59,000 families.

Welcome Baby and other related investments are part of a broader story unfolding in LA County. The authors describe an important policy shift that's moving both public and private providers toward an integrated system of universal and targeted home visiting. The county's action plan calls for significant investments in new parent support and responsiveness from multiple county-level agencies, as well as the development and expansion of multiple home visiting models to meet the needs of the county's diverse population.

As the initiative continues to grow, Altmayer and Andrade DuBransky write, the county is aiming to streamline referral pathways to ensure maximum participation; fill service gaps for high-risk populations; increase access to voluntary home visiting for families at high risk for involvement in the child welfare system; create a common data collection system to improve outcome reporting; maximize the use of current resources while generating new revenue; and ensure that the home visiting system is deeply embedded in larger systems serving children and families.

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With its size, scope, and diversity, Los Angeles County is a unique place to test models for expanding and integrating family and child-based services. The county spreads across more than 4,000 square miles and has an ethnically and culturally diverse population of 10.3 million people, over 600,000 of whom are children age five and under.[1] Its inequalities mirror those of the nation as a whole, with communities that have both the lowest and the highest estimated poverty rates among young children in the state—only 4 percent poverty in the southwestern part of the county, but 68 percent in southeastern Los Angeles.[2] These inequalities also present significant opportunities to improve outcomes for its youngest children, particularly in terms of reducing abuse and neglect. Almost 15 percent of all children in LA County will be reported to child protective services before they turn five—although most of these referrals aren't serious enough to warrant opening a case—and one-third of the children in the county's Department of Children and Family Services system are four years old or younger. Not surprisingly, the county sees generational cycles of engagement in the child welfare system.[3] Breaking such cycles will become even more critical as poor children become an increasingly larger portion of children in the county, as the county's birth rate and absolute number of children decline.

LA County's structure creates tremendous opportunities for cooperative approaches to setting and implementing a countywide vision. In December 2016, the five-member Board of Supervisors created such an opportunity with a unanimous motion directing the county's Department of Public Health to plan a home visiting system in collaboration with First 5 LA, the LA County Perinatal and Early Childhood Home Visitation Consortium (hereafter, the Consortium), the Office of Child Protection, the Children's Data Network, and the departments of Health Services, Mental Health, Public Social Services, Children and Family Services, and Probation.

LA County's experience provides valuable insights into how to approach an integrated web of family supports involving multiple program models, funding sources, partners, and referral sources. It's not about advancing one approach or model as the answer to strengthening families; it's about providing an interwoven range of services and supports to meet family needs with a foundational investment in universal supports, particularly home visiting. The Los Angeles experience offers three big lessons for implementing a systems approach to home visiting.

First, changing systems—and building integrated systems of support—is a long-term proposition. Systems that support children and families are funded through myriad local, state, federal, and nongovernmental sources, all with unique requirements. Weaving these systems into a cohesive whole takes time, leadership, and commitment.

Second, such efforts succeed when high-quality services joined through partnerships are poised to take advantage of opportunities for systemic change. When such opportunities arise, it's critical to maximize them. But doing so may take years of groundwork. Long-standing and thoughtfully designed investments in home visiting, as well as community and county partnerships,

can create the context for elected leaders to accelerate the system-building process.

Third, partnerships grounded in a commitment to common principals are essential. Elected and appointed leaders in Los Angeles invested in partnerships to build a network of family supports and prioritized building diverse coalitions for sustainable change. The story thus begins with how early investments in home visiting funded by a dedicated early-childhood revenue stream created the fertile soil for broader systemic change.

Early Evolution of Home Visiting in LA County

Proposition 10, passed by California voters in 1998, imposed a 50-cent state tax on tobacco products and dedicated the revenue to support county-level investments to improve all children's healthy development and school readiness. Reflecting emerging research on the importance of the first few years of life for the developing brain, this legislative initiative created the state's first dedicated resource to support the healthy development of young children and the establishment of 58 local county commissions focused on early childhood, today known in LA County as First 5 LA.

In 2000, the Los Angeles Proposition 10 Commission, which later became the First 5 LA Commission, began operation and received $165 million as its first allocation of annual funds from the tobacco tax. Preschool and home visiting, based on well-supported evidence, were included among the organization's first investments. The initial investment in home visiting yielded a broad range of providers, including the county's Nurse-Family Partnership program, community-driven models targeting teen parents, and a home visiting program to be administered in a domestic violence shelter. The quality and consistency of these approaches, and the populations they targeted, varied widely.

Anecdotal evidence indicated that [early] programs were recruiting families who were relatively skilled at navigating systems and garnering support.

This early period developed services for families in their homes but lacked a systematic approach to sustainability, evaluation, curriculum, and appropriate target population. Anecdotal evidence indicated that the programs were recruiting families who were relatively skilled at navigating systems and garnering support.

The Welcome Baby Model

Guided by local experience and national research, in 2009 the First 5 LA Board launched Best Start, a comprehensive, place-based initiative that included Welcome Baby, a home visiting model that was less intensive than other models that had an established national presence and research base. The Welcome Baby model had three basic elements:

- a universal platform to reach all families delivering at 14 participating birthing hospitals, thereby reducing stigma and increasing access to hard-to-reach families

- the opportunity to assess family risk consistently
- the ability to offer a perinatal model with a moderate intensity

Welcome Baby aims to contact families nine times, from the earliest possible point before birth until a child's ninth month. Three contacts (two visits and one phone call) occur before birth, distributed evenly between enrollment in the program and expected delivery; one takes place at bedside in the birthing hospital; and five occur in the home afterward, in the child's first week, second to fourth week, second month, third to fourth month, and ninth month. Seven of the nine contacts are home visits. Parents were originally allowed to enroll up to the point of birth; this policy was changed in 2017 to allow for enrollment up to one month after a child's birth, based on focus group feedback and an increase in requests. Although families who enroll after hospital discharge may have poorer outcomes for breastfeeding, the change was made to help connect higher-risk families who don't accept the offer until after they leave the hospital to more intensive home visiting or other critical services.

The Welcome Baby Workforce

The nine contacts involve several types of professionals. A hospital liaison conducts the hospital visit, a public health nurse conducts the first in-home postpartum visit, and parent coaches conduct the remaining seven contacts. In addition, families may be enrolled in Welcome Baby by an outreach specialist, who builds relationships with staff members in prenatal settings and encourages them to refer families to the program. Having families work with up to four different professionals is not optimal, but Welcome Baby deemed it necessary for a number of reasons. For one, birthing hospitals weren't willing to allow a large program staff to be present in their labor and delivery units; for liability purposes, they also required that such staff members be hospital employees. The first postpartum visit also includes a physical exam of the baby and the option of a physical exam for the mother, which must be completed by a medical professional. In exit surveys and focus groups, program participants have seen the postpartum nurse visit as a critical incentive. The nurse visit interrupts the families' engagement with their parent coach, but this transition hasn't affected family retention.

Early Implementation and Pilot Testing

The Welcome Baby pilot began in a downtown Los Angeles hospital as part of Best Start's broader place-based, community-building work. The community was identified with the help of the county's Service Integration Branch, which was seeking to integrate county services in specified geographic regions, thereby creating an opportunity for the home visiting program to benefit from enhanced service linkage.

The pilot allowed the program to learn about protocols, training components, hospital integration, caseload dimensions, staff qualifications, materials, and messaging to participants and referral partners. For example, in response to problems related to lack of buy-in from labor and delivery staff and meshing the program with standard operating procedures, the protocols were refined to enhance integration into the hospital. The protocols were also made more specific to better guide the program's in-hospital and in-home professionals. The training package evolved over time, adding enhancements, such as reflective supervision

and safety in the field, to early training components on motivational interviewing and trauma and resiliency.

Caseloads and Staff Qualifications

The pilot was also an opportunity to test and modify caseload expectations and staff qualifications. Caseload plans were ultimately devised based on numbers of visits that could be executed, the time estimated for documentation and making referrals, and an appropriate client maximum of no more than 70 families. Qualifications were established for each level of staffing, giving consideration to balancing the effectiveness of paraprofessionals in recruiting and engaging families with requirements for increased supervision and challenges associated with working with higher-risk families.

Engagement Strategies

First 5 LA learned effective approaches for recruiting and retaining families. Messaging was refined based on the pilot's experiences, including challenges related to the complex eligibility requirements, thus enhancing Welcome Baby's ability to clearly communicate the nature and benefits of the program to prospective participants and referral partners. In addition, the pilot site tested the Bridges for Newborns risk assessment tool, used to establish eligibility and best fit for home visiting services, as the program prepared to expand to 13 more birthing hospitals.

Welcome Baby Expansion

After adopting an updated strategic plan in 2009, First 5 LA strengthened its investment in Welcome Baby and expanded from the pilot to 13 more hospitals serving Best Start communities. An analysis of newborns returning to homes in Best Start communities established a list of 25 (out of more than 60) birthing hospitals in the county that together delivered over 50 percent of all births and 80 percent of all Best Start babies, with a minimum threshold of 8 percent of births in at least one Best Start community. The strategic plan called for expanding more intensive evidence-based national home visiting programs to be offered to families identified through the Bridges for Newborns risk assessment.

The expansion began in 2011. Thirteen of the 25 hospitals agreed to participate. The pilot hospital and the 13 new hospitals together delivered over one-third of all births in the county, and almost 60 percent of Best Start births. First 5 LA coordinated the procurement of providers to implement more intensive evidence-based home visiting in coordination with winding down other initiatives whose associated staff could be recruited to support the expansion. To meet the needs of the most at-risk families, the First 5 LA Commission approved investments in more intensive home-visiting programs, allowing each community to select a model commensurate with its needs. Due to limited resources, more intensive services were offered to families that lived inside the boundaries of a Best Start community; families living elsewhere received fewer or less intensive services (a lower *dosage* of the Welcome Baby program).

Using Research to Support Scale and Sustainability

Welcome Baby is designed as a universal platform that fills a gap in support for families with minimal to moderate risk factors. Because a universal platform reduces the stigma associated with receiving outside

help, it was also expected that higher-risk families would be more likely to participate in voluntary family supports. The design built on lessons from other lower-dosage models, including Family Connects in Durham, NC (see the article in this issue by Kenneth Dodge and Benjamin Goodman), Hawaii Healthy Start, and Orange County, CA's Bridges for Newborns. Because Welcome Baby didn't directly replicate any of those models, analyzing the early results was critical. First 5 LA developed a sequenced evaluation plan that included multiple studies to assess service quality, program outcomes, and the delivery system's effectiveness. The results were used to improve both services and the delivery system, as well as to begin to build a case for sustaining the program.

Welcome Baby is designed as a universal platform that fills a gap in support for families with minimal to moderate risk factors.

Pilot Study

In 2015, the Urban Institute and the University of California, Los Angeles, completed a multiyear study of the pilot program that had begun in 2009, with data collected on a rolling basis. The treatment group at the third wave of data collection consisted of 406 participants in the Welcome Baby program at the Dignity Health-California Hospital Medical Center (hereafter, California Hospital), some of whom enrolled before their child's birth and some of whom enrolled after; the comparison group consisted of 264 mothers who did not receive Welcome Baby, lived in the target community and delivered during the same period as the treatment group. Follow-up assessments took place when the children were 12, 24, and 36 months old. Procedures included a verbally administered survey, an observational assessment of parent and child intervention, an observational assessment of the quality of the home environment, and a height and weight assessment of the child. First 5 LA had already begun to expand Welcome Baby as data collection for the study commenced. The study results were expected to help improve the program and make it more sustainable.

The study found significant positive impacts on families, with more pronounced effects for families who had enrolled in the program prenatally. At 12 months, Welcome Baby had a positive effect on breastfeeding practices, quality of the home environment, including learning activities that relate to early childhood development, and children's communication and problem-solving skills. These findings persisted at 24 months, and more positive, encouraging parenting was also detected. Differences between participants who enrolled prenatally and those who enrolled postnatally were more pronounced at 24 months than at 12 months; in particular, families that enrolled prenatally had better outcomes for home learning activities, maternal stress, outdoor play, overweight and obesity, and children's problem-solving skills. At 36 months, participation in Welcome Baby continued to be associated with better child communication skills and responsive and encouraging parenting, as well as better child personal-social skills and social competence, more affectionate parenting, and more teaching behaviors by mothers. Health-related child outcomes, such as child immunization rates and well-child visits, were

high for both the intervention and control groups, likely due to the overall high rate of insurance coverage for children in LA County. Rates of emergency room visits were also similar between the two groups.

Psychometric Study

The second major evaluation focused on the predictive validity of the screening tool used to ensure that families at greatest risk of poor outcomes are referred out of Welcome Baby to more intensive home visiting programs.[4] Though the program used a cutoff score to make this determination, the intent behind screening was to accurately rank the relative level of risk among families to help connect them with the public and nonprofit resources they need. Simply put, as resource levels change, the cutoff score could be changed to expand access to low-/moderate- or high-intensity services, based on future learning about how best to achieve desired outcomes. The cutoff score has been adjusted downward since the program began; future adjustments will be based on the level of resources available, evaluation results, and feedback from home visiting partners and providers.

The first step was to test the Bridges for Newborns assessment, designed for use in neighboring Orange County, in the Welcome Baby pilot program at California Hospital. After initial testing, the tool was modified to more strongly emphasize psychosocial challenges, including mothers' experience with violence as both a child and an adult. The revised tool then underwent psychometric study by the RAND Corporation, a nonprofit policy research and analysis organization. RAND found that when compared to an existing, validated tool that measures similar content, the revised tool was reliable because it produced similar results both in the hands of different testers and when used with the same family a second time. Based on RAND's recommendations, First 5 LA adjusted the weights of 12 items on the screening tool to increase validity.

Focus Groups

In early 2018, the program sought input from focus groups to measure participant satisfaction and improve enrollment. Focus groups were held with both Welcome Baby participants and with women who had declined to take part in the program; a total of 120 women took part. Overall, clients were satisfied with the program and appreciated its services. The focus groups revealed their desire for additional visits, opportunities to give and receive peer support, and more structured engagement of fathers in the program. The focus groups also yielded critical feedback on communication strategies to increase enrollment.

Implementation and Outcomes Evaluation

The most recent evaluation was the Welcome Baby Implementation and Outcomes Evaluation, also conducted by RAND and completed in August 2018.[5] This study aimed to help the program improve and to prioritize its training and technical assistance resources. It focused on how well the implementation sites adhered to the program model (known as *fidelity*), how successful they were in achieving short- and intermediate-term outcomes, and the relationship between those two factors. It also examined participants' perceptions, conditions related to referral networks, and factors contributing to attrition. RAND evaluated 11 elements of fidelity, including staff qualifications, supervisory ratios, staffing levels, content of visits, and referrals to community services. Overall, the study found

a relatively small relationship between fidelity and successful outcomes, but some fidelity components were more likely than others to be associated with positive outcomes: staff qualifications and training, reflective supervision, home visitor workload, and the percentage of the curriculum content that was covered.

Despite inconsistent fidelity across the sites, Welcome Baby participants demonstrated better outcomes in more than half of the areas measured that could be compared to regional or national indicators of success. Once families had received the two- to four-week postpartum visit, however, greater fidelity was associated with lower attrition, suggesting that program fidelity may be a key to keeping families engaged. Finally, in client satisfaction surveys, families said that Welcome Baby met their needs and that their relationships with home visitors were extremely positive.

Impact Study

The final element of Welcome Baby's evaluation plan is an impact study currently being conducted by American Institutes for Research and Georgetown University. As a randomized controlled trial, the study should provide the best evidence to date about Welcome Baby's impact on participants and the value of universal models to potential payers.

Moving to an Integrated System

One of the earliest and most significant steps toward a home visiting system was the creation of the Perinatal and Early Childhood Home Visiting Consortium. Launched in 2012, the Consortium evolved from the Perinatal Home Visitation Advisory Committee that was convened in 2010 by the LA County Department of Public Health's Maternal, Child, and Adolescent Health Programs. The Advisory Committee helped the Department of Public Health pursue its application for federal Maternal and Infant Early Childhood Home Visiting (MIECHV) funding, which had been made available as part of the Patient Protection and Affordable Care Act. The Consortium was staffed by the Los Angeles Best Babies Network, the training and technical assistance body supporting First 5 LA's home visiting investment. Financial and leadership support came from the Department of Public Health, the Los Angeles County Partnership for Early Childhood Investment, and First 5 LA. The Consortium was also selected to be part of the Pew Charitable Trusts' Home Visiting Data for Performance Initiative, a national effort to identify a small set of core outcomes that could capture the collective impact of investments in early childhood home visiting. The Consortium improved the county's ability to collect countywide aggregate data on selected indicators, strengthened practice across programs, and demonstrated collective impact according to community measures of success and sustainability.

Leaders recognized that without an integrated system of referrals and coordination, families wouldn't be effectively connected to programs.

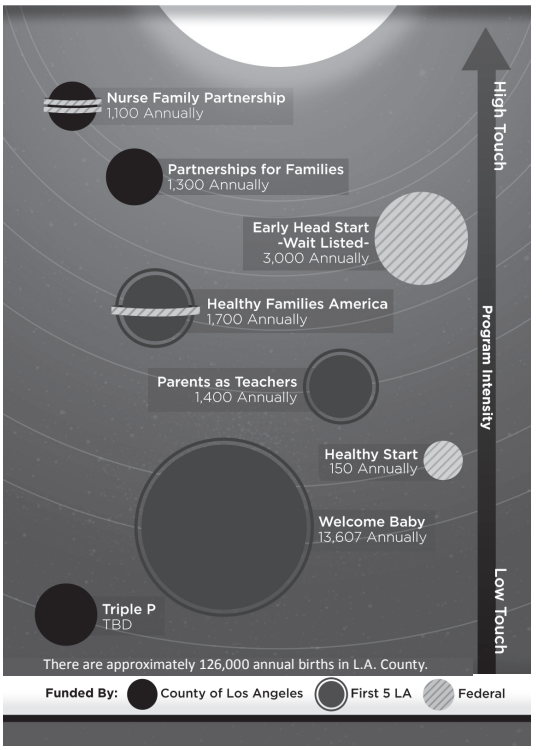
The Consortium linked the various program models and somewhat autonomous community programs. By 2011, a patchwork of programs was developing at both the county and community level, with the broadest being First 5 LA's expansion of

Welcome Baby. The second largest was the expansion of Nurse Family Partnership under the Department of Public Health through MIECHV funding. Nurse Family Partnership is one of the earliest evidence-based models for home visiting that begins prenatally with visits conducted by a public health nurse. Although the community programs were provided by agencies that had strong, trusting relationships with their target populations, there was no collective accounting or record of the number of available slots. Nor was there much information about standards or the consistency with which the programs were offered, much less program results. Increasingly, providers, funders, and agency leaders recognized that without an integrated system of referrals and coordination, families (and particularly families most at risk for poor outcomes) wouldn't be effectively connected to programs as referring agencies attempted to navigate a maze of eligibility requirements.

Progressive Dosage and Model Diversity

Figure 1 reflects the makeup of home visiting services in LA County in 2016 and shows how a universal, multitiered system can include offerings that differ in intensity, provider characteristics, entry portals, and funders. Across the system, a single home visit is the minimum dosage for both intake and basic services, including breastfeeding support and an introduction to early childhood development. More intensive services are available for families with more complicated risk profiles. Among current programs, Welcome Baby serves the most families. Sixty-five percent of LA County families who participate in home visiting receive Welcome Baby; the other 35 percent receive a more intensive program from one of seven models.

Figure 1. Home Visiting Models in LA County: Capacity, Intensity, and Funding Sources (2016)



Source: First 5 LA

Despite the diversity of programs offered in 2016, significant gaps persisted across the system:

Service gaps: Although Welcome Baby follows a universal model, its current level of services doesn't fully meet the county's need for universal risk-screening and referral. Welcome Baby is available only to families who give birth at one of the 14 participating birthing hospitals, which largely serve high-risk communities. Even when fully implemented, Welcome Baby will

serve only 20 to 25 percent of the estimated 126,000 babies born annually in the county. To create a truly universal system, the county would need to expand hospital access and/or enlist other trusted entry portals, such as Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) sites and primary healthcare services. Given First 5 LA's financial constraints, additional funding would be needed to explore options for universal expansion and intensive service needs.

Program eligibility gaps: Families that give birth at one of the 14 hospitals can enter the Welcome Baby program only during the first month of a child's life. Similarly, Nurse Family Partnership requires that families enroll during the second trimester of pregnancy. These eligibility criteria create gaps for women and families who could benefit from the program but aren't identified early enough or aren't willing to enroll until later in their children's lives. Moreover, families' risk factors are likely to change during a child's first five years, and an ideal system would offer more opportunities for early intervention, particularly for families at risk for intervention by child welfare/protective services beyond the first month after a child's birth.

Capacity gaps: LA County is home to over 600,000 children under the age of five and sees approximately 126,000 births per year. Even if program eligibility were expanded, the existing service network couldn't meet all families' needs. Filling this gap would require an increase in both universal and targeted offerings to families. The birth rate can indicate the level of service needed to reach out to all families, but it's harder to identify the types and levels of risk that families will experience. Based on one set of risk factors, including preterm birth, perinatal mental health, involvement with child protective services, and economic instability, a county working group estimated that approximately 25 percent of all families giving birth in LA County could benefit from more intensive services. Considering just one of these factors, a Children's Data Network analysis of babies born in LA County in 2006 found that 15 percent were referred to child protective services by age five.[6]

Innovative model gaps: Home visiting providers and funders alike recognize a need to learn more about how well programs work with the various county populations and subpopulations. Home visiting leaders identified the need to work together to estimate and refine the county's system-level capacity based on birth characteristics, implementation, and outcome data, and to test innovative models that may be a better fit for specific target populations.

In 2016, three key efforts coalesced to create the momentum for significant progress on an integrated system of home visiting for LA County: First 5 LA shifted its focus to a policy-and-systems change agenda; the Office of Child Protection (OCP) was created and charged with developing a countywide plan focused on prevention; and, in December, the Board of Supervisors unanimously passed a motion calling for an integrated system of home visiting.

Shift to Policy and System Change

Following adoption of a new strategic plan in 2015, First 5 LA switched its primary focus from direct services to changing the policies and systems that undergird early childhood services. This decision was triggered partly by the decline in First 5 LA's tobacco tax revenue: from 2000 to 2019, annual revenue

had fallen by about 50 percent. First 5 LA's new strategic direction, embedded in its investment guidelines, focused on prevention and system change and prioritizes scaling up evidence-based practices, and engaging partners to achieve results. By supporting systemic changes designed to endure after First 5 LA's funding (or its role in these programs) ends, the organization seeks to deepen its impact, extend the reach of its resources, and build the policy and political will to maximize impact for young children.

Office of Child Protection and County Prevention Plan

In April 2014, the Los Angeles County Blue Ribbon Commission on Child Protection, which was convened in response to the death of a child, released a detailed plan to improve the county's child protection system. It recommended that the County of Los Angeles create an Office of Child Protection to increase coordination and accountability, and to develop and implement a comprehensive countywide prevention plan to reduce child maltreatment. The Office of Child Protection's Prevention Plan identified home visiting as one of seven core strategies to prevent child abuse; county departments were asked to commit to supporting one or more of these priorities. Although the plan wasn't released until June 2017, early implementation began in 2016, including extensive outreach to community, nonprofit, and public leaders, as well as residents.

Board of Supervisors Vision for Home Visiting Motion

In December 2016, the County of Los Angeles Board of Supervisors adopted a unanimous motion instructing the Department of Public Health—in collaboration with First 5 LA and other programs and departments—to "develop a plan to coordinate, enhance, expand, and advocate for high-quality home visiting programs to serve more expectant and parenting families so that children are healthy, safe, and ready to learn."[7] The Department of Public Health took the lead in developing recommendations for building an integrated system. The factors it considered included how to:

- use or adapt national models and evidence-based practices to improve outcomes for LA County;
- coordinate a system for home visitation programs that includes streamlined referral pathways and an outreach plan to ensure maximum participation, especially in LA County's highest-risk communities;
- identify gaps in services for high-risk populations, based on a review of effective national models, existing eligibility requirements, and cultural competencies, and develop plans to narrow these gaps;
- increase access to voluntary home visitation for families at high risk of involvement with the child welfare system;
- improve outcome reporting through common data collection, and;
- maximize resources by making the best use of available funding and finding opportunities for new revenue.

The Board's motion infused energy and leadership into existing efforts, brought attention to the need to connect with families as early as possible, and brought together

diverse partners, audiences, and advocates in a call to expand home visiting and create an integrated web of family supportive services.

The collective leadership envisioned an integrated system that could reduce families' isolation and stigmatization, ensure that families access the resources they need sooner, and engage families at the primary prevention level, with the opportunity to connect to secondary and tertiary interventions as needed. A universal approach would connect with all families, including those most isolated, and offer them a home visiting service that best fits their needs; it would also capitalize on the program eligibility and the cultural, linguistic, and geographic capabilities that providers already offer. Home visiting offers families a way to become more familiar with commonly used institutions, such as the health care, early education, and education systems, and with public resources like parenting groups, parks, community gardens, and libraries, etc. By reducing the stigma associated with family support programs, universal offers of home visiting can also engage families who have not accessed voluntary prevention services in the past due to experiences with or mandatory participation in public social services, mental health services, the child welfare system, or the justice system.

LA County's Plan for a System of Home Visiting

In July 2018, the County released its comprehensive plan for building an integrated system, *Strengthening Home Visiting in Los Angeles County—A Plan to Improve Child, Family and Community Well-Being*. The plan presents a vision for universal home visiting nested in a broader set of supports for families, which it describes as:

> A system of voluntary, culturally responsive, home-based family-strengthening services available to all families in LA County with children prenatally through age five that
>
> - Optimizes child development
> - Enhances parenting skills and resilience
> - Safeguards maternal and infant health
> - Prevents costly crisis intervention
> - Reduces adverse childhood experiences
> - Demonstrates improved educational and life outcomes.
>
> Under this vision, all families in LA County with young children would have access to trusted support and coaching in their homes, matched appropriately to their needs, so that they and their children may thrive.[8]

To achieve this vision, the plan identifies four areas of work: service coordination and integration; data and evaluation; workforce development; and funding and sustainability. It also identifies the infrastructure needed to make the system a long-term reality.

Service Coordination and Integration

Because home visiting supports positive family functioning across multiple domains and helps increase families' access to resources, it doesn't fit into a single sector. Home visiting is relevant not only to health but also to various social services. Given LA County's size and population, it's also unrealistic to have a single point of entry and referral into home

visiting services. The recommended plan is a coordinated intake approach that would help families access services in many ways, and do so even when their circumstances change. A coordinated approach uses assessments that have already been completed, both to prevent duplicate screening and to build on the community's existing assets. Ideally, assessment and referral to home visiting services would occur prenatally, or at least when a child is born. Given these universal targets, strong connections to the health care sector are both necessary and feasible.

Health System Coordination and Integration

With the passage of the Affordable Care Act in 2010, followed by corresponding actions in California, all the county's children and pregnant women have access to public insurance, regardless of income or immigration status. All California women are also eligible for comprehensive pregnancy coverage, which includes access to such things as nutrition, health education, and clinical care. As of 2018, LA County has the state's largest number of child Medicaid enrollees; approximately 58 percent of children from birth to age five are enrolled in the state's Medi-Cal managed care program.[9]

One promising strategy for embedding home visiting into health care systems is to capitalize on a movement to reward providers for value-based care.

Despite research showing that home visiting is positively correlated with desired health system outcomes like better use of the health care system, reduced reliance on expensive modes of receiving care, and increases in preventive health, enlisting the health sector in the effort to build an early childhood system has faced multiple challenges. Two of these stand out:

1. Children and pregnant women are no longer the dominant Medi-Cal population. Before the Affordable Care Act included uninsured adults in Medicaid, children from birth to 19 represented 52 percent of Medi-Cal managed care enrollees; by 2017, that figure had dropped to 42 percent. The challenge now is to ensure that Medicaid health plans maintain a focus on the needs of young children and families.[10]

2. Compared to other populations in managed care, children and pregnant women don't have a large impact on costs. Therefore, plans have relatively fewer financial incentives to focus on the quality of their care. Children don't make up a significant percentage of people who use a given plan heavily, and even acutely ill children, including those who require long stays in neonatal intensive care, aren't a significant burden on Medi-Cal health plans.

One promising strategy for embedding home visiting into health care systems is to capitalize on a movement to reward providers for value-based care. For example, some health care plans offer higher reimbursement for providers with higher scores on the Healthcare Effectiveness Data and Information Set, which may be affected by a home visitor who can help clients seek and access care. Such scores include postpartum

visit rates and child immunizations. Even if pregnant women want home visiting, such services aren't funded under Medicaid managed care, save for home health agency visits ordered by a physician, which happens only rarely, or visits from clinical providers participating in the state's Comprehensive Perinatal Services program.[11] First 5 LA has learned that health plans and risk-bearing physician groups can refer to, fund, or offer home visits only to select, hard-to-reach populations among their membership. Home visiting is not included as a Medicaid benefit, and states have no obligation to provide it; they are more likely to offer care management by phone.

As health plans have increased accountability for patient care outcomes, First 5 LA has been working in partnership with local plans to demonstrate that home visitors can effectively increase access to preventive care. Under Medi-Cal, plans must pay for comprehensive prenatal services, such as assessment, referral, and health education; they are also accountable for ensuring that new mothers show up for and receive postpartum visits. A home visitor who can promote these services adds value to a plan; that is, home visitation can be considered a quality-improvement intervention for pregnant or postpartum women who would not otherwise access health services in a timely manner or be referred to critical social services, such as WIC. First 5 LA and its county partners are beginning to work with health plans to strengthen referrals from primary care offices to home visiting and to track home visiting services in the electronic health record. This tracking will allow health plans to evaluate whether and how integration with home visiting improves access to preventive care and mother and child outcomes. If home visiting helps route women to health care providers that offer clinically effective interventions, then it can demonstrate its worth to funders and providers. For example, one health plan is piloting postpartum home visits, both clinical and nonclinical, in a rural community of LA County, in hopes that the home visitor—often a trusted resource—can help clients navigate and use health services.

Social Services Coordination and Integration

The County of Los Angeles supports economic self-sufficiency, health and mental health care, early care and education, child welfare, and rehabilitation and re-entry through the justice system for over 10 million residents. Hundreds of community-based organizations, which act as cultural brokers and trusted entities, play a critical role in ensuring that families receive these services and supports in a manner that is both linguistically appropriate and culturally responsive.

County agencies have broad mandates to achieve weighty outcomes within shifting environmental contexts, such as economic stability, physical and mental health, and community safety, and to do so in a family-centered way. As in many diverse communities, government systems must support families and meet their needs "despite the families' different histories and needs and the fact that they live in communities with different resources, cultures, and expectations," write Jacquelyn McCroskey of the University of Southern California School of Social Work and her colleagues. "As a result, government institutions are challenged with supporting fragile families, encouraging self-sufficiency, and assuring the safety and wellbeing of children."[12]

The 2007 Board of Supervisors effort to reduce child maltreatment, the Prevention Initiative Demonstration Project, has helped the county's more recent push to expand home visiting. The project funded community-based organizations to become regional agency leads of local networks serving families, aiming to better connect families to local agencies that can increase their social networks, to help families get economic support, and to help them access and use beneficial services, activities, and resources. These three strategies rest on theories of change suggesting that increases in social capital resulting from social connection and network-building can strengthen family systems; that relationship-based community organizing enhances community capacity for self-management and self-care; and that enhancing protective factors associated with strong families increases children's safety and ability to thrive.[13] By weaving together connected systems of support, this strategy embedded a network approach in the county. Several of the community-based organizations that pioneered this prevention network, now known as Prevention and After Care Networks, have been significant providers of community-based home visiting services. This network will be a fundamental connecting point for referrals to home visiting and from home visiting into supportive services tailored to individual family needs.

Data Collection and Evaluation

Expanding and improving programs will require rigorous data collection, analysis, and evaluation. Data collection is a foundational component of quality programming, as it supports monitoring, improvement, and outcome tracking. Building on the Consortium's success, the County of Los Angeles is working to regularly track a core set of common indicators and other potential standardized measures and parent feedback mechanisms. The scorecard of key metrics includes measures of four domains: healthy births, safe children, strong families, and cost savings and avoidance.

Building the system will require regularly analyzing administrative data to map program capacity, track the system's use of resources, and assess needs and gaps (for example, based on geography, underserved groups, and/or program selection criteria). Administrative matching of individual data across sectors, begun by the Children's Data Network, will allow the system to study participants over time to assist with resource and program planning, problem-solving at multiple levels of practice, and tracking outcomes.

Workforce: Quality and Evaluation

To capitalize on opportunities to implement home visiting among multiple platforms and achieve outcomes meaningful to the systems involved, high-quality service delivery is critical. To sustain high quality requires continuing investment in the workforce, and the Consortium and its backbone agency, the Los Angeles Best Babies Network, play a critical role in both identifying workforce needs and responding to those needs by supporting training across models.

The Consortium's development and growth and the Pew Charitable Trust's involvement influenced both a progression toward greater quality in home visiting programs and a clearer shared vision for the future that includes alerting larger systems to critical issues that home visiting providers discover. Consortium members share

Table 1. Funding Strategies of LA County Agencies

Department/Agency	Revenue Source	Funding Strategy
Department of Public Health (DPH)	Targeted Case Management (TCM)-Federal Title XIX (Medicaid) funds (TCM services are the most commonly billed services by home visiting programs in the nation).	This strategy had not been fully maximized in LA County due to local restrictions, particularly as they relate to the participation of community-based organizations. Recognizing that the county was not garnering available funds, DPH adjusted its policies to enable participation by non-county entities, including community-based organizations. In early 2018, First 5 LA and DPH partnered on a pilot to be expanded to the remaining 18 First 5 LA grantee sites during FY 2018-19.
Department of Mental Health (DMH)	Mental Health Services Act Funding – Dedicated funding source in California for mental health prevention and early intervention services.	Integration between home visiting and mental health, pioneered in the county by the DPH Nurse-Family Partnership program and DMH, is being expanded as part of a $40 million, two-year experimental DMH investment in the home visiting system with the possibility of continuing beyond two years based on results.
Department of Health Services (DHS)	Whole Person Care Medicaid Waiver	This waiver has expanded access to home visiting for women served directly by county hospitals and clinics. The model, called MAMA's Visits, includes a mobile-care team-based approach; its targets mothers receiving prenatal services from DHS, a safety net healthcare provider.
Department of Public Social Services (DPSS)	Temporary Aid to Needy Families	DPSS is supporting voluntary enrollment of TANF (CalWORKS) clients in Parents as Teachers and Healthy Families America, supported through a pilot funded by First 5 LA and scheduled to be expanded with state funds in 2019. For the first time, California will fund home visiting for CalWORKs-eligible beneficiaries.

ownership of this system vision and have successfully advocated for it. For example, home visitors collectively named greater accessibility of maternal mental health resources as a top priority, which has helped the system improve collaboration and redeploy resources to meet this need. The Consortium also creates stronger connections among providers, making it easier to refer clients from one agency providing home visiting services to another, based on the referring agency's assessment of the best fit for the family. Through philanthropic support, the Consortium has automated a referral decision tree. The Consortium also provides a platform for continued professional relationship building, increasing the likelihood that providers will refer a family to an agency when they feel confident in the quality of services the family will receive.

Funding and Sustainability

County of Los Angeles social service agencies embraced the call from the Board of Supervisors and reassessed existing programs with an eye toward expansion and integration. Table 1 shows examples of funding strategies launched or anticipated as a result of the motion.

Early Implementation Wins

As partners embark on the first full year of system building, early markers of success are materializing across the county and paving

the way for a sustainable system of home visiting. First, the County of Los Angeles has established a leadership body to monitor, adjust, coordinate on, and advocate for the expanded system of home visiting. This Collaborative Leadership Council is charged with supporting implementation of the 2018 plan, building will and commitment for its vision, and identifying opportunities to deepen the connections between home visiting and other prevention and family strengthening work, such as efforts to prevent child abuse and neglect, reduce birth disparities, and increase access to developmental screening and intervention services. It includes representatives of multiple county departments, the health and early care and education sectors, home visiting providers, the Consortium, and researchers and evaluators.

Another early success is that expanded funding is making intensive home visiting a possibility for many more families than were previously eligible. Department of Mental Health Prevention and Early Intervention (PEI) funding has eliminated geographic eligibility restrictions into home visiting programs. In 2018, the Department of Public Health, which is responsible for program management, contracted with 17 agencies that have been providing the Healthy Families America and Parents as Teachers programs through funding from First 5 LA to expand these programs to previously ineligible families based on where they live. New models are being developed and tested to support the unique needs of families, particularly those most at risk. The Department of Health Services is piloting a program, known as MAMA's Visits, to deliver medical interventions that have been shown to reduce preterm births (including progesterone and low-dose aspirin) to patients for whom those treatments are indicated but inaccessible. Visits to the home are a key component of the program; the home visitors will help mothers advocate for their own perinatal health care and support them in carrying out medically advised regimens. The Department of Public Health is also exploring a model to specifically target women with substance abuse problems.

An increased focus on training home visitors to improve quality supports as well as sustainability has already been launched. The Department of Mental Health conducted eight different training sessions, with approximately 194 home visitors trained and an additional 175 targeted in 2019, to help home visitors address maternal mental health in response to provider priority needs. Additionally, approximately half of the contracted home visiting agencies have been trained on how to bill and leverage federal funding and protocols for implementation are being developed.

Finally, advocacy efforts have brought increased attention at a statewide level to the value and impact of home visiting. In 2018, for the first time, California approved funding for beneficiaries of the federal Temporary Assistance for Needy Families (TANF, known as CalWORKs in California), to provide access to voluntary participation in an evidence-based or evidence-informed home visiting program. The voluntary program is offered to any CalWORKs beneficiary who is pregnant with no other children at the time of enrollment, or a first-time parent or caretaker relative of a child less than 24 months old at the time of enrollment in the home visiting program. In LA County, this has resulted in over $7.5 million for further expansion of the three models supported by First 5 LA and the

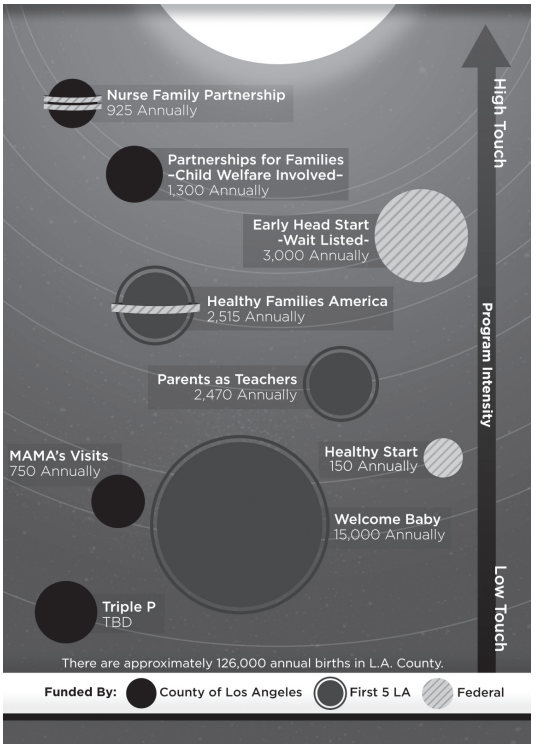
Department of Mental Health's PEI funding. The 2019 Governor's Proposed Budget also proposes to expand funding for home visiting services, directing an additional $78.9 million statewide to expand and make permanent the CalWORKs Home Visiting Initiative created in the 2018–19 budget.

Conclusions

Today, the LA County's home visiting system is larger, more cohesive, and of higher quality than it has ever been (see figure 2). With nine models provided by community- and institution-based agencies, and with a greatly expanded capacity to serve families through county and state funding, the Collaborative Leadership Council is strategically focused on expanding service options while maintaining quality and a commitment to systemization. The Board of Supervisors motion increased the number and depth of involvement of county institutions when it comes to expanding the scale, scope, and quality of home visiting services and to integrating these services with critical community and safety-net supports. Although it's important to celebrate these early wins, key proponents and leaders of the plan are keenly aware of the risks of rapid expansion and are working to avoid silo building and/or reducing quality. Further diligence is also needed to sustain and expand the county's universal platforms to ensure that all families are offered support at the earliest possible moment in their children's lives.

LA County's home visiting system has evolved toward collective impact, punctuated by key advances, political opportunities, and commitment to both learning and quality. Contributors to various aspects of the system have built deeper partnerships, which have increased the system's capacity to respond to opportunities for expansion; to document implementation and needs; and to coordinate for improved practice. The final chapter of the LA home visiting story has yet to be written through the next critical stage of implementation, but the lessons learned to date will guide current and future leaders in this effort. The leadership is committed to maintaining the system's key pillars: universal access, comprehensive risk screening, tiered interventions at different levels of intensity, and diverse programming to meet the needs of unique populations.

Figure 2. Home Visiting Models in LA County: Capacity, Intensity, and Funding Sources (2019)



Source: First 5 LA

Endnotes

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Home Visiting for First-Time Parents: Community Innovation

M. Rebecca Kilburn and Jill S. Cannon

Summary

In this article, M. Rebecca Kilburn and Jill S. Cannon report on First Born, a targeted universal home visiting program operating in over half of New Mexico counties. Created in a small town in response to a lack of support for pregnant women and new parents, First Born adapts features of other home visiting programs, responding to conditions common to high-need, low-resource communities.

As its name suggests, First Born enrolls first-time families. A team of home visitors, including a registered nurse or other licensed health care professional and a paraprofessional parent educator, offers 40 weekly home visits during the child's first year; the frequency of visits diminishes during the child's second and third year. The nurse visits the home both before and after the child's birth, and also when medical issues are the focus of visit. Because nurses are in short supply in many communities, however, most of the home visits are made by parent educators, who coordinate with the nurse visitor.

To promote early childhood health and development, First Born educates parents and helps them access community resources, using a three-pronged approach: helping the family to develop life and social skills, such as decision-making, crisis intervention, and knowledge of child development; using screening tools to identify problems (for example, substance dependency or developmental delays) and referring families to the appropriate sources of help; and promoting effective coordination among community resources.

Based on First Born's scale-up experience, Kilburn and Cannon outline several lessons for other universal programs, including the pros and cons of universal services, the expectation that universal programs will have population-level impact, and barriers to innovation.

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Child services programs begin in different ways and follow different paths.[1] The story of the First Born Program, which we tell here, describes how in the 1990s members of a community in New Mexico, seeking to ameliorate bad outcomes for young children and their families, developed a home visiting program that serves all first-time parents in a community. We discuss why the community made a number of choices, including making First Born universal rather than targeting it to at-risk families and building home visiting teams that comprised both nurses and parent educators rather than one or the other.

First Born's program innovation and development was driven by the community rather than by a top-down process. The community developed a program that was both universal and targeted—universal in that it didn't offer services based on risk status and targeted in that it serves first-time parents only. First Born's features are likely to appeal to other rural communities that have similar workforce and budgetary constraints. Given that child and family disadvantage in the United States is increasingly concentrated in rural areas, adapting models to serve such areas is increasingly important. Finally, the article highlights lessons that can be transferred to home visiting as it matures in the United States as well as to evidence-based policymaking more generally—about the pros and cons of universal services, the expectation that universal programs will have population-level impact, and barriers to innovation.

Background

For decades, New Mexico has seen some of the worst child outcomes in the nation.[2] Since 2005, it has been among the lowest five states in the country in the annual Kids Count rankings of child wellbeing.[3] Since 2012, it has ranked 49th every year except for 2013, when it ranked 50th.[4] Within New Mexico, counties have considerable variation in child outcomes, and Grant County, where First Born began, routinely ranks among the lowest half of counties in the state in terms of various measures of child wellbeing.[5]

Grant County sits in the southwest corner of the state, with its westernmost border touching Arizona and its southernmost border coming within 10 miles of Mexico. The Continental Divide runs through it, traversing mountainous regions that include Gila National Forest and the Gila Cliff Dwellings National Monument. Slightly less than half of the county's residents are Hispanic. The largest municipality is Silver City, where about 10,000 of Grant County's 30,000 residents live. Silver City was founded as a mining camp in 1868, and although many types of ore deposits were largely depleted over the next century, copper mining is still one of the most important contributors to the local economy. Tourism, government employment, and cattle ranching are the county's other major industries.

One of the largest employers in Grant County is Gila Regional Medical Center (GRMC). This medical facility is the largest in a 100-mile radius and provides emergency and inpatient hospital services as well as associated family medicine facilities and preventive services. In the mid-1990s, Donald Johnson was chief of pediatrics at GRMC. At the same time, his wife, Victoria Johnson, directed a program—funded by the State of New Mexico's Behavioral Health Services Division—that aimed to improve outcomes of teen mothers and their babies.

The Johnsons reacted similarly to experiences in their respective positions: frustration at observing infants and parents exhibiting poor outcomes that they believed might have been avoided through preventive services delivered during pregnancy or soon after birth. Meanwhile, a set of rigorous research studies conducted for early childhood prevention programs that had a home visiting component, such as the Nurse Family Partnership (NFP) home visiting program, Project CARE, and Houston Parent-Child Development Center, demonstrated that these types of services could indeed improve child and maternal outcomes.[6]

The Johnsons and others providing child and maternal services in the community were excited about the positive findings from NFP and other early interventions, but they were pessimistic about replicating these national evidence-based programs in Grant County. Most of the programs had been developed and tested in large urban areas. Grant County was designated a Health Professional Shortage Area by the US Health Resources and Services Administration (HRSA), meaning that finding registered nurses or other clinicians to staff preventive programs would be challenging or impossible. (See the HRSA website at bhpr.hrsa.gov/shortage for information about Health Professional Shortage Areas.) Furthermore, many Grant County mothers spoke Spanish, and finding bilingual registered nurses would be especially difficult. Grant County service providers felt that some of the national models seemed expensive to implement and also that the county would not meet some of the models' minimum scale requirements, such as being able to support a caseload of 100 mother-child pairs. Last, based on their own practices the Johnsons and their colleagues perceived that most new parents—and not just those who met the restrictive definitions of risk used by many of the existing programs—could benefit from preventive services.

They had other reasons to object to targeting services only to the highest-risk mothers. For one, almost all births in the county were paid for by Medicaid, implying that most families would likely qualify for a targeted program. The process of determining risk-based eligibility takes time, which can be a barrier to promptly beginning services and may discourage some potential clients from enrolling. The Johnsons and their colleagues also felt that the public would be more likely to support—and clients would be more likely to accept—the program if services were offered not just to families identified as needy but to all families becoming parents for the first time, without regard for the family's socioeconomic status.

At this point, the Johnsons and others could have determined that no models were a good fit for their community, and they could have continued to do business as usual. They decided instead to innovate. Using emerging findings from neuroscience, program evaluation, economics, and other fields, they developed a program incorporating features that had evidence of effectiveness while tailoring the structural requirements to meet the realities of their community. By 1998 it began to go by the name First Born Program, and by 2002 it was acknowledged as one of the nation's 10 most innovative and exemplary prevention programs by the Substance Abuse and Mental Health Services Administration, the Center for Substance Abuse Prevention, and other collaborative national agencies.

The First Born Program

First Born promotes early childhood health and development by creating teams of specially trained parent educators and health care professionals to give parents information, training, and access to community resources. This section describes the theory of change that underlies the program model and provides details about the program's structure.

Theory of Change

First Born uses a three-pronged approach to promote child and family wellbeing and to help with a range of potential family needs:

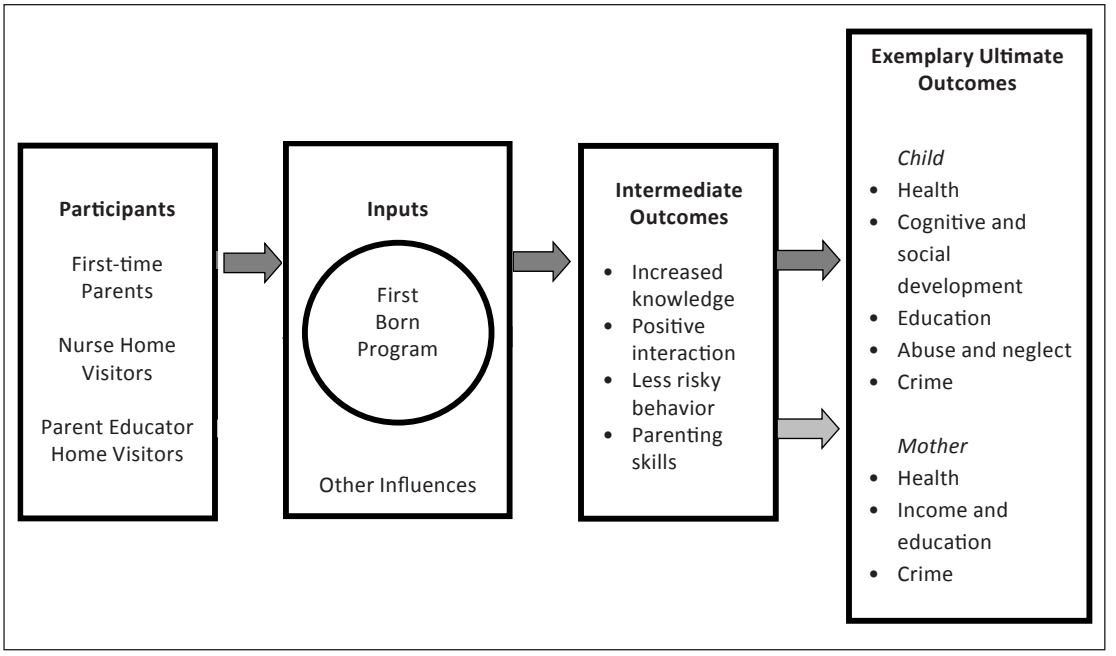
- *Family education.* Home visitors work with the family to develop life and social skills, such as decision-making, crisis intervention, and child developmental assessment and knowledge.
- *Problem identification and referral.* Home visitors use screening tools to identify family members who need referrals to other resources for issues including substance dependency, family violence, and developmental delays.
- *Coordination of community resources.* Program staff participates in community-based councils, task forces, and other teams to promote effective coordination of data and services.

Families who participate in the program are expected to enhance their family functioning and to develop protective factors that will facilitate their positive development in the short and long term (see figure 1 for a simple representation of the First Born logic model). First Born is guided by three theories—self-efficacy and empowerment, family ecology, and attachment and bonding—which characterize behavioral change as dependent on an individual's beliefs, motivations, and emotions as well as the family's community context. Specifically, the program works to enhance family resiliency by building trusting relationships and by identifying family goals through weekly home visits to promote:

- positive interaction and relationship between parent and child;
- positive parenting behaviors;
- safe, nurturing, and stimulating environments;
- increased factual knowledge about pregnancy, delivery, and child health and development;
- increased knowledge about the effects of alcohol, tobacco, and other drugs;
- decreased risky behaviors on the part of the parents;
- increased knowledge of community resources for the family; and
- opportunities for formal education continuation.

Ultimately, theory suggests that families should experience better outcomes in the areas of physical and mental health, social and family interactions, cognitive development, and family goal and challenge management. The program is designed to help families improve intermediate outcomes in the form of family behaviors, knowledge, and interactions, which in turn promote the mother and child's physical and mental health, and positively affects other outcomes, such as education and abuse and neglect.[7]

Figure 1. First Born Program Basic Logic Model



Program Details

First Born is a universal program; its services are free and are offered to all first-time parents within the service area (typically a county). Program participants (generally mothers) can enroll during pregnancy and up through the child's second month. The program ends when the child reaches age three. To help recruit parents and refer them to services, First Born builds relationships with community providers that work with families and children. The home visitors work closely with local health care providers, hospitals, and social service agencies to identify and recruit first-time parents and to help them get preventive and developmental information and services.[8] First Born sites aim to enroll parents in the program during pregnancy. Pregnant families learn about the program from a range of sources, including friends, health care providers, civic organizations, and social services. First Born sites also work very closely with the local hospital maternity ward to identify and recruit additional first-time families at childbirth for families who were not enrolled in First Born prenatally.

The First Born model calls for at least 40 weekly home visits in the child's first year of life, although a study in one site indicates the average number of visits may be lower in practice.[9] Visits may be less frequent in the child's second and third year. Trained home visitors deliver the program, typically in the child's home, using the trademarked First Born Program, a curriculum-based model that adapts previous home visiting models to high-need, low-resource communities, including rural areas. By going to families' homes rather than requiring them to come into program offices in town, the program can reach families that otherwise might not readily access services.

Rather than choosing to use either nurses or parent educators as home visitors, First

Born decided to create teams that combine the two. New Mexico's nurse shortage is only expected to grow worse, and First Born's two-person home visiting team lets communities use their available workforce to their best advantage.[10] The First Born home visiting team includes a registered nurse or other licensed health care professional, such as a licensed practical nurse, who visits participating families both before and after the child's birth, and when families encounter medical challenges later on. Parent educators, however, are the most frequent visitors; thus First Born's staff has about eight parent educators paired with each nurse. Visits are conducted in English or Spanish, depending on the family's preference.

Parent educator home visitors generally have at least some college education and some human services experience. Once they're hired, they get extensive training in the First Born curriculum, as well as in child development, culturally competent practice, and other topics. Their preparation includes 120 or more hours of lectures and textbook training, 40 or more hours of shadowing a trained First Born home visitor, and about 40 hours of training learning about community resources—for example, food resources or the local child protective services' investigation procedures. Home visitors must demonstrate competency in many areas of the curriculum before they can conduct home visits, including: mission statement and core values; communication and relationship-building skills; managing home visits; program documentation; safety; prenatal and postpartum curricula; breastfeeding; immunizations; medical issues; infant growth and development; mental health issues, such as maternal depression; substance use; family planning; domestic violence; child abuse and neglect; community resources; hospital orientation; and cardiopulmonary resuscitation. After starting home visits, they also receive regular supervision, including reflection on home visiting experiences, and continuing education on topics like new health insurance eligibility standards or new aspects of the First Born curriculum.

A hallmark of the First Born model is integration into the community, which takes many forms. For example, First Born staff serve on community committees or workgroups like early learning councils, establish informal and formal referral arrangements with other child and family-serving organizations and individuals like WIC offices, doulas, high schools, churches, etc., conduct public outreach campaigns, and encourage clients to refer friends. Integration into the community promotes referrals to and from First Born; it also helps establish First Born's universality, as the program becomes the new normal among all community members who are preparing for childbirth and parenting.

Evaluation Over the Program Life Cycle

Since its inception, First Born has used several types of evaluation to assess implementation and outcomes. These evaluations align to some degree with the stages of implementation, broadly described as program development, initial implementation, and full implementation. First Born's evaluation experience follows recommendations from researchers that programs conduct evaluations sequentially as they go through the following stages: an articulation of a theory of change and logic model that can be tested (program development and initial implementation stages); monitoring of inputs and adherence to the program model during initial

implementation; evaluation during full implementation to assess the program's effectiveness at achieving intended outcomes for participants; and last, assuming that the initial evaluations are promising, a rigorous impact evaluation with a comparison group to determine whether the program is the cause of the observed outcomes.[11]

Theory of Change, Monitoring, and Implementation Evaluation

First Born sites regularly collect data during implementation for continuous quality improvement and self-evaluation. During initial development, First Born's developers outlined a theory of change, identified the program's key goals, and then created a set of data indicators that reflected those goals.[12] Since then, collecting this data has become a routine part of program implementation in all sites to assess program inputs and outputs for internal evaluation purposes.

The next evaluation step was to conduct an implementation evaluation examining short-term participant outcomes. A researcher-practitioner collaboration between New Mexico State University and First Born articulated a research-based theory of change and designed the evaluation to assess outcomes in relation to that theory. Two published articles from the evaluation showed that the program was achieving its intermediate family-functioning goals for participants.[13] This evaluation looked at a group of 109 participants receiving services in the Silver City site from 2001 to 2003, after the program had reached the full implementation stage. In what is known as a *pretest-posttest design*, the evaluators examined whether enrolled families' outcomes improved over time, from before program services were received to after. The researchers found that families scored higher after receiving program services on measures of family resiliency, such as social support and family interaction. They also found that when families had more home visiting contact hours, their scores on these measures improved significantly. This evaluation provided preliminary evidence to build the case for replicating First Born at other New Mexico sites.

Two further evaluations assessed First Born's implementation at other sites as the program was replicated in New Mexico. One was a qualitative study by RAND Corporation researchers that looked at the experiences of six First Born sites in four key areas during the early implementation stages (up to one year after initiating client services), from 2007 to 2010.[14] The sites included four primarily rural locations, one small city, and one larger city. The study found that half of the sites met their intended staffing objectives in early implementation, two-thirds met referral and enrollment objectives, and two-thirds met objectives for adherence to the program model. All the sites were generally able to operate the program within their budgets.

More recently, a University of New Mexico process evaluation examined implementation outcomes for an enhanced version of First Born that employs special staff to support family enrollment and program referrals to community resources.[15] This study included program implementation data from 2010 through 2014, starting while the program was in the initial implementation stage and covering more than 1,500 families. The authors also observed 39 home visits. The study aimed to examine such aspects of the program's operation as number of cases, child and family assessments, services provided, staff knowledge, and coverage of core topics,

and to put these things in the context of how the program was expected to operate and how well it adhered to the model. The researchers found that program staff had a clear understanding of the First Born model and the expectations for implementation, and that home visits generally followed the First Born core curriculum while covering additional topics to meet individual families' needs.

Impact Evaluation

After logic model validation and implementation evaluations showed promising evidence, First Born supporters and potential funders became interested in the next stage of evaluation: an impact study to look at the program's effects on participants compared to those who didn't participate in the program. The study's primary aim was to see whether the program was helping improve family outcomes as intended. A secondary aim was to build stronger evidence to guide future decision-making about the merits of continuing or expanding the program. But the study faced a dilemma: How do you evaluate a universal program for causal impacts when there isn't a control group that's not receiving services?

RAND researchers and First Born supporters were discussing options for an impact evaluation when a situation in Santa Fe County suggested an answer. Santa Fe was starting the program but lacked the funding to serve all families expecting their first child. The community also had prior experience using a lottery system for enrollment in underfunded social services and planned to use a lottery for First Born as well. When the researchers approached the Santa Fe site about using the planned lottery system to randomize eligible families to receive First Born services or not, it was amenable and the impact study was born. Ideally, the impact evaluation would have been conducted in the original Silver City site after full implementation was reached and before replication to other sites, but circumstances in the real world meant that the impact study occurred at a relatively new site during the program's expansion.

The impact evaluation was a randomized controlled trial, that is, eligible families were randomly offered either enrollment in First Born (the treatment group) or not (the control group). Randomization began after the program had been serving families for over a year (to ensure that it was operating as intended in the initial implementation stage); a pilot randomization was also conducted first. The study ultimately randomized 244 families (138 in the treatment group and 106 in the control group) from June 2011 through October 2013.

A study of the program's effects on infant health care found that families assigned to First Born used less health care in their first year than families not assigned to the program. Specifically, the evaluation found that children in the treatment group were one-third less likely to visit an emergency department than control group children and 41 percent less likely to have visited a primary care provider nine or more times (see table 1).[16] (The median and mean number of visits to a primary care provider in the data was eight, so the study examined the incidence of children visiting primary care more than the average number of times.) No significant differences were found for hospitalizations or for injuries requiring

Table 1. Treatment and Control Group Effects for Child Health Care Use in First Year

Outcome	Treatment Group Mean	Control Group Mean
One or more emergency department visits	0.28	0.42*
Child saw health care provider 9 or more times in first year	0.29	0.49*
One or more hospitalizations	0.12	0.16
One or more injuries requiring medical attention	0.06	0.09
Sample size	138	108

Source: Kilburn and Cannon, 2017.
Note: * denotes treatment and control group means are significantly different (p<.05).

medical attention, although the First Born group showed outcomes in a more positive direction than the control group.

This evaluation also compared effects for children in lower-risk and higher-risk families. Most home visiting programs target high-risk families because it's believed that these families will benefit the most from services. Few studies have examined whether a universal program can also be effective for lower-risk families. The Santa Fe evaluation found similar significant results for outcomes among lower-risk families, indicating that they also benefited from the program.

The study's results were disseminated to local and state policymakers, philanthropists, and service providers in New Mexico to help guide decision-making based on the first-year health effects the program achieved. But the study had limitations. For example, it relied on self-reported data through surveys with mothers. It also focused on a single site that had been enrolling families for less than two years when the study began, with a community context that may differ from other First Born sites in New Mexico. Furthermore, the fairly small sample size of the evaluation meant that it could detect only relatively large effects. (Researchers also collected data on parenting practices, such as laying the baby on the back to sleep or avoiding the use of walkers; these results were being examined in an analysis that had not yet been published when this issue of *Future of Children* went to press.)

What's Next for First Born Program Evaluation

As the program evolves, replication studies at additional First Born sites will help determine whether infant health care use is similar across sites; effects should also be tested at sites with more years of full implementation. Furthermore, longer-term followup and testing of effects for additional outcomes will better guide decision-making, as will cost analyses of returns on initial investments in the program. For instance, cost analyses could assess whether reductions in costs associated with health care use outweigh program costs.

Ongoing monitoring and data collection will remain important to ensure that First Born sites continue to adhere to the program model and meet internal goals and objectives. Last, if the model is adapted to meet community needs or

otherwise changes over time, the program should be reevaluated to assess whether it is achieving intended outcomes.

Scaling Up the Program

The developers of some home visiting programs make plans early on to scale up their program model. But after 10 years of operation, First Born wasn't aiming to expand to additional sites. Then other communities with contextual challenges similar to Grant County's came to First Born's leadership and asked for help to improve their own child and maternal outcomes.

Demand from Other Communities

In 2006, about a dozen home visiting programs were operating in New Mexico, using a range of program models, funding sources, and targeting strategies. They included services for children diagnosed with disabilities under the federal IDEA Part C early intervention program; a state-run case-management program for at-risk families; privately supported programs operated by local United Way agencies; and others that had patched together funding from a variety of government and private sources. At the time, New Mexico had not committed recurring funding to a designated home visiting system.

Meanwhile, home visiting programs were surging across the United States. By 2009, 40 of 46 states responding to a survey were offering state-based home visiting services.[17] The Pew Charitable Trusts, an independent nonprofit NGO that seeks to improve both policy and practice, had launched the Pew Home Visiting Campaign, which aimed to increase federal and state support for voluntary home visiting. And the NFP home visiting model had grown from two replication sites in 1996 to sites in 31 states in 2010, as well as a National Service Office that supported over $10 million worth of activity in the fiscal year ending in September 2010.[18]

Some of the growing interest in home visiting programs has been attributed to the strong findings from a set of rigorous research studies conducted for the NFP and other early childhood programs, as described above.[19] Indeed, by 2007, NFP had conducted its third randomized clinical trial demonstrating improvements in outcomes for mothers and children well into the teen years.[20] The growing evidence related to the NFP coincided with another trend in social programs: the evidence-based policy movement. Organizations like the Coalition for Evidence-Based Policy advocated that the government favor social interventions that demonstrated effectiveness through randomized trial evaluations (see www.evidencebasedprograms.org for more information), and the NFP was the only early childhood program to earn the coalition's Top Tier designation. Late in 2010, the US Department of Health and Human Services released a list of seven home visiting models that it classified as "evidence-based," and the department has since listed other programs that meet its standards.[21]

At the same time, the Los Alamos National Laboratory (LANL) Foundation began to systematically review ways that it could help improve outcomes in northern New Mexico. The LANL Foundation, a private organization committed to improving northern New Mexico communities by investing in education, learning, and community development, is supported largely by LANL and its employees. The foundation's strategic review led it to focus

on early childhood. It decided that home visiting had shown the most promise for improving child and maternal outcomes in the context of the particular challenges facing the area's largely rural, poor counties. The foundation found convincing evidence that NFP was effective and strong support for replication from the National Service Office; for other leading models, such as Healthy Families America and Parents as Teachers, the research evidence was mixed.

After gathering more information about the NFP, the foundation decided that it wasn't able to implement the model. The NFP home visitors are registered nurses, and the foundation determined that it would not be able to hire enough nurses in its largely rural service area. Like Grant County, this region and most of the state of New Mexico were designated as HRSA Health Professional Shortage Areas. Furthermore, NFP's projected total cost per family was sizeable—at that time, the NFP website reported typical costs of $4,500 per family, per year, with families participating in the program from the first trimester of pregnancy until the child's second birthday.[22]

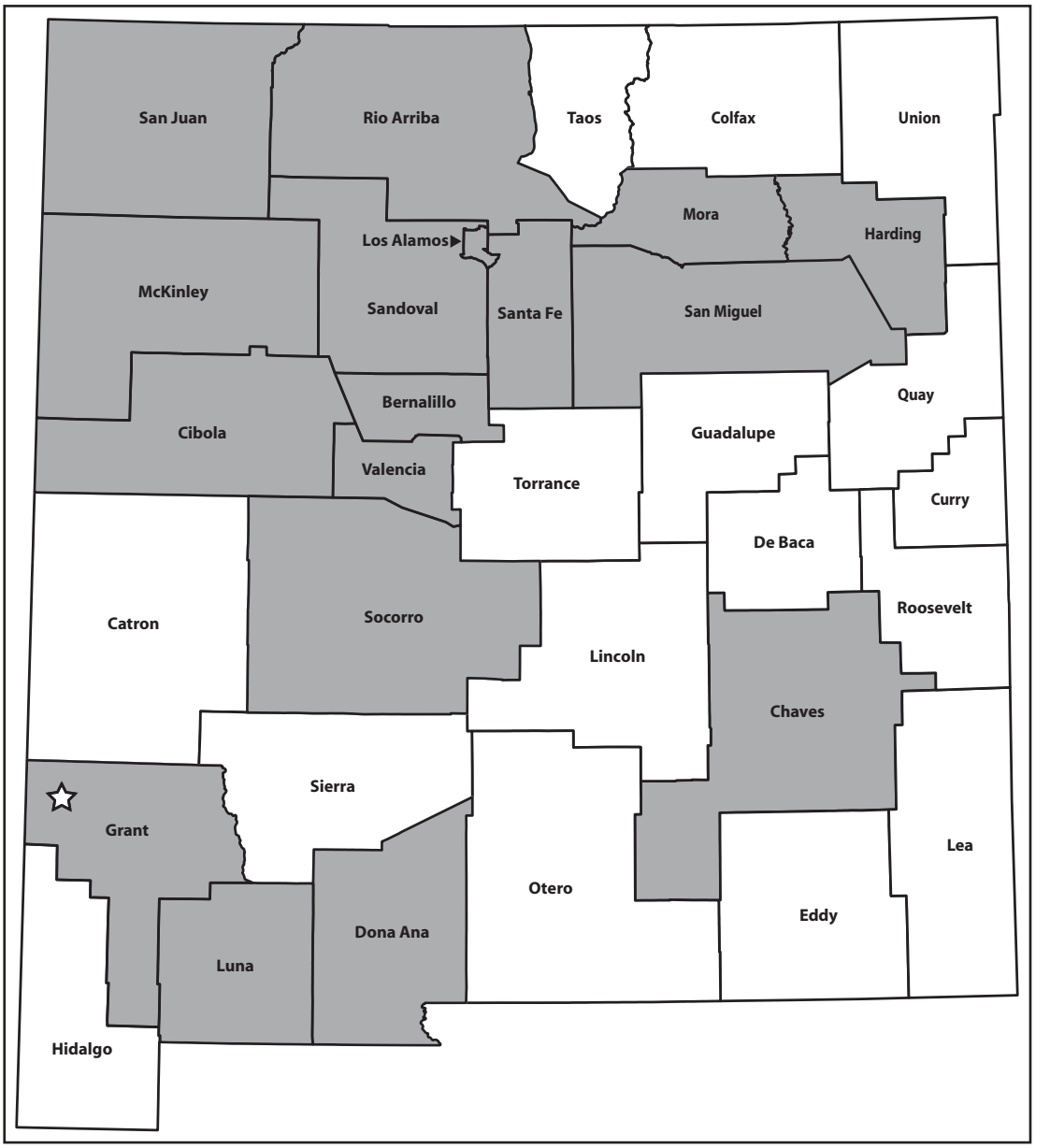
Unexpectedly, the foundation's national search for an appropriate home-visiting program for northern New Mexico took it to the southwestern part of its own state. LANL chose to implement First Born for several reasons, including that the program used both nurses and non-nurse professionals and that costs were about two-thirds of NFP's. Furthermore, as we note above, an evaluation of the original First Born site, published in a peer-reviewed journal, found that the program was meeting its stated objectives to promote family resiliency across several domains.[23] From the foundation's perspective, the only thing missing from First Born was a technical assistance and training infrastructure that could facilitate replication. The foundation persuaded the Grant County First Born team to help with replication, and it provided financial support. The first step was to implement First Born programs in Rio Arriba County and Taos County in northern New Mexico, and both programs began serving children in 2007.

In 2008, the New Mexico state budget included the first recurring funding stream to establish and support a state system of home visiting. By 2009, the state was supporting 14 organizations that offered home visiting services in 19 of the state's 33 counties. By 2010, five state-supported First Born sites were operating, in Grant (Silver City), Los Alamos, Rio Arriba, Santa Fe, and Socorro counties. Additionally, a private nonprofit health-promotion organization, St. Joseph Community Health, began funding and delivering First Born in the metropolitan Albuquerque area in 2010. As figure 2 shows, by 2018 First Born served more families than any other home visiting program in the state, with publicly and privately funded in sites in 17 of New Mexico's 33 counties (figure 2), 10 Native American Pueblo communities, and the Navajo Nation.

These sites said that they chose First Born for reasons similar to those cited by the LANL Foundation:

- The organization's goal was to improve the types of child and maternal health outcomes for which home visiting has shown promise compared to other service strategies.
- The organizations recognized the evidence for the NFP program, but thought NFP was impractical for these communities due to nursing

Figure 2. New Mexico Counties Implementing First Born in 2018



Source: http://www.firstbornprogram.org/programsites.html

Notes: Dark gray counties implement First Born. Star denotes location of original site.

shortages, perceived high cost, and the fact that they lacked enough births to meet the NFP's requirement of 100 high-risk parents to establish a site. (See www.nursefamilypartnership.org/communities/local-implementing-agencies for site requirements.)

- Two published articles showed that First Born was achieving its intermediate family-functioning goals for participants.[24]

Rural communities may find it challenging to find nurses or licensed clinicians to serve as

home visitors (as some models require), and they may not meet the scale requirements of some models. For this reason, rural communities have been particularly interested in First Born.

Infrastructure for Replication

Although the team that started the original First Born site in Grant County was able to help initial replication sites in the northern part of the state, supporting the large number of sites that were implementing First Born across the state by 2017 was beyond the capacity of the Grant County program developers. Upon reaching a larger scale, many home visiting programs, including NFP, Parents as Teachers, Healthy Families America, Child First, Family Spirit, and Family Connects, created national program offices to help new sites get started, monitor existing sites' adherence to the program model, and help sites with training and other implementation support. To maintain the quality of existing sites and meet the demand for new ones, First Born realized that it would also need to establish an organization dedicated to supporting quality and replication. Unlike the developers of most other programs that had reached this scale, First Born's program developers hadn't planned to lead this new organization.

Thus there was demand for the services of a First Born national program office, but no such office was in the works. Existing sites were concerned about the future of the program, and philanthropies that had supported First Born's growth from one site to many faced the prospect of no long-term return on their investment. Another challenge to establishing a First Born program office was financial: such an office would require additional resources, meaning that the new organization would need to raise funds before getting started.

After several years of uncertainty regarding First Born's fate, a partnership of interested parties developed a plan to open a First Born program office at Santa Fe Community College's Early Childhood Center of Excellence. The office will provide statewide training, technical assistance, and licensing of First Born sites throughout New Mexico. As with other programs' service offices, the initial financial model depends on philanthropic support along with licensing fees from sites. Expansion of First Born beyond New Mexico is under consideration.

Lessons for Other Universal Programs

Because the program was a community-led effort, First Born's story is different from that of many programs that have reached full implementation. Yet many of the lessons from First Born are broadly relevant for other programs, no matter where their leadership comes from.

Pros and Cons of Universal Services

Like other universal programs, First Born is sometimes criticized because it may be serving some clients who are not at risk for poor outcomes and, hence, isn't efficiently using scarce funds. First Born has countered these arguments in two ways. The first is by pointing out that First Born isn't fully universal—it doesn't serve all parents of newborns, but only first-time parents, who represent slightly over 40 percent of parents of newborns in the state. And a program that serves all first-time parents will eventually serve most parents with more than one child.

The second response to these criticisms is that in a state as poor as New Mexico that has such poor outcomes for young children, it isn't efficient to target services only to the highest-risk families. New Mexico has the highest percentage of Medicaid births in the nation—72 percent of births in 2016, the latest year for which data are available.[25] Given that younger women are more likely to have their births covered by Medicaid, it's likely that the rate for first births is even higher. Other means-tested programs have decided that when rates of qualification are so high, the costs of screening for eligibility are likely to outweigh the benefits, and so they serve everyone; school lunches in some communities are an example of this phenomenon. Furthermore, universal services reduce the stigma associated with participation, thus raising the likelihood that high-risk families will in fact participate. In sum, in a poor state like New Mexico, targeting by socioeconomic status may have low value. This justification for universal services may be less persuasive in states that are more affluent or have better child outcomes.

Interestingly, First Born has also been criticized for targeting too much. Specifically, some policymakers and community members have expressed concerns that by serving only families of first-born children and limiting enrollment to families with infants less than two months old, First Born is denying services to families that clearly need help, such as families that have had a substantiated child-protective services case in the past or families with multiple children and a parent going to prison. In fiscal year 2017, New Mexico initiated Level II targeted home visiting services, which are offered to families identified as having a high degree of stress (Level I home visiting programs are prevention and promotion programs like First Born). Level II services are currently in a pilot phase; having these services available in First Born locations would alleviate concerns about overtargeting.

Universal Services Suggest Population-Level Impact

Another lesson from First Born is that universal programs may be expected to have population-level impact. Especially when program evaluation results suggest that a program is effective, its relevant indictors for the geographic area being served should show improvements if the program is available to everyone.

In the case of Grant County, First Born has been implemented for nearly 20 years, and yet average outcomes for newborns in Grant County have exhibited only modest improvement.[26] Home visiting programs are typically voluntary, and take-up rates among families who are offered services are generally less than 75 percent.[27] Furthermore, of the families who enroll in home visiting, large numbers don't complete the entire program.[28] As a result, a program would need to produce extremely large changes in participating families' outcomes to generate improvements in indicators for all families in the program's catchment area. Even though it's a question of simple ratios, this type of explanation may be unsatisfactory to funders, particularly in an environment where take-up and completion rates of less than 100 percent for a universal program are themselves the targets of criticism. Furthermore, additional factors may contribute to population-level outcomes

that mask a program's improvements. For example, since First Born began operating in Grant County, the area has experienced the Great Recession, mine closures, the opioid epidemic, and other confounding factors. Though it's easy to explain why a universal program might not generate improvements in population-level indicators, the inference that universal services should lead to upticks in these indicators is nevertheless common.

Barriers to Innovation

A final lesson from First Born is that in addition to incentives and assistance, innovation requires overcoming numerous formidable barriers. One such barrier is the chicken-or-egg aspect of getting funding for a new program that's under development: funders have a strong preference for supporting evidence-based programs, but programs can't achieve evidence-based status until they're tried. The sort of evaluation needed to achieve evidence-based status can often cost more than $1 million, a sizable "barrier to entry," to use an economics term. Another challenge is that once demand for a program is generated, creating a service office to support replication entails large fixed costs. State and federal funders focus on reimbursing providers for services delivered, but they rarely provide funding to develop infrastructure for specific programs, leaving philanthropic support or other fundraising to fill that gap. Last, many program developers and communities are not in a position to spend a decade or more developing or modifying programs to improve existing services or adapt programs to meet local needs.

These barriers to innovation are daunting for any sector of human services, but they may be particularly burdensome for communities that don't have the infrastructure that stands behind universities, government agencies, and foundations. The challenges that First Born and other programs had to overcome to reach full implementation raise questions about whether the current approach to supporting programs may be stifling innovation.[29] Balancing the funds devoted to established programs with more attention to innovation and adaptation may expedite improvements in human services.

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HealthySteps: Transforming the Promise of Pediatric Care

Trenna Valado, Jennifer Tracey, Jonathan Goldfinger, and Rahil Briggs

Summary

In this article, Trenna Valado, Jennifer Tracey, Jonathan Goldfinger, and Rahil Briggs highlight the potential to expand the promise of pediatric care to encompass the full array of child and family needs that can affect the long-term wellbeing of infants and toddlers.

Pediatric care is not stigmatized, nearly universally accessed, and oriented toward prevention. The American Academy of Pediatrics already urges pediatricians to screen for adverse childhood experiences, maternal depression, behavioral and developmental risk, and even the effects of poverty on children. Most pediatricians would like to extend their narrow health care mandate to broader social-emotional and behavioral care and education, but they're often constrained by issues of time, training, and reimbursement.

Valado and her colleagues offer a solution to those constraints: HealthySteps, a risk-stratified, population health model that integrates a skilled child development professional—called a HealthySteps specialist—into the pediatric care team. The model comprises eight core components that can be divided into three tiers of service, beginning with universal screening that allows practices to identify children and families at higher risk of negative outcomes. These families are then offered the more intensive service tiers, in which they receive customized support based on their needs.

The evidence supporting HealthySteps comes from a large multi-site evaluation conducted by Johns Hopkins University, which included a randomized controlled trial component, as well as several site-level research studies. Results from this research indicate that HealthySteps had an array of positive impacts on practices that adopted the program and clients they served, including increased physician and caregiver satisfaction, improved continuity of care, greater adherence to recommended well-child visits and vaccinations, and increased rates of developmental screening and other services. There were also positive impacts on children and parents over time, though many of these impacts were modest. The HealthySteps National Office is continuing to evaluate implementation, training, impact, and cost as the program spreads across the nation. Questions that remain to be answered include how such a model should be financed and how health insurance could pay for it.

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How might we, as a society, help parents and caregivers develop the secure, loving relationships with their babies and toddlers that foster healthy development and resilience? And how might we also help families who are facing adversity connect to community supports so they can protect their children from repeated, toxic exposures that can harm development? Whatever their social or economic circumstances, most new parents feel enormous societal pressure to be "perfect" at parenting, so the setting for such interventions would need to be trustworthy and nonstigmatizing. Parents must want to participate, and not be labeled or judged for doing so. The ideal setting would also be universal—a place where all parents and children already go, without facing significant cost, long wait times, or great distances. Finally, it would give families ongoing access to a range of professionals trained to assess and help with child and parent challenges that can impact a child's development.

This ideal setting already exists: pediatric primary care. Pediatric care (including, as defined in this article, primary care provided to young children by family practitioners and nurse practitioners in other settings) is among the least stigmatizing and most universally accessed services in the United States.[1] According to 2016 national data, 89 percent of children five years old and younger had experienced a preventive visit in the past year.[2] (Compare that, for example, to the 7 percent of eligible children under three who access the federal Early Head Start program.[3]) In addition, given that the recommended schedule includes 13 well-child visits in the first three years of life, pediatric care provides an opportunity to interact with families repeatedly. Researchers studying the intergenerational transmission of risk from mother to infant note that primary health care providers play a "pivotal role in facilitating access to support services" that can break vicious cycles of adversity.[4] The leading professional association, the American Academy of Pediatrics (AAP), has recognized this promise; it urges pediatricians to address adverse childhood experiences and the effects of poverty on children.[5] Pressure is also mounting throughout pediatrics to integrate professionals from different disciplines into a coordinated office team to help families cope with any challenges they face, whether social, emotional, behavioral, financial, physical, or environmental.[6] But before pediatrics can fulfill this promise nationally, it must overcome several obstacles.

In this article we examine some of these obstacles, and we highlight a leading model of family-centered, relationship-based care, called HealthySteps, that transforms how pediatric and family practices support families with young children. By expanding the array of needs addressed in pediatric care, HealthySteps offers a sustainable model of relationship- and team-based primary care that has demonstrated positive impacts for children and their families.

Challenges in Pediatrics

For years the AAP has recommended that pediatricians routinely use validated screening tools to identify risks to development in every child as effectively and as early as possible. Despite this recommendation, US screening rates remain consistently low. Only 30 percent of parents responding to a national survey reported having completed a developmental screening tool when their child was between nine and 35 months of age.[7] Surprisingly, that number

rises to only 37 percent for children whose primary care meets the AAP's definition of a "medical home," defined as care that's accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective.[8]

Even when pediatric practices screen for risks, families can't necessarily access important resources and services. Among families who need help arranging or coordinating their children's care among different doctors or services, only 16 percent say they receive that support.[9] Families with children at moderate to high risk of developmental delays may actually receive less family-centered care, referrals, and care coordination, potentially indicating that a systemic bias exists or that providers can be overwhelmed by certain children's needs.[10] Pediatricians acknowledge this limited coordination and its negative effect on families' ability to access services, attributing it primarily to lack of time and inadequate staffing.[11]

Children's behavior, parent-child relationships, and family circumstances are underrepresented in curricula and training for physicians.

Another problem is that pediatric education traditionally focuses mostly on children's physical health. Children's behavior, parent-child relationships, and family circumstances are relatively newer topics that are underrepresented in curricula and training for physicians. To help children overcome adversity and succeed in school and in life, pediatricians still need to get better at observing parents and children for concerning (and praiseworthy) behaviors and interactions and at fostering healthy relationships.[12]

Last, pediatricians have limited financial incentives to offer care that incorporates universal screening, counseling, care coordination, and including other types of professionals in their practices. Despite new federal and state efforts to pay for positive outcomes rather than paying fees for specific services, US insurers tend to focus on short-term cost savings tied to physical health, as opposed to longer-term cost savings and the positive outcomes tied to emotional wellbeing. Young children are typically healthy and incur relatively low health costs, which can make it difficult for insurers to justify investing in pediatric primary care innovations—particularly given their focus on older adults with chronic conditions, where cost savings are more immediate. Positive outcomes from services for young children and parents mostly occur later in life, so pediatrics is consistently challenged to make the case that insurers should pay for services that encourage relationship-based care early in life. Investing in children's physical and emotional wellbeing could not only generate health-related cost savings in the short term; more importantly, it could affect the long-term trajectory of children's health and wellbeing into adulthood, and bring long-term cost savings for health care, education, social services, criminal justice, and other sectors.

The HealthySteps Model

HealthySteps offers an approach that can help overcome many of these challenges. The eight core components of the HealthySteps

model (see box 1) are designed to promote healthy child development by providing positive parenting guidance, connecting families to community resources to meet children's and parents' needs, and fostering parent-child relationships that nurture children and buffer them from the effects of toxic stress. To help deliver the core components, a skilled child development professional, known as a HealthySteps specialist, is integrated into the pediatric primary care team. Most HealthySteps specialists are social workers with master's degrees, followed by psychologists. HealthySteps specialists have the time and training to support both common and complex child and family problems, including (but not limited to) feeding, behavior, sleep, attachment, maternal depression, social needs, and adapting to life with a baby or young child. An emphasis on building healthy relationships—between parents and children, between families and health care providers, and among health care professionals—is one of HealthySteps' hallmarks. HealthySteps thus both borrows from and enhances the trust parents have in pediatricians, all within the nearly universally accessed, non-stigmatized setting described above.[13]

In a pediatric practice, HealthySteps services aim to help all children from birth to three years, as well as their families, by discussing children's development and behavior; identifying children's and parents' strengths, risks, challenges, and needs early; and helping meet those needs in a timely, tailored manner. To use resources efficiently, HealthySteps uses a three-tiered approach that stratifies risk. In the first tier, child and family screenings and access to a child development support line are offered universally. In the second, families with mild to moderate concerns receive short-term consultations on development or behavior, along with referrals to needed services, care coordination, positive parenting guidance, and early learning resources. In the third

Box 1. HealthySteps Core Components

1. *Child Developmental, Social-Emotional, and Behavioral Screenings:* All children from birth to three years old are routinely screened for physical, cognitive, language, social-emotional, and behavioral risks and needs, following a recommended screening schedule.
2. *Screenings for Family Needs:* All families with children from birth to three years are routinely screened for important risk factors and social determinants of health—including maternal depression, food insecurity, housing instability or homelessness, utility needs, transportation needs, interpersonal safety, substance misuse, and tobacco use—following a recommended screening schedule.
3. *Child Development Support Line:* All parents with children from birth to three years can communicate with a HealthySteps specialist between visits for nonurgent, nonmedical concerns.
4. *Child Development and Behavior Consults:* Families with children from birth to three years receive short-term support in the form of one to three consultations with a HealthySteps specialist to address specific, time-limited concerns.
5. *Ongoing, Preventive Team-Based Well-Child Visits:* Families identified as being most at risk meet with a HealthySteps specialist during routine well-child visits.
6. *Care Coordination and Systems Navigation:* HealthySteps specialists partner with parents, clinicians, and community-resource providers to coordinate and navigate systems that support child health and development and family needs.
7. *Positive Parenting Guidance and Information:* HealthySteps specialists provide guidance, education, information, and resources that help parents support their children through different stages of development.
8. *Early Learning Resources:* HealthySteps specialists share concrete strategies, activities, and tools designed to support children's early learning.

tier, families with the greatest risk factors or needs receive a series of team-based well-child visits incorporating a HealthySteps specialist. The HealthySteps National Office has learned from its sites nationwide that—in alignment with AAP guidelines—the team can successfully provide some universal services using front-desk staff, medical assistants, residents and other trainees, and/or nurses, thus freeing HealthySteps specialists and doctors to offer tailored services. This approach allows practices to provide HealthySteps to approximately 2,000 children by adding just a single HealthySteps specialist.

Evidence for HealthySteps

Ever since HealthySteps began in the mid-1990s, evaluation has been an integral part of the model. Early on, the Johns Hopkins Bloomberg School of Public Health conducted a national evaluation across 15 HealthySteps sites that consistently implemented the model following standard protocols. In an affiliate evaluation, Johns Hopkins engaged nine additional sites that followed the same implementation protocols but used varied evaluation designs. These early evaluations laid the foundation for the model to grow in later years, with several sites investing in more research on their own. In addition, two national studies completed in 2010 and 2017 focused specifically on assessing model implementation across the entire HealthySteps network. In this section we review the evidence for HealthySteps and highlight topics where more research is needed.

National Evaluation

The most extensive evaluation, yielding the strongest evidence for the effectiveness of HealthySteps, was initiated by the Johns Hopkins Bloomberg School of Public Health in 1996. Fifteen sites participated in the evaluation, divided into two groups using different evaluation designs.

Six of the sites conducted a *randomized controlled trial* (RCT), in which families at a single clinic were randomly assigned to receive either HealthySteps services (the intervention group) or care as usual (the control group). RCTs are considered the gold standard for generating evidence, because they allow researchers to more confidently attribute any observed effects to the program itself, instead of to other, unobserved factors. However, an RCT can pose challenges for a model like HealthySteps that's intended to have practice-wide effects. For example, even families in the control group might benefit from being in a HealthySteps practice, because the clinic's health care professionals have been trained in the HealthySteps model and could bring certain aspects of the HealthySteps approach to their interactions with those families. The possibility of such spillover effects for the control group was noted in the evaluation report, though the researchers strived to minimize these effects (importantly, the HealthySteps model as originally conceived and evaluated offered all model core components to all families in a practice).[14] In addition, practices offering HealthySteps might have ethical concerns about withholding services from a subset of families for the purposes of research—especially when the model is implemented in a high-need community, as is often the case for HealthySteps.

The nine other sites participating in the 1996 evaluation used what researchers call a *quasi-experimental* (QE) design: families receiving HealthySteps services

at a given clinic (the intervention group) were compared to families served by clinics that didn't offer HealthySteps (the control group). Researchers consider an RCT to produce stronger evidence than a QE design, since an RCT compares families in the same practice, thus avoiding the potentially confounding effect of differences between practices. But in a QE design, families receiving services were still compared to similar families not receiving those services. RCT and QE designs both contrast favorably with nonexperimental designs that lack a control or comparison group, as this limits researchers' ability to attribute positive results to the intervention being studied. (Nonexperimental research can still yield valuable insights and point to directions for future research, as shown in the discussion of site-level studies below.)

A total of 5,565 children and their parents were enrolled in the national evaluation—2,963 in the intervention group (1,133 in RCT sites, 1,830 in QE sites) and 2,602 in the control group (1,102 in RCT sites, 1,500 in QE sites). All sites followed the same implementation protocols and drew data from the same sources, including:

- newborn HealthySteps enrollment forms
- child medical records
- contact logs
- telephone interviews with mothers or other primary caregivers at three points in time (2–4 months, 30–33 months, and 5–5.5 years), and
- interviews and self-administered questionnaires with practice staff at two points in time (at the start of the evaluation and 30 months later).

An observation study was also conducted at two of the RCT sites to assess the quality of the home environment, mother-child interactions, and child development among 432 families visited in their homes at 16–18 months and again at 34–37 months. The national evaluation found that HealthySteps had positive impacts on the participating practices, as well as on the children and families served.

Box 2. What Are Adjusted Odds Ratios?

Many results from the national evaluation are presented as adjusted odds ratios (AORs). An odds ratio is a way to measure the association between an intervention and a given outcome. As explained in the final report, "an odds ratio of greater than 1 indicates that subjects in the intervention group were more likely to report a given characteristic than were subjects in the control group; an odds ratio of less than 1 indicates that subjects in the intervention group were less likely to report a given characteristic than were subjects in the control group. An odds ratio of 1 indicates that there was no difference between intervention and control groups." The larger the odds ratio, the bigger the difference between the groups. For example, an odds ratio of 10 means that, compared to the control group, the intervention group had 10 times the odds that a given outcome would be observed. An adjusted odds ratio accounts for other variables that could influence a given outcome (such as education level or income) and adjusts the odds accordingly.

Practice-Level Results

Physicians in both the RCT and QE sites reported that HealthySteps encouraged a team approach and increased their understanding of families' needs.[15] After 30 months of HealthySteps, clinicians (including pediatricians and clinical specialists other than the HealthySteps specialist) were five times more likely to report being "very satisfied" with their staff's ability to meet the behavioral and

developmental needs of children in the intervention group. Both the RCT and QE sites showed increases in satisfaction over time within the intervention group: from 31 percent to 62 percent of clinicians saying they were "very satisfied" in RCT sites, and from 39 percent to 65 percent in QE sites.[16] However, the difference in this effect between intervention and control groups was only statistically significant at the RCT sites, with an adjusted odds ratio, or AOR, of 10.67 (see box 2).

Family-Level Results

Intervention families at both the RCT and QE sites were more likely than control group families to receive a wide array of benefits, including screening, connections to needed services, and anticipatory guidance (that is, helping parents or guardians understand and respond appropriately to their children's expected growth and development).[17] Intervention families were eight times more likely to receive a developmental assessment for their child (AOR = 7.11 for RCT sites, 8.81 for QE sites, and 8.00 combined) and four times more likely to receive information on community resources (AOR = 3.50 for RCT, 4.95 for QE, 4.23 combined). These families were also 2.4 times more likely to discuss five age-appropriate topics with someone at the practice by the time their children were two to four months old (AOR = 1.91 for RCT, 2.92 for QE, 2.41 combined) and 10 times more likely to discuss six or more age-appropriate topics by 30–33 months (AOR = 8.56 for RCT, 12.31 for QE, 10.36 combined). All the results were statistically significant, with a 95 percent confidence level, for both RCT and QE sites.

HealthySteps also had positive effects on adherence to the recommended schedule of well-child visits and vaccinations, as well as continuity of care and parent satisfaction.[18] Intervention families at both RCT and QE sites were 1.5 to 2.6 times more likely (depending on their child's age) to have timely well-child visits; these results were statistically significant for seven of nine time points, with the exception of the nine-month and 15-month visits at RCT sites. In addition, intervention families were 1.4 to 1.6 times more likely to receive age-appropriate child vaccinations and 1.4 times more likely to be up to date on vaccinations by the time the children were two years old (AOR = 1.51 for RCT, 1.33 for QE, 1.41 combined), with all results statistically significant. Intervention children were also 1.7 times more likely to remain at the practice through at least 20 months of age (AOR = 1.87 for RCT, 1.53 for QE, 1.66 combined), and their families were 1.7 times more likely to be highly satisfied with the care they received.[19]

These findings were consistent across income groups, leading the researchers to conclude that "a universal practice-based intervention such as HealthySteps has the potential to reduce income disparities in the utilization of preventive services, timely well-child care, and satisfaction with care."[20]

Parent-Level Results

HealthySteps had a modest impact on several parenting practices. Parents in the intervention group were 24 percent less likely than those in the control group to place newborns on their stomachs to sleep (a position that increases the risk of sudden infant death syndrome), a finding that was statistically significant across both RCT and QE sites (AOR = 0.74 for RCT, 0.78 for QE, 0.76 combined). Other results were statistically significant only at QE sites. For

example, when their children were two to four months old, intervention parents in the QE sites were 24 percent less likely to feed them water (AOR = 0.76) and 19 percent less likely to introduce solids too early (AOR = 0.81). They were also 33 percent less likely to report using severe forms of physical discipline (defined as slapping the child in the face or spanking with a belt or other object) at 30–33 months of age (AOR = 0.67).[21]

Similarly, intervention parents at the QE sites were 35 percent more likely to show their infants picture books every day at two to four months (AOR = 1.35) and 38 percent more likely to play with their infants every day (AOR = 1.38), though these effects weren't statistically significant when measured again at 30–33 months.[22] Intervention group mothers in QE sites who were identified as being at risk for depression—which can detract from parents' ability to be responsive to a child—were more likely than control group mothers to discuss their sadness with someone at the practice (AOR = 2.83), though there were no significant impacts on the depressive symptoms themselves.[23] However, the observation study revealed that intervention mothers were more likely to interact sensitively and appropriately with their children at 34–37 months, even though this difference wasn't yet apparent at 16–18 months.[24]

Child-Level Results

Most of the outcomes assessed at the child level were related to other outcomes discussed above, such as timely well-child visits and vaccinations and age-appropriate feeding. In addition, analysis of data from the embedded observation study showed that HealthySteps was associated with greater attachment security and fewer child behavior problems.[25]

Importantly, several of the results seen in the national evaluation persisted over time, though all effects were modest. At the 5.5-year follow-up, intervention families were less likely to report using severe physical discipline (AOR = 0.85 for RCT sites, 0.57 for QE sites, 0.68 combined) and more likely to report negotiating with their children instead (AOR = 1.25 for RCT, 1.16 for QE, 1.20 combined).[26] Intervention parents were also more likely to have remained at the practice (AOR = 1.10 for RCT, 1.19 for QE, 1.66 combined) and more likely to report that their child regularly looked at or read books (AOR = 1.07 for RCT, 1.22 for QE, 1.16 combined).

Although the national evaluation demonstrated that HealthySteps could promote positive outcomes, several areas weren't significantly affected: parents' knowledge of child development; parents' sense of competence; mothers' daily stress and depressive symptoms; breastfeeding initiation and duration; toddler safety practices; use of acute care or emergency departments; hospitalizations; and parents' reports of their children's language development at two years of age.[27] But it's important to note that the evaluation used an *intention to treat* principle in its analyses. As the authors wrote: "Application of the intention to treat principle means that all the subjects enrolled in the intervention group are treated in the analysis as if they had received the full intervention, even if some are known to have received less or to have dropped out."[28] Thus the results don't reveal whether families who received different levels of service benefited differently from participating in HealthySteps. In addition,

the families served by the RCT and QE sites differed from the families served by the sites that participated in the affiliate evaluation, in which mothers tended to be younger and less educated and were more likely to be Hispanic and receive Medicaid.[29]

Affiliate Evaluation

Several original sites that didn't participate in the national evaluation instead took part in the affiliate evaluation, in which they followed the same implementation protocols but used varied evaluation designs. Three sites completed studies with sample sizes too small for their results to be generalized: a site in Kansas evaluated delivery of HealthySteps services via telemedicine to 38 adolescent parents in a large urban school district; and sites in Alabama and North Carolina assessed discipline practices among 182 parents of toddlers.[30]

In the most rigorous affiliate evaluation, the University of Washington used an RCT design to compare the HealthySteps model, with or without a prenatal component, to usual care. This study randomly assigned 303 families to either HealthySteps only or HealthySteps with a prenatal component, and 136 families to receive the usual care at other practices. Data collection included a telephone survey at one and three months after birth and follow-up telephone interviews with 78 percent of the original 439 families at 30 months. As in the national evaluation, both groups of intervention families received more services than comparison group families, and intervention children were more likely to receive timely well-child visits and vaccinations.[31] Several other positive outcomes were associated with participation in HealthySteps, including greater parent knowledge of infant development; higher rates of parental satisfaction in their role as parents; greater likelihood to report feeling supported to breastfeed and to continue breastfeeding past six months; more use of appropriate discipline strategies; higher scores on a child injury control index; greater satisfaction with care; and lower rates of health plan disenrollment.[32] Intervention mothers were less likely to report depressive symptoms at three months, though they reported more depressive symptoms at 30 months (there was no difference between groups in clinically significant depression). Results were mostly similar for both intervention groups, but children exposed to HealthySteps with a prenatal component had larger expressive vocabularies at 24 months. The researchers concluded that the prenatal component had little added benefit.

Lastly, six sites collected a limited array of data on 1,103 families served by HealthySteps, without collecting similar data on a comparison group. These sites served a higher-risk population (the mothers tended to be younger, less educated, poorer, less likely to be married, and more ethnically diverse than those in the national evaluation), but families still received a wide range of preventive care services and were highly satisfied with care. Thus, as the authors noted, the affiliate evaluation's "invaluable contribution" was "that it demonstrated that HealthySteps could be successfully implemented with a low-income, high-risk population as well as in a high-income population."[33]

Site-Level Studies

After the national evaluation, sites had more flexibility in how to implement HealthySteps. Many added additional programs to meet

clients' needs, hired HealthySteps specialists with specific credentials (such as clinical psychologists), and/or had HealthySteps specialists obtain additional certifications (for example, by becoming certified lactation consultants). As HealthySteps was implemented in new locations, some sites pursued their own research. In Colorado, the medical records of 40 HealthySteps children were retrospectively compared to those of 36 demographically matched control children, and the results again demonstrated that HealthySteps children had timelier well-child visits and vaccinations. The study also found that HealthySteps families had more frequent discussions of child development (including social skills, sleep, and temperament) and family needs (such as adjusting to a new baby, social support, and postpartum depression). However, it found no difference in sick visits or emergency department visits.[34] Although the small sample size and retrospective design limit this study's generalizability, the results were similar to key findings from the national evaluation.

The most extensive site-specific research on HealthySteps was conducted in 2005–10 in a large urban health system in New York City, Montefiore Medical Group. One study tracked two groups of children identified as being at risk of social-emotional delays at six months. The goal was to assess whether families who accepted a HealthySteps intervention (the intervention group) showed a change in their child's social-emotional risk at 36 months when compared to those who declined HealthySteps (the control group).[35] Of the 711 children identified as at risk at six months, 170 were screened again at 36 months. Compared to the control group children, intervention group children had more typical scores on the Ages & Stages Questionnaire: Social-Emotional (ASQ:SE).[36] But because the parents who accepted HealthySteps might be more engaged in their child's development in other ways, using that as the criterion for assigning families to the intervention or control group limits our ability to generalize the results to other populations. A second QE study found that children of mothers who'd experienced childhood trauma (as measured by the Family Psychosocial Screen) had a higher risk of social-emotional delay (as measured by their likelihood of having at-risk ASQ:SE scores) at 36 months, compared to children of mothers without childhood trauma.[37] However, enrollment in HealthySteps seemed to moderate this relationship. Among children enrolled in HealthySteps whose mothers had experienced childhood trauma, ASQ:SE scores were well below the cutoff for clinical concern—and, on average, closer to the scores of children whose mothers hadn't experienced childhood trauma. A third study reviewed the medical charts of children born in 2004–06 and conducted interviews with their mothers to compare obesity at five years of age among three groups: children identified via the ASQ:SE as at risk for social-emotional problems who received HealthySteps; children identified as at risk but whose parents declined HealthySteps; and children with typical social-emotional development who did not receive HealthySteps.[38] A total of 336 mothers were identified for inclusion in the study, which consisted of chart reviews and telephone interviews. The study found that at-risk children who didn't receive HealthySteps were significantly more likely to be obese at five years than were at-risk HealthySteps children. Furthermore, the weight status of at-risk children who received HealthySteps was similar to that of children who weren't at risk. Again, the relatively

small sample sizes and specific contexts of these studies limit our ability to generalize the results. But the studies do suggest promising areas for more research.

Implementation Studies

In 2015, the HealthySteps National Office transferred to ZERO TO THREE, a global nonprofit that aims to ensure babies and toddlers benefit from the early connections critical to their wellbeing and development. Given the flexibility in implementation that arose after the original national evaluation, the National Office sought to explore the extent to which sites continued to offer the original core components. It commissioned an external firm (James Bell Associates, in collaboration with MDRC) to conduct a national implementation study of 62 sites.[39] The results were consistent with another national implementation study that was completed with 50 sites in 2010.[40] The 2015 study found that more than 90 percent of sites offered child and family screenings, team-based well-child visits, links to community resources, and written materials for parents. But only about 80 percent of the sites maintained a child development information line, and fewer than half offered parent groups. Although most sites provided home visits, they indicated that the practice was difficult to sustain and limited their services to fewer families. They also reported that parent groups were logistically difficult, and parent attendance was low. Both the 2010 and 2015 studies found that HealthySteps sites were serving a high percentage of low-income families, a notable departure from the early national evaluation.

The HealthySteps National Office took the 2015 findings into consideration when updating the model to better reflect the realities of implementation, as well as developments in pediatrics and the broader early childhood field since the mid-1990s. This raised the question of whether outcomes demonstrated in past evaluations could still be considered valid for the updated model. To answer this, James Bell Associates comprehensively reviewed research on the model's updated core components, examining evidence from other programs that offer similar services. The researchers concluded that the evidence "demonstrates wide-ranging support for the components that HealthySteps offers, and each component has been linked to several positive outcomes."[41]

It's not enough to show that HealthySteps sites identify problems and connect families to resources. We also need to assess whether doing so yields positive outcomes for children and families.

Future Research

As the National Office begins to scale HealthySteps beyond its current 136 practices (in 20 states, the District of Columbia, and Puerto Rico), it must ensure that sites adhere closely to the model. Fortunately, the 2015 implementation study found that most sites were delivering the core components of the model as designed. In addition, aggregate data collected from 85 HealthySteps sites in late 2016 showed that most sites were regularly screening for a wide array of child and family problems. By the time children were 12 months old,

98 percent of sites had screened for child development, which focuses on established milestones for communication, gross and fine motor skills, problem solving, and self-help needs; and 69 percent (increasing to 90 percent by 24 months) had screened for social-emotional development, which focuses on the ability to understand others' feelings, control one's own feelings and behaviors, get along with other children, and build relationships with adults. By 24 months, 86 percent of sites had screened for autism. Ninety percent had screened for maternal depression by six months after giving birth; and more than 50 percent had screened for key family problems such as intimate partner violence, substance misuse, smoking, food insecurity, housing insecurity, and parental stress. By comparison, only 30 percent of parents nationally reported completing a child developmental screening tool when their child was between nine and 35 months of age.[42] And given that other screenings—for social-emotional development, maternal depression, and social needs—are newer AAP recommendations, it's reasonable to assume similarly low or even lower rates for these screenings at non-HealthySteps practices across the country.

But it's not enough to show that HealthySteps sites identify problems and connect families to resources. We also need to assess whether doing so yields positive outcomes for children and families. Answering this question poses a challenge for pediatric primary care. For one, there are ethical concerns about withholding services from certain families to establish a control group that would allow researchers to confidently attribute to HealthySteps any positive outcomes they observe. As we noted earlier, this issue may be particularly pronounced in high-need communities, where many HealthySteps practices are found. Researchers can try to overcome this concern by randomizing at the practice level rather than the individual level (so patients served by practices that aren't offering HealthySteps are used as a control group) or by randomizing at the individual level but excluding families with the highest need from the pool of possible research participants (so those families still receive HealthySteps services). But these approaches have significant limitations, so researchers need to explore other ways to study HealthySteps that minimize ethical concerns.

Another challenge for research on HealthySteps is related to the quality and accessibility of data. Ideally, research data could be drawn from electronic medical records to reduce the burden of data collection on both practice staff and families. However, the National Office has found that electronic medical records don't contain all the data needed for a comprehensive evaluation of HealthySteps. Moreover, the data they do contain are often inadequate for research, due to problems like the formatting of data fields (for example, use of open-ended text fields or simply attaching PDFs of screening results to the record). One way to overcome this problem might involve using administrative data already collected by the sites.

The National Office plans to build more evidence for HealthySteps in the years ahead, both by enlisting sites in small-scale, rapid-cycle studies focused on key outcomes, and by exploring opportunities for more-comprehensive, long-term evaluations. Simultaneously, the National Office will identify ways to help sites

increase their capacity for collecting and reporting high-quality data, and for using data to guide their work with families. This initiative has already begun. The office is partnering with selected sites to use continuous quality improvement to enhance data collection, service delivery, and outcomes in six areas: breastfeeding, child social-emotional development, early childhood obesity, maternal depression, family social needs, and parent-child relationships. A key priority in this work is to understand how well HealthySteps works for different types of families and how the model can be further strengthened to better meet the diverse needs of the populations served in pediatric care.

HealthySteps Financing and Cost Savings

As HealthySteps expands to reach more families with young children, we seek to learn more about the program's costs and sustainability. The primary ongoing cost is the specialist's salary and fringe benefits, which can vary based on licensure and credentialing as well as local market demands. Other costs include optional program materials and supplies for families, as well as general technology costs associated with phones, computers, and printers for HealthySteps specialists. Many sites take advantage of the HealthySteps specialist's capacity to add enhancements like home visits or early learning programs, which may entail additional costs.

The typical cost to deliver the most comprehensive HealthySteps services to children with the most concerning risk factors or needs ranges from $450 to $900 per child annually. Many factors can affect the cost, including the total number of children served, HealthySteps specialists' salaries, local enhancements, and funder-specific reporting or caseload requirements. When sites use a tiered approach that matches service intensity to each family's level of need, the cost per child may be lower for families receiving less-comprehensive services. The National Office officially introduced this tiered approach to the entire network in mid-2018, although several large sites have used a risk-stratified approach for years. In the years ahead, the National Office will explore variation in costs per child across the different levels of service intensity.

To support their operations, HealthySteps sites can seek funding from a multitude of sources. The ideal approach to sustaining HealthySteps is to braid together various funding mechanisms. However, some sites finance their programs with a single source of one-time funding, often in the form of time-limited grants from government agencies, philanthropic organizations, or local entities. While grant funding is an excellent way to start a HealthySteps program or expand capacity, it doesn't guarantee long-term sustainability. Across 114 sites that provided information on funding in 2018, 40 percent indicated that they receive money from multiple sources; grants, foundations, and health systems were the most common. Other funding sources include individual departmental funds (for example, graduate medical education funds to include HealthySteps topics in resident training programs); municipal, county, state, and federal funds; the Department of Defense and the Indian Health Service; and philanthropy.

Because HealthySteps is based in pediatric and family medicine practices, sites

could potentially bill payers for services provided to children and families, and use the payments they receive to fund operations and expand the model. The model provides services beyond those typically offered by a pediatrician's office, including child and family screening, help with positive parenting, and referrals and support for families who need additional services beyond the primary care office. HealthySteps sites can pursue reimbursement by billing public and private insurers for specific services delivered to children and families. Opportunities for reimbursement vary greatly from state to state; they also depend on the type of payer and the licensure of the HealthySteps specialist.

Sites may also seek out innovative payment options for HealthySteps services. These might include value-based purchasing, direct contracting with insurers, and capitated service arrangements (that is, a guaranteed payment to a clinician or group of clinicians for a given set of services) beyond traditional fee-for-service reimbursement. Across the 114 sites that provided information on reimbursement sources for HealthySteps services in 2018, 27 percent reported receiving reimbursement from Medicaid or the Children's Health Insurance Program (CHIP), 25 percent reported reimbursement from commercial or private insurers, and four percent reported reimbursement from Tricare (a program that provides health benefits to uniformed service members, both active and retired, as well as their families and dependents). The National Office provides resources and support to help sites seek payment from insurers for HealthySteps services.

Innovative payment options for HealthySteps services might include value-based purchasing, direct contracting with insurers, and capitated service arrangements.

The National Office has also collaborated with Manatt Health, a dedicated practice division within the law firm of Manatt, Phelps & Phillips, LLP, to quantify short-term cost savings to state Medicaid agencies associated with key HealthySteps services. Short-term savings that accrue to state Medicaid agencies within a year are linked to specific HealthySteps interventions. Among children, savings were found in rates of well-child visits and immunizations, oral health, and inappropriate use of care for ambulatory-care sensitive conditions (conditions such as earaches, asthma, and respiratory infections for which hospital admission could have been prevented by interventions in primary care). Among adults, savings were found in the areas of breastfeeding, postpartum maternal depression, intimate partner violence, smoking cessation, and unhealthy birth spacing (less than 18 months between a birth and the mother's next pregnancy).

A single-state analysis conducted in 2017 by the National Office and Manatt, Phelps & Phillips demonstrated yearly savings to Medicaid of up to $1,150 per family, for an annual return on investment of 83 percent, based on the interventions outlined above (excluding smoking cessation). The National

Office is currently customizing this analysis for other HealthySteps sites and state Medicaid agencies.

Synergy with Other Models

Because HealthySteps expands the capacity of pediatric practices by adding a new professional to the care team, HealthySteps sites have consistently noted that the model is an excellent platform for additional innovations. Examples of programs that can be layered onto well-child care include Reach Out and Read (ROR), Video Interaction Project (VIP), Family Information & Navigation Desk (FIND), Health Leads, Safe Environment for Every Kid (SEEK), Kids' Health Insurance by Educating Lots of Parents (Kids' HELP), and Well Child Care, Evaluation, Community Resources, Advocacy, Referral, Education (WE CARE). Research has shown that these and similar programs have a range of positive impacts on children and families:

- ROR gives families books in the pediatric office and encourages them to read with their children. ROR has been shown to increase the frequency with which parents read to their children and report reading with their children as a favorite activity.[43] It also leads to enhanced language development in preschool children.[44]

- VIP builds on ROR's approach to promoting cognitive, language, and social-emotional development. This program adds a new team member, a child development interventionist, who helps parents identify goals for their child's development. It also provides developmentally appropriate toys and reading materials, and suggests activities for parents to do with their child at home. The interventionist videotapes parent-child interactions in the office and watches the video with the parents, reinforcing positive parenting and identifying opportunities for improvement. Parents take home a copy of the video to help them carry out the activities and to share as a learning resource for other family members. VIP children are more likely to experience typical cognitive development and less likely to experience developmental delays, and VIP parents experience less parenting stress.[45]

- FIND trains college students, community members, medical residents, care coordinators, and community health workers to screen for social needs in pediatrics and to connect children and families with appropriate community resources. Not only did FIND significantly improve social needs among families screened and connected through a pediatric practice, but an RCT also showed improvements in children's health according to their caregivers.[46]

- Health Leads focuses on helping health care providers tackle unmet social needs—such as food, housing, and employment—that can harm child health and development. Trained student volunteers work with physicians to identify family needs and refer families to the appropriate program. The volunteers then follow up with referred families and give them information on community-based resources. The program has demonstrated success in both

identifying needs and connecting families to needed supports.[47]

- SEEK focuses on children's exposure to parents' mental and behavioral health problems. The program trains child health care professionals to screen for and address four adverse childhood experiences (ACEs) in parents: depression, stress, substance misuse, and intimate partner violence. SEEK pediatric providers reported feeling more comfortable and competent helping with mental health and social needs.[48] They also reported fewer referrals to child protective services, fewer documented instances of possible medical neglect, a reduction in delayed immunizations, and fewer severe physical assaults.[49]

- By using trained parent mentors, Kids' HELP produced improvements in child insurance coverage, parent satisfaction with doctors, access to a primary care provider and specialty care, and preventive and dental care needs. It also reduced out-of-pocket costs.[50]

- WE CARE trains pediatric providers to use a 10-item screening tool to assess families' psychosocial needs, and then offers a tailored community resource guide for related referrals. Compared to families who didn't participate in the program, WE CARE families were more likely to access employment, childcare, and fuel assistance, and less likely to remain homeless.[51]

Despite these positive results, programs that tackle children's and families' varied needs in a pediatrics setting face two challenges when it comes to financial sustainability. First, health insurers rarely recognize volunteers, peers, or other "navigators" as professionals whose services should be reimbursed. Second, meeting families' social needs requires a broad array of community organizations and agencies, necessitating costly community engagement and alignment work to develop detailed, accurate resource listings and databases, as well as formal information sharing agreements.

All the enhancements discussed above may be implemented more efficiently through HealthySteps, benefiting from the time and expertise of HealthySteps specialists and from the family-centered culture at HealthySteps sites. Another plus is the fact that HealthySteps specialists' education and licensure are already known to payers, which may increase the chance of reimbursement for additional services in the clinical setting. Several HealthySteps sites have also found that their pediatric practice and/or HealthySteps specialist became a locus for community resource alignment and change, building on relationships developed with community professionals to reduce barriers that prevent families from accessing needed resources.

Beyond the programs mentioned above, other models aim to redesign well-child visits in novel ways. Three examples of this are Parent-Focused Redesign for Encounters, Newborns to Toddlers (PARENT), Project DULCE (Developmental Understanding and Legal Collaboration for Everyone), and group well-child care. PARENT embeds a trained, master's-level parent coach (similar to many HealthySteps specialists) in the primary care team. The coach offers families most of the developmental guidance that usually comes from pediatricians in typical well-child care. This allows doctors to provide more brief, focused interventions for child

and family needs, especially around physical health, growth, and development. PARENT also uses web-based tools to customize the visit, ensure pre-visit screenings, and send text-based health messages to families. In an RCT that enrolled mostly families living on very low incomes, parents who received the program reported more preventive services (such as anticipatory guidance, developmental screening, psychosocial assessment, and opportunities to respond to parents' developmental or behavioral concerns), more family-centered care, and fewer emergency room visits.[52]

DULCE offers services similar to the core components of HealthySteps—including an integrated family specialist—and adds a medical-legal partnership offering legal services and regular, collaborative, educational meetings of health care and legal professionals to discuss families' cases. Unlike HealthySteps' three years of intervention, DULCE serves families for the first six months of a child's life. An evaluation has shown that outcomes from DULCE include more vaccinations and well-child visits, improved access to concrete resources, and fewer emergency room visits. But the researchers noted that "for many outcomes, the effect size diminished by six months [after the program ended—that is, when the child was 12 months old] to the point that it was not significant." That drop-off may be related to DULCE's relatively brief intervention time frame.[53]

Finally, in group well-child care, often referred to as "centering," families share the well-child visit experience with other families and professionals in a single room—an approach shown to be both feasible and acceptable to parents.[54] Group well-child care goes a step further than AAP recommendations to include parents as team members: it uses parents' voices and experiences to support one another. Visits are thus both led by professionals and enhanced by peers; in studies, parents consistently find this approach valuable. However, group well-visits haven't become a norm in pediatrics. One problem is that studies show children in group well-child care may be less likely to receive recommended vaccines, and providers may be less likely to identify unique risks in their home environment.[55] Parents have also expressed concern about not having enough private time with the provider.[56] In addition, the sessions are difficult to schedule, given the need to coordinate multiple families and care team members.

The three models described above could benefit from the integration and potential for sustainability offered by HealthySteps. In fact, some HealthySteps sites have already pursued such integration, a process that they should complete while still adhering to HealthySteps' implementation guidelines.

The Future of Relationship-Based Primary Care

Our comparison of enhanced primary care models yields several important lessons. First, by integrating trained team members into pediatric primary care to address child development, parenting, mental health, insurance coverage, and access to health care and social services, practices can consistently transform families' experiences and improve a wide range of child and family outcomes. Second, both parents and providers appreciate and benefit from changes to traditional well-child care, but it's paramount to ensure that innovations don't lead to neglect of other risks and needs (such as child safety and vaccination). Third,

it appears that innovative interventions in child development, parenting, mental health, and social needs can be more effectively incubated and implemented in pediatrics by adding a dedicated team member, as in HealthySteps, VIP, PARENT, FIND, and Kids' HELP. Without team-based care, it's likely that lack of time and burnout will continue to limit sustainable improvement. A recent article emphasized that burnout "imperils the Triple Aim" of health care ("enhancing patient experience, improving population health, and reducing cost"); it recommended adding another goal for a "Quadruple Aim" that encompasses improvement in the work life of health care providers.[57] Clearly, we need more research into how team-based care encourages innovation. Such research will be a focus of the HealthySteps National Office work described above, exploring how HealthySteps sites across the network might best deal with breastfeeding, child social-emotional development, childhood obesity, maternal depression, family social needs, and parent-child relationships.

An open-minded, collaborative approach would show funders and payers where synergy truly exists.

One challenge acknowledged by the HealthySteps National Office is that providers, philanthropy, payers, and policymakers may not always recognize the subtle programmatic differences that can alter how much an intervention costs, how many children and families can be reached, which outcomes are plausible and how long they might persist, and the likelihood of achieving sustainability. We encourage all models and interventions that seek to enhance primary care in early childhood to share what works best, to use the same measurements, and to consider conducting studies that compare models one-on-one and in conjunction—as health care trailblazers have done for treatments that address blood pressure, diabetes, and cancer. Sometimes two models yield better results than one, and sometimes not. Such an open-minded, collaborative approach would show funders and payers where synergy truly exists, and help them make an impact when taking programs to scale.

In this spirit, the HealthySteps National Office has embarked on two place-based partnerships. In Guilford County, NC, the partnership is starting from the model up, piloting the integration of HealthySteps with both the Family Connects model developed at Duke University and the Nurse-Family Partnership model, with support from the Duke Endowment. Family Connects is a universal model that identifies child and family needs in the birth hospital and during later home visits, and then connects families to services. (For more about Family Connects, see the article in this issue by Kenneth A. Dodge and W. Benjamin Goodman.) In Tulsa, OK, the partnership stems from metrics and data, and involves developing integrated care coordination, data systems, and measurement across several models and initiatives. This program is being implemented in partnership with the Birth to Eight Strategy Tulsa of the George Kaiser Family Foundation, which is designed to engage families during pregnancy and follow them through the early years of children's lives. In addition to these two place-based initiatives, the

National Office is exploring opportunities to coordinate HealthySteps with other models, such as VIP and Help Me Grow.

This work raises important questions. Where does one model end and another begin? How do we establish the criteria for adherence to integrated models? Can we still rely on research into each individual model when discussing what integrated models might achieve? And how about the additive effects that could lead to new outcomes not previously shown or assessed? Even with two proven models, administrators can spend months ironing out where services should and shouldn't overlap (for example, which child and family needs benefit from redundancy and which do not) and how to navigate different populations, priorities, measurements, and data systems. Hopefully, the lessons from Guilford, Tulsa, and other communities will help identify ways to do these things quickly and effectively.

Meanwhile, the HealthySteps National Office is confident that momentum is building for relationship-based, team-based primary care to become a norm in the United States. With generous support from Blue Meridian Partners, the National Office at ZERO TO THREE is planning to scale the model over the coming years so that HealthySteps is present in all 50 states and serving one million children per year by 2032.

Two converging trends are creating significant support for system-wide change that will make it possible to scale HealthySteps, and conceivably other forms of enhanced primary care as well. The first is mounting public recognition, based on ever-increasing scientific evidence, that a child's earliest years and relationships strongly affect lifelong wellbeing. Understanding that these early years and their relationships with their child are critically important, new parents are likely to demand better services to guide them in parenting and to meet their families' needs.[58]

The second trend is the unsustainable rise in health care costs, which is leading public and private payers—including the recent collaboration of massive employers Amazon, JP Morgan Chase and Berkshire Hathaway—to focus on paying for quality preventive care and outcomes rather than paying fees for specific services. Previous value-based purchasing efforts (that is, linking payments to improved clinical outcomes) have focused on adults. But now payers and policymakers are increasingly recognizing that shifting the focus to the early years could generate long-term cost savings and help contain the rise in health care spending—while simultaneously improving long-term health and wellness. Although young children are typically healthy and incur minimal health costs, recent federal efforts in Medicaid and CHIP have shifted to an increased emphasis on pediatric care. The federal government is funding a Medicaid Innovation Accelerator Program to bolster pediatric value-based purchasing efforts for children's preventive oral health services as well as maternal and infant health, including pediatric medical homes and breastfeeding. And in April 2017, the federal Centers for Medicare and Medicaid Services Innovation Center solicited comments on the design of alternative payment models to improve the health of children covered by Medicaid and CHIP.[59] This is the first effort at the federal level to explore innovative payment approaches in pediatrics, including extending accountable care organizations (a network of clinicians who share financial responsibility to deliver and coordinate care for a given set of individuals, with the goal of improving

clinical outcomes and reducing associated costs) to pediatric populations. States are also working closely with the federal government on these innovative initiatives, aiming to transform pediatric practice among local providers.

Transforming the Promise

As primary care faces increasingly complex demands, pediatrics must take on the challenges and nuances of team-based care, relationship building, family mental health and social needs, and changes in financing. Still, relationships remain a profound context for learning and positive change, as HealthySteps has proven over the past 20-plus years.

To realize cost savings, all enhanced primary care models would be wise to monitor trends not only in health care financing and the use of technology to make care more accessible and affordable, but also in developing and integrating innovative models. At the same time, innovation should proceed cautiously and thoughtfully, given that the relationship between staff and patient is at the center of health care. Innovations that both streamline routine activities and foster this growing relationship are the gold standard for future investment.

The birth of a child is an opportunity, and the relationships that support new families offer a critical path for change, with the power to shift generational patterns and improve outcomes for both parents and children. HealthySteps has shown that it can help transform the promise of pediatric care by responding to a wider array of child and family needs that can affect children's health and wellbeing.

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A Population Approach to Parenting Support and Prevention: The Triple P System

Ronald J. Prinz

Summary

Adverse parenting practices, including child maltreatment, interfere with children's adjustment and life outcomes. In this article, Ronald Prinz describes the Triple P—Positive Parenting Program, designed to improve parenting population-wide.

Prinz offers four main reasons to take a population approach. First, official records grossly underestimate the extent of problematic parenting. Second, communities need to normalize involvement in parenting support programs rather than singling out or stigmatizing parents. Third, a population approach could have many benefits, such as preventing behavioral and emotional problems in early childhood, encouraging greater school readiness, and reducing the risk of problems during adolescence. Fourth, compared to strategies that target a narrow segment of parents and children, a population approach may create a climate of positive social contagion for positive parenting.

Triple P—a multitiered system of programs with varying intensity levels, delivery formats, and specialized variants—aims to increase the number of parents who have the knowledge, skills, and confidence to raise their children well; to decrease the number of children who develop behavioral and emotional problems; and to reduce the number of children maltreated by their parents. Prinz outlines the origins and guiding principles of Triple P, describes the program model, and explains the conceptual framework for the multitiered approach to prevention. He then summarizes the evidence for this approach, emphasizing population studies that have tested the full Triple P system. He also discusses such critical issues as implementation and quality assurance, benefits versus costs, and significant obstacles to adopting a population strategy for parenting support.

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Improved parenting can play an important role in preventing child maltreatment. By definition, child maltreatment involves parenting gone awry. Many factors can affect parenting. Nonetheless, support for parenting and families has the potential to prevent or reduce child maltreatment. To fulfill this potential, however, likely requires a well-formulated approach aimed at reaching large segments of the community. Before discussing how such an enterprise might be implemented, we must answer a more basic question: why take a population or community-wide approach to parenting support as a key strategy for preventing child maltreatment?

For one thing, official records of child maltreatment grossly underestimate levels of problematic parenting generally, and maltreatment specifically. For example, a random household telephone survey conducted in North Carolina and South Carolina found that parents reported engaging in physically abusive parenting behaviors at a rate more than 40 times higher than the official substantiated rates of physical abuse in those states.[1] Many parents, not just those in the child welfare system, rely heavily on coercive discipline practices for child misbehavior. It's well established that coercive and physically abusive parenting practices damage health and child development, and that they're prevalent and all too commonplace. These facts justify a broader public health response.[2]

Another reason to take a population approach is that an intervention that singles out parents who are at elevated risk for child maltreatment may stigmatize them and deter them from participating. Parents typically don't seek out programs that explicitly espouse prevention of child abuse, with the possible exception of either court- or agency-mandated participation. Stigma and deterrence run counter to reaching large segments of the population, which is so critical to prevention. But if parenting support services are presented and perceived as beneficial to the whole community of parents, we can normalize parents' participation in these programs. Consider prenatal birthing classes, for example: they've become the norm because they engage parents whatever economic, racial/ethnic, or family-configuration groups they belong to. Similarly, public schools encourage parents to get involved in their children's education. A key goal for the public health strategy, then, is destigmatized and normalized access to parenting support for prevention.

A broad public health approach to parenting support could also affect many kinds of outcomes. Evidence-based parenting interventions have been shown to be effective not only in preventing child maltreatment, but also in preventing children's early behavioral and emotional problems, and improving readiness for school. They can also reduce the risk of adverse outcomes in late childhood and adolescence, including academic problems, substance abuse, delinquency, dropping out of school, and teen parenthood.[3] Pursuing several goals and outcomes at the same time with the same core intervention can produce efficiency. And having multiple benefits can make population-wide parenting interventions more viable than those that focus exclusively on preventing officially documented child maltreatment, which by itself occurs relatively infrequently.

Finally, a population approach can lead to what's known as positive social contagion.

In public health, *contagion* refers mainly to the spread of disease. The concept of social contagion, however, has been applied to effects on behavior, for better or worse.[4] Parenting practices might be susceptible to social contagion, given how often parents, relatives, and neighbors discuss child-rearing and witness each other's family interactions. The challenge is how to activate processes that might increase positive contagion among parents. Compared with focusing only on families at greatest risk, taking a population-wide approach to parenting support could be a better way to induce positive contagion. Reaching many parents, strategically using media and communications, and engaging many service sectors might all spread contagion for positive parenting. We need more research to better understand positive social contagion and how to foster it among parents.

The Triple P System as an Example

The multilevel system of interventions known as the Triple P—Positive Parenting Program was established over many years by Matthew Sanders and his colleagues at the University of Queensland in Australia. Triple P represents a well-detailed population approach to parenting and family support.[5] As an innovative population strategy, it combines many forms of prevention. Guidelines from the Institute of Medicine classify preventive interventions in three categories:[6]

1. Universal interventions applied to the general population without regard for risk among individuals

2. Selective interventions focused on a subgroup with one or more risk factors that make poor outcomes more likely

3. Indicated interventions aimed at individuals who are already showing signs of problematic outcomes

Triple P might best be called a blended prevention model.

The Triple P system combines all three of these categories in what might best be called a blended prevention model. Some of the Triple P programs fit well in a universal context for the general population, while others serve specific segments of the population—for example, parents of children with pronounced behavior problems, parents at risk for maltreatment, or parents of children with developmental disabilities—either with tailored content, more intensive programming, or both. Using a blended prevention model as well as varying program intensities, Triple P attempts to meet the needs of many kinds of parents to achieve greater reach among the population.

Origins of Triple P

The Triple P approach belongs to a broader class of interventions that emerged about 50 years ago. In the 1960s the prevailing paradigm, which was based on psychoanalytic assumptions about mental health disorders, began to be replaced by a new paradigm emphasizing the social environment. The shift happened more quickly in child mental health than in adult mental health, in part because the family environment's impact on children was readily apparent. A key tenet of the environmental approach is that parents are well positioned and can be called on as "architects" to establish or alter the social-environmental conditions at home and elsewhere to improve their children's lives.

Thus, behavioral family-based interventions grew out of social learning theory and applied behavior analysis to eventually become the cornerstone of clinical child psychology. This approach to the treatment of children's problems was easily extended to prevention, because both applications seek to empower parents and improve parenting practices.

Triple P belongs to a larger class of evidence-based parenting support (EBPS) that has proven effective in prevention and early intervention.[7] Triple P is similar to other EBPS interventions with respect to the family process, philosophy, and concepts of effective parenting. EBPS tenets include:

- Child behavior occurs in the context of social interactions that parents can alter.
- The intervention philosophy champions collaborative goal setting and problem solving; practitioners consult with parents rather than lecture or prescribe to them.
- Practitioners adopt a positive frame by assuming a nonjudgmental attitude toward parents, emphasizing parent and child competencies over deficits, promoting positive child behaviors and parenting practices to displace problematic ones, and exuding a professional style reflecting patience, encouragement, and optimism.
- The interventions overall are theoretically driven and focused on action, making use of specific, concrete, and practical parenting strategies.

Triple P subscribes to these common facets, which vary modestly among EBPS interventions. But Triple P is unique in taking a broad public health approach and uses a set of procedures aimed at greater reach and collective impact. This framework increases the potential of an EBPS intervention to reduce the prevalence of child maltreatment.

Main Principles

Triple P's consistent conceptual framework draws from multiple disciplines and theories, including applied behavior analysis, cognitive-behavioral intervention, parent-child attachment, and family systems theory. For example, Triple P is guided by:

- A social learning model of parent-child interaction that recognizes how parents and children influence each other
- Research on coercive and dysfunctional patterns of family communication[8]
- Developmental research on parenting in everyday contexts[9]
- Public health perspectives on family intervention[10]

A key concept of Triple P is self-regulation, the process whereby individuals (a) acquire the skills they need to manage and alter their own behavior and emotions, and (b) become independent problem-solvers in the face of challenges. Self-regulation applies to several aspects of the Triple P system.[11] At the level of the child, the strategies often involve parents promoting self-regulation in age-appropriate ways. For example, parents can teach children new skills or behaviors (like brushing teeth or picking up clothes) by giving them small prompts to encourage them to achieve mastery—without the parent completely taking over. Parents can promote children's self-regulation of emotions by sidestepping outbursts and instead watching for opportunities to react positively to frustrating events. For parents, self-regulation comes into play in managing

their own emotions and behaviors when interacting with their children. Triple P also shows parents how to challenge unhelpful attributions, such as "my child is out to get me" or "I'm failing," and replace them with constructive thoughts and actions, such as "What can I do to redirect my child's behavior?" For practitioners, self-regulation involves identifying and changing cognitions that interfere with their interactions with stressed-out parents. Triple P professional training not only provides useful information and resources, it also encourages self-regulation through such activities as follow-up reading, participation in professional peer support groups, and constructive self-evaluation.

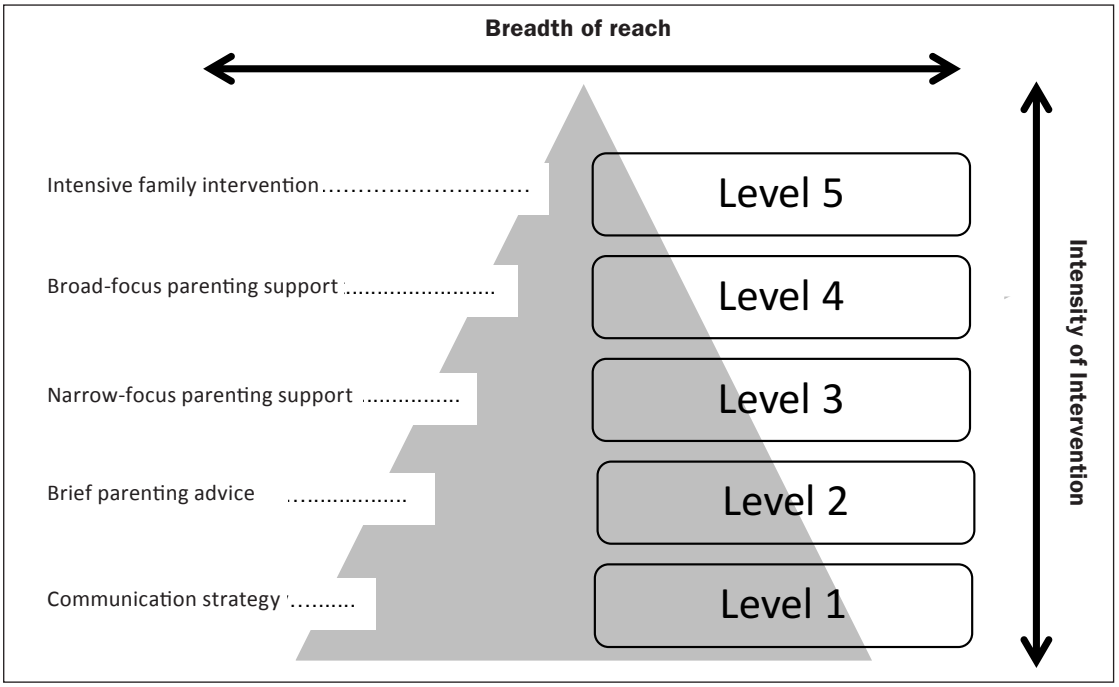
Multitiered System

Triple P's chief goal is to alter the prevalence of parenting and child problems by making high-quality EBPS programs widely available to parents. Specifically, it aims to:

1. Increase the number of parents who have the necessary knowledge, skills, and confidence to parent their children well
2. Increase the number of children who are thriving socially, emotionally, and academically
3. Decrease the number of children who develop serious social, emotional, and behavioral problems,
4. Decrease the number of children who are maltreated or at risk of being maltreated by their parents

To achieve these goals, Triple P operates as a multitiered system of programs with varying intensity levels, delivery formats, and specialized options or variants. The

Figure 1. The Multitiered Triple P—Positive Parenting Program System



interventions are organized around five levels of increasing intensity. The lowest level, 1, is a media and communication strategy; levels 2–5 all involve delivering services of some kind. The five levels together form a tiered continuum (represented by the pyramid in figure 1), reflecting a blueprint for population reach. The width of the pyramid at each step indicates the relative proportion of the population addressed at that level of intensity. The pyramid's base is wide to denote universal reach, while the top denotes a focus on a considerably narrower segment of the population for indicated or targeted reach.

Multiple levels of intensity boost capacity and make more efficient use of precious resources.

The multitiered approach addresses the following factors:

Reach. To reduce prevalence, programs must reach a substantial portion of the population. That's easier to do with multiple levels of program intensity. It would be impossible to deliver the highest-intensity program to all families, if only because resources wouldn't stretch across the population. Multiple levels of intensity boost capacity and make more efficient use of precious resources.

Parental needs and preferences. Parents differ widely in the amount of parenting support they need or prefer. Most parents participating in Triple P may not need or desire a longer, more intensive intervention. That's why the pyramid in figure 1 is wider at the lower levels. Even parents who might need or benefit from the more intensive levels can partake of a low-intensity level—which might in turn make them more receptive to more intensive participation.

Principle of minimal sufficiency. This public health–friendly principle means providing "just enough" intervention to solve a problem, while making more assistance available if needed. Accordingly, the low-intensity levels of Triple P help parents solve problems without heavy reliance on professional assistance. When low intensity isn't enough, parents can get more support.

Flexibility for repeat engagement of parents. Multilevel Triple P lets parents enter, exit, and reenter the system as needed. Parenting needs change as children develop and family circumstances shift, so parenting support must be accessible throughout childhood. However, we expect that parents who've participated in an effective early intervention will be less likely to need intensive intervention later.

Individual Components in the System

Level 1, the media and communication strategy, is available to all parents in a community. It offers useful information about parenting through electronic media, print and other promotional vehicles, and community events. Many Triple P communities use a level 1 platform called *Stay Positive*, which can be tailored to local needs. Functionally, the media and communication strategy serves several purposes. It:

- conveys useful, empirically validated positive parenting tips to help parents solve child-rearing problems without relying on professional assistance;

- increases receptivity to and reduces the stigma associated with seeking parenting support, with the goal of normalizing the process of participating in family-based services;
- validates positive parenting concepts for parents who have already received Triple P services at one of the other levels;
- reinforces the workforce delivering Triple P in the community; and
- generally increases community awareness of parenting resources.

Levels 2 and 3 involve low-intensity or "light touch" delivery of Triple P. Level 2 consists of brief parenting consultations in the form of Triple P Seminars (single, standalone large-group sessions) or Brief Primary Care Triple P (one or two contacts with a parent). Level 3 involves narrowly focused parenting support and as many as four contacts with a parent—for example, via a longer version of Primary Care Triple P, discussion groups, or a brief online program.

Level 4 involves broadly focused parenting support, with programming that typically extends over three to four months. Level 5 comprises intensive family intervention, sometimes in conjunction with Level 4 programming or as a standalone Triple P program, typically over the course of four to five months.

Delivery format, which is mostly independent of intensity level, refers to how a program is implemented. Level 1 has its own formats, as described earlier. Formats for levels 2–5 include consultation with individual parents, group delivery with eight to 10 sets of parents (without the children present), large group sessions that can vary in size from 10 to 200 parents, self-directed programming using a workbook, and online delivery. Triple P has its own terminology: in level 4, for example, "Standard Triple P" refers to the program administered to an individual family; "Group Triple P" is for delivery to eight to 10 families (weekly group sessions followed by weekly telephone follow-up with individual families), and "Triple P Online Standard" is the computer version of Standard Triple P. The variety of formats increases the Triple P system's potential reach.

Triple P programs can be grouped into two main developmental clusters. The programs mentioned thus far pertain to parents of children 2–11 years of age. The parallel Triple P programs at levels 2–5 for parents of children 12 to 16 aren't discussed in this article.

Beyond the core programs outlined above, the suite of program variants in the Triple P system has grown to meet specialized needs associated with either specific segments of the population or particular circumstances. These variants include:

- Stepping Stones Triple P: for parents of children with developmental disabilities who have, or are at risk of developing, behavioral or emotional disorders
- Lifestyle Triple P: for parents of children who are overweight or obese
- Pathways Triple P: for parents in the child protective services system due to child maltreatment
- Family Transitions Triple P: for parents going through separation or divorce
- Resilience Triple P: facilitative parenting for supporting and coaching

Table 1. Description and Applications of Core Parenting Skills Promoted through Triple P

Skill	Description	Applications
Developing good relationships with children		
Spending quality time with children	Spending frequent, brief amounts of time (as little as one or two minutes) involved in child-preferred activities	Encourages exploration, and provides opportunities to build children's knowledge, and for children to reveal and practice conversational skills
Talking with children	Having brief conversations with children about an activity or interest of the child	Promotes vocabulary, conversational and social skills
Showing affection	Providing physical affection (hugging, touching, tickling, patting)	Opportunities for children to become comfortable with intimacy and physical affection
Encouraging desirable behavior		
Using descriptive praise	Providing encouragement and approval by describing the behavior that is appreciated	Encouraging appropriate behavior (speaking in a pleasant voice, playing cooperatively, sharing, drawing pictures, reading, cooperating)
Giving attention	Providing positive nonverbal attention (a smile, wink, or pat on the back; watching)	As above
Having interesting activities	Arranging a child's physical and social environment to provide interesting and engaging activities, materials, and age-appropriate toys (such as board games, pencils and paper, CDs, books, construction toys)	Encouraging independent play and promoting appropriate behavior when in the community (for example, when shopping or traveling)

Source: Matthew R. Sanders and Trevor G. Mazzucchelli, eds., *The Power of Positive Parenting: Transforming the Lives of Children, Parents, and Communities Using the Triple P System* (New York: Oxford University Press, 2018), 68–9. Used with permission.

children, in combination with peer relationship training, to reduce victimization and aggression toward peers and promote positive peer relationships

- Grandparent Triple P: to support grandparent-parent and grandparent-grandchild interactions and relationships

Each program in Triple P, with the exception of level 1 media programming, can operate as a standalone intervention. Across levels, formats, and variants, the many options let organizations, communities, and regions tailor the Triple P system to meet local needs and add components over time.

Core Program Principles and Content

All programs in the Triple P system adhere to five core principles of positive parenting:

1. *Safe and engaging environment.* All children need a supervised and

Table 1. Continued

Skill	Description	Applications
Teaching new skills and behaviors		
Setting a good example	Demonstrating desirable behavior through parental modeling	Showing children how to behave appropriately (for example, speaking calmly, washing hands, tidying up, solving problems)
Incidental teaching	Using a series of questions and prompts to respond to child-initiated interactions and promote learning	Promoting language, problem solving, cognitive ability, and independent play
Ask-say-do	Using verbal, gestural, and manual prompts to teach new skills	Teaching self-care skills (such as brushing teeth or making a bed) and other new skills (such as cooking or using tools)
Using behavior charts	Setting up a chart and providing social attention and backup rewards contingent on the absence of a problem or the presence of an appropriate behavior	Encouraging children for appropriate behavior (such as doing homework or playing cooperatively, asking nicely) and for the absence of problem behavior (such as swearing, lying, stealing, tantrums)
Managing misbehavior		
Setting clear ground rules	Negotiating in advance a set of fair, specific, and enforceable rules	Clarifying expectations (for such things as watching TV, shopping trips, visiting relatives, going out in the car)
Using directed discussion for rule breaking	The identification and rehearsal of the correct behavior following rule breaking	Correcting occasional rule breaking (such as leaving school bag on the kitchen floor running through the house)
Using planned ignoring for minor problems	The withdrawal of attention while the problem behavior continues	Ignoring attention-seeking behavior (such as answering back, protesting after a consequence, whining, pulling faces)
Clear, calm instructions	Giving a specific instruction to start a new task, or to stop a problem behavior and start an appropriate behavior	Initiating an activity (such as getting ready to go out, coming to the dinner table), or terminating a problem behavior (fighting over to do instead share, keep your hands to yourself)
Backing up instructions with logical consequences	Using specific consequence that involves removing an activity or privilege from a child or the child from an activity for a set time	Dealing with disobedience and mild problem behaviors that do not occur often (for example, not taking turns)
Using quiet time for misbehavior	Removing a child from an activity in which a problem has occurred and having them sit	Dealing with disobedience and children repeating a problem behavior after a logical consequence

protective environment that is safe from danger, prevents injuries and accidents in the home and elsewhere, and is sufficiently engaging to promote healthy development. This principle is obviously compatible with concepts related to child maltreatment prevention.

2. *Positive learning environment.* From birth and throughout childhood, parents are their children's first and perhaps most important teachers. Parents can provide a learning environment that involves positive and constructive interactions and promotes the gradual acquisition of self-regulation skills. In this regard, Triple P emphasizes incidental teaching and other parenting strategies that help children ultimately learn how to solve problems for themselves.

3. *Assertive discipline.* Children need age-appropriate, proactive, and authoritative rules of conduct, guidance, and discipline. Accordingly, Triple P conveys efficacious parenting strategies that are alternatives to coercive and ineffective discipline practices or to the absence of discipline practices altogether.

4. *Realistic expectations.* For effective parenting, it's important to adopt realistic expectations about children's behaviors and competencies—that is, expectations that are developmentally appropriate and tailored to each child's current level of functioning. The same principle also pertains to parents having realistic expectations about their parenting. Inherent in this is the need to examine expectations, assumptions, and beliefs about the causes of children's behavior, and to make adjustments accordingly.

5. *Parental self-care.* A parent's stress level, self-esteem, health, and sense of wellbeing can all affect parenting. Triple P encourages parents to consider that the larger context for parenting includes personal self-care, empowerment, and emotional and physical wellbeing.

These core principles can be applied broadly and are consistent with the recommendations of other behavioral scientists, such as Laurence Steinberg of Temple University, whose "basic principles of good parenting" share similar themes.[12]

Triple P draws on many parenting strategies, clustered into four categories: developing good relationships with children, encouraging desirable behavior, teaching new skills and behaviors, and managing misbehavior. Table 1 describes the parenting skills in each category promoted through Triple P and explains how each skill is applied to child development.

Evidence and Impact

We have two types of evidence for the impact of Triple P on children and families. The first and by far the larger consists of studies on the individual levels and programs in the Triple P system. These studies of individual components provide an essential foundation for a viable system. The second type of evidence consists of three large studies evaluating the population impact of the whole Triple P system.

Individual Triple P Programs

Studies on the individual programs and elements of the Triple P system cut across

age groups, applications, intensity levels, delivery formats, settings, populations, and nations. The early studies, conducted three decades ago, tested and refined the parenting strategies that would ultimately form part of the Triple P toolkit. Much of this research was based on intensive single-case experiments delivered in families' homes. The initial single-case studies gave way to group clinical trials and evaluations of interventions that involved more than one parenting strategy. Over the years, the evidence surrounding Triple P has grown substantially. As of June 2018, 321 evaluation studies had been conducted, including 164 studies that randomized families to Triple P versus a comparison or control condition. Researchers examined a variety of populations and problems, such as:

- General population
- Child conduct and related behavior problems
- Specific child issues such as bedtime, mealtime, and recurrent abdominal pain
- Childhood anxiety disorders
- Chronic illnesses such as asthma
- Childhood obesity
- Children with autism spectrum disorder or intellectual/developmental disabilities
- Bullying victims
- Gifted and talented children
- Children in natural disasters

Although most Triple P studies concerned the prevention or reduction of child behavior problems, some studies looked at several other facets of child and family functioning, adding to the utility of the system.

A systematic review published in 2014 examined 101 Triple P outcome studies across levels and formats, child populations, and prevention categories (universal, selective, or indicated).[13] Collectively, the studies have shown that Triple P programs have a fairly consistent and statistically significant positive impact on parents and children. Beyond statistical significance, it's important to know the magnitude of the effects, which statisticians measure in *effect sizes* (ES). These usually run from close to zero, which means no effect, to 1.0 or higher. An ES around .2 is considered a small effect, around .5 a medium effect, and around .8 a large effect.[14] Studies of Triple P programs have shown medium effects, on average, for outcomes such as:

- Parenting practices (ES = .47)
- Child social, emotional, and behavioral adjustment (ES = .47)
- Observed child behavior (ES = .50)
- Parenting satisfaction and efficacy (ES = .52)

Studies have shown that Triple P programs have a fairly consistent and statistically significant positive impact on parents and children.

Not every study of Triple P has found positive results. For example, eight studies tested Level 4 Group Triple P in a universal context, each using a sample

of 150 families or more. Seven of the eight showed positive results, but one, which was conducted in Switzerland, failed to find positive effects despite using a well-described research design and appropriate measurements.[15] The Swiss study delivered the program in schools, which might not have suited parents as well as other venues, and problems related to implementation may have affected the results. Overall, 4.4 percent of Triple P studies have failed to find positive effects. This percentage is within the range that we might expect to occur by chance. Still, it's important to learn from such studies. Researchers are finding that insufficient attention to how well a program is implemented can produce poor outcomes in studies and dissemination.[16]

Evaluation of Population Impact

Studies of individual Triple P programs are an essential foundation for the Triple P system, but they can't substitute for evaluation of population impact. To date, three published studies have evaluated the impact of the whole system; these are summarized in Table 2.

First, the Every Family prevention study examined how Triple P affected prevention of social, emotional, and behavioral problems among four- to seven-year-olds.[17] The intervention encompassed all five levels of the Triple P system. Levels 2–5 were delivered in community, health, and school settings by child health nurses, general practice physicians, school nurses, mental health services staff, and family intervention specialists. Level 1 included social marketing and health promotion, information about positive parenting, links to services, and communications to counter parent-blaming messages in the media. A cross-promotional strategy involved both print and electronic media—for example, via newspaper columns about positive parenting, resource materials for parents (available at preschools, schools, childcare centers, and libraries), radio segments, and televised public service announcements.

To measure outcomes, a telephone survey randomly sampled households on two occasions three years apart, before and after implementation of Triple P. Independent interviewers not involved with Triple P conducted the computer-assisted survey. Intervention and non-intervention communities were matched on socioeconomic and racial/ethnic characteristics before comparison.

Parents in the intervention communities reported significantly lower rates of coercive parenting, parental depressive symptoms and stress, and child emotional and psychosocial difficulties. The study found no significant effects on parenting confidence and social support, or on children's prosocial behavior. Overall, the study showed that it's possible to have a population-level impact on coercive parenting and children's behavior problems around the time they start school, as an alternative to selecting out a small segment of children for special intervention.

Second, a population-level study in Ireland tested the Triple P system's impact on childhood conduct problems, focusing on parents of children aged three to seven.[18] The intervention consisted of levels 1–4 of the Triple P system. A level 1 social-marketing strategy involved newspaper columns, websites, mass emails, posters, and flyers. The program was implemented by a partnership of several nonprofit and governmental organizations, including family

resource centers, community development initiatives, childcare facilities, preschools and schools, and general practitioners. The program's population penetration was approximately 34 percent among parents of children in the targeted age range. The evaluation of outcomes compared large catchment areas that were matched according to poverty levels, demographic characteristics, and urban/rural proportions. Based on an appropriate sampling of households separate from participation in Triple P, the evaluators conducted face-to-face parent interviews. The Triple P communities showed a substantial reduction in the percentage of children with conduct problems (and other behavioral and emotional problems) that fell in either the clinical or the borderline range, compared with children in communities that didn't receive the program. Other reported benefits included improved parenting, higher parental confidence, and lower parental stress, though evaluators found no significant increase in children's prosocial behavior. Overall, the Ireland study found that Triple P had a positive impact on children and families, which was attributed in part to careful attention to the quality of implementation.

Third, a population trial funded by the US Centers for Disease Control and Prevention examined the Triple P system's impact on child maltreatment.[19] The study tested whether community-wide parenting support could reduce population rates of child maltreatment. Answering this question required a rarely used "place randomization" design, in which geographic places, in this instance counties in South Carolina, were randomly assigned to the study conditions. The 18 mid-sized counties, none of which had prior exposure to Triple P, were picked geographically rather than recruited in any way. After matching for poverty rates, child maltreatment rates, and population size, the 18 counties were randomly assigned to either the Triple P system (intervention) or services as usual (control).

In the nine Triple P counties, program implementation drew from the existing workforce in several service sectors—members of nongovernmental organizations, preschool and day care directors, staff at public health centers, personnel in elementary schools (such as counselors, parent educators, and kindergarten teachers), mental health workers, and clergy with counseling backgrounds. All of these received professional Triple P training. The level 1 communication strategy involved local newspapers, radio, newsletters at schools, mass mailings to family households, presence at community events, and website information. The goal was to convey positive parenting information, model parental success stories, normalize parenting support, and empower parents to solve child-rearing issues.

The evaluation focused on all households with at least one child under the age of eight years (that is, between birth and eight years old). Three administrative data systems, each with its own reporting procedures, provided the indicators for measuring outcomes: (1) substantiated child maltreatment cases reported by the child protective services system; (2) child out-of-home placements reported by the foster care system; and (3) hospital-treated maltreatment injuries reported by the health-care system. The two sets of counties were statistically compared going back five years before Triple P to verify that existing differences or diverging trends wouldn't account for the results. None of the three indicators yielded significant pre-

Table 2. Population-Based Studies of the Triple P System of Parenting Support

	Every Family Study	Ireland Midlands Area Partnership Triple P System Trial	US Triple P System Trial
Location	Australia	Ireland	South Carolina, US
Geographic units	20 catchment areas	Four regions	18 counties
Child age ranges	Four to seven years	Four to eight years	Birth to seven years
Population size	3,004 families or households	3,065 families	195,388 children
Evaluation method	Comparison of matched communities before and after exposure to Triple P system	Comparison of matched regions before and after exposure to Triple P system	Counties randomized to intervention or control, adjusting for five years prior to study
Intervention elements	Media/communication (L1); parenting seminars, brief consultation (L2); primary care (L3); group (L4); enhanced (L5)	Media/communication (L1); parenting seminars (L2); discussion groups (L3); group (L4)	Media/communication (L1); parenting seminars, brief consultation (L2); primary care (L3); group/individual (L4); enhanced (L5)
Delivery agents	275 trained practitioners	68 trained practitioners	649 trained practitioners
Main outcomes	Significant impact on child behavior problems, parenting for misbehavior, parental depression; nonsignificant for positive parenting	Significant impact on child behavior problems; lowered proportion of children above clinical threshold for conduct and emotional problems	Significant reduction in child maltreatment cases, out-of-home placements, and hospital-treated maltreatment injuries

study differences between the two sets of counties or significant diverging trends over time.

The Triple P system demonstrated a preventive impact on all three indicators. Compared with the control counties, and taking into account initial prevalence levels, counties exposed to the Triple P system saw significantly lower rates of substantiated child maltreatment (ES = 1.34), out-of-home placements (ES = 1.06), and hospital-treated maltreatment injuries (ES = 1.01)—with large effects for all three outcomes.

This population study demonstrated that it's possible to lower child maltreatment rates by providing parenting support to an entire community in the form of the tiered Triple P system. Ideally, researchers elsewhere would try to replicate this population study, but the likelihood of repeating this type of research design is low. A replication would require randomizing many counties or sufficiently large communities with no prior exposure to Triple P, to the Triple P system versus services as usual. Conversely, evidence for population outcomes is emerging in communities where Triple P has been adopted. For example, Santa Cruz County in California implemented the full

Triple P system and documented gains over a five-year period.[20] At least 9,000 parents participated in Triple P services, potentially affecting more than 16,000 children. The evaluation documented significant reductions in adverse parenting practices and child behavior problems in the Triple P families. More importantly, Santa Cruz County observed a 22.7 percent reduction over four years in the rate of substantiated cases of child maltreatment, compared with a 6.3 percent reduction for all of California.

Implementation and Quality Assurance

After several decades of evidence-based programming, researchers and policy makers are recognizing that scientific evidence for an intervention is necessary but not sufficient for success. The other crucial ingredient is dedicated attention to the quality of implementation.[21] No matter how solid the evidence for a program, implementing it poorly will yield little or no impact.[22] A public health–oriented, multitiered prevention system like Triple P presents many complexities and challenges for implementation. Accordingly, current efforts to disseminate Triple P focus much more on implementation than they did a decade ago.

Scientific evidence for an intervention is necessary but not sufficient for success. The other crucial ingredient is dedicated attention to the quality of implementation.

The Triple P Implementation Framework has emerged as a way to help communities and policy makers with planning and quality assurance.[23] This framework, summarized below, guides communities that adopt Triple P through a sequence of activities intended to promote effective service delivery and sustainability:

1. Engagement of organizations to determine program fit and readiness
2. Specification of, and commitment to, outcome goals, program choices within the Triple P system, number and selection of delivery practitioners, leadership teams, and community partnerships
3. Implementation planning for internal support of the delivery workforce via supervision, professional peer support, and coaching; monitoring and evaluation process (including assessment of program-delivery fidelity and targeted outcomes); and initial development of structural and financial plans for sustainability or expansion
4. Systematic training and accreditation of practitioners selected by the adopting organizations to deliver the various levels
5. Ongoing implementation and maintenance involving (a) quality improvement driven by monitoring data, (b) guidance from leadership and implementation teams, (c) addition or expansion of level 1 media and communication, (d) workforce replenishment, and (e) installation of additional components from the Triple P system to meet emerging community needs.

Culturally and Economically Diverse Populations

Triple P has been implemented with a broad array of families in culturally and economically diverse communities, including:

- Indigenous communities in Australia
- Maori populations in New Zealand
- First Nations peoples in North America
- Low- and middle-income countries (for example, Kenya and Panama)
- Counties in California and North Carolina with substantial Hispanic, African American, and Asian American populations

Opinions solicited directly from parents suggested that Triple P's core principles and parenting strategies are cross-culturally robust, but that doesn't mean the program might not need to accommodate and adapt to different populations.[24] Triple P approaches diversity of communities and families in two ways: flexible delivery and formal adaptation.[25]

Flexible delivery refers to facets of the program that allow the content and process to be tailored without sacrificing vital aspects. For example, Triple P practitioners defer to parents in choosing child behavior goals, as well as choices among parenting strategies. This tailored approach lets parents bring cultural and personal values and preferences to bear on how they use the program. Practitioners can take cultural and family contexts further into account when delivering Triple P. For example, they can vary their communication style to make parents feel comfortable. More importantly, practitioners can choose illustrative parenting and child examples compatible with the family's personal and cultural experiences. Finally, organizations can deploy a Triple P workforce, including supervisors, that reflects the cultural and racial makeup of the communities being served.

Formal adaptation of Triple P to specific cultures or countries, though less common, has occurred. For example, Triple P developed a collaborative partnership adaption model and applied it to indigenous Australian and New Zealand Maori communities.[26] In brief, the model involves:

- establishing a collaborative partnership with the community
- assessing cultural acceptability of the existing program and soliciting input from parents, practitioners, and community leaders throughout the process
- making changes in the language, content, and delivery process
- evaluating the adapted program
- scaling up the program with respect to training, ongoing evaluation, support, and sustainability

In New Zealand, one cultural adaptation involved altering resource materials and illustrating how Triple P principles and local tribal customs can work together to build parenting skills. The process is continuing, but initial evaluations show that adaptations of Triple P can produce positive outcomes.[27]

Benefit-Cost and Funding Considerations

Recently, the Washington State Institute for Public Policy (WSIPP) conducted a benefit-

cost analysis of the Triple P system. With respect to prevention of child maltreatment, WSIPP determined that a benefit of $9.29 would be returned for every dollar spent on Triple P, based on a cost of $152 per child in the population. WSIPP also estimated benefit-cost ratios for level 4 Triple P programs with respect to reducing children's disruptive behavior problems, and found a benefit return of $4.47 for Group Triple P and $3.36 for Standard (individual family) Triple P per dollar spent. These estimates were based on costs of $367 per family and $992 per family, respectively.

Funding to implement Triple P varies across jurisdictions and often involves blended financial arrangements. Sources of funding for Triple P in the United States typically include state agencies (child and family services, health, public health, mental health, and social services), philanthropic and nongovernmental entities, federal grants, and primary care systems.

Significant Challenges

Most studies on Triple P's effectiveness have focused on individual programs; only a handful have tested the system as a whole. This isn't by chance. Population trials—especially those involving randomization of communities—are complex, costly, and difficult to procure. But such trials are important to keep moving forward. Researchers teaming with state public health departments will need to devise carefully crafted evaluations involving geographic catchment areas.

In public health terms, *penetration* refers to the proportion of individuals in the population reached by a prevention strategy. Sufficient penetration is critical for a population-based intervention like Triple P. When population impact is not the goal, interventions with individual families can be successful without substantial penetration. By contrast, an intervention like Triple P could succeed in helping some families but fall short because it didn't reach enough of them. It's an open question how much penetration the Triple P system needs to alter, for example, population indicators of child maltreatment. Similarly, we need more work on ways to increase penetration, such as how to engage more service sectors and settings, make greater use of online programming, and optimize positive social contagion.

A related problem concerns population measures. For child maltreatment, archival records work well as long as the community, county, or state is large enough to reliably detect changes in prevalence rates. Population measures of children's social, emotional, and behavioral problems are harder to come by, as are measures of parenting practices other than "official" maltreatment.

Installing a parenting support system like Triple P doesn't mean that nothing else needs to be done to reduce child maltreatment.

The most common forms of child maltreatment are neglect, physical abuse, or a combination of both. The extent to which a population approach to parenting support like Triple P might specifically prevent neglect is not known. However, in most neglect cases the parents also struggle with common parenting challenges that

might be ameliorated by parenting support interventions. In reality, the categories of neglect and physical abuse aren't very distinct, which suggests that strengthening parenting can help prevent both.[28] It almost goes without saying that prevention of neglect also needs to involve elimination of adverse conditions related to housing, hunger, absence of medical care, and other sources of deprivation.

Installing a parenting support system like Triple P doesn't mean that nothing else needs to be done to reduce child maltreatment. We would benefit from research that tests the impact of combining Triple P with intervention or policy strategies related to, for example, primary health care, parental substance use, or food insecurity.

Conclusions

Parenting affects many aspects of child development, including but not limited to child maltreatment. Reaching large segments of the population through evidence-based parenting support could have considerable benefit to society. The Triple P—Positive Parenting Program system builds on this premise. Structurally, Triple P aims for community- or population-wide implementation through a multitiered system of programs of increasing intensity, drawing on a variety of delivery formats to fit parental preferences and needs. As a blended approach to prevention, the system promotes universal access while incorporating targeted components to reach a variety of parents. We have much evidence for individual programs in the Triple P system, and evaluations of the whole system show promise for preventing behavioral/emotional problems and problematic parenting practices, including child maltreatment. Greater emphasis on implementation will likely raise Triple P's potential further.

Having a cogent parenting support system in place doesn't obviate the need to address other critical issues. Parenting support can and should work hand in hand with other efforts, such as programs to address the toxic elements of poverty, full access to efficacious treatment for parental substance use, early childhood education, and access to adequate health care.[29]

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Every Child Deserves a Permanent Home: The Permanency Innovations Initiative

Mark Testa, Kristen Woodruff, Roseana Bess, Jerry Milner, and Maria Woolverton

Summary

About one-fifth of children involved in investigations for abuse or neglect are placed in foster care. Although some return to their families quickly, others may remain in foster care for years without permanent family relationships. In this article, Mark Testa, Kristen Woodruff, Roseana Bess, Jerry Milner, and Maria Woolverton examine the Permanency Innovations Initiative (PII), a federally funded effort that tested innovative programs designed to prevent children from experiencing long stays in foster care and to build evidence for strategies that can be brought to scale in child welfare.

PII aimed to follow a four-phase model for selecting, implementing, and testing interventions, including *exploration and installation, initial implementation and formative evaluation, full implementation and summative evaluation, and replication and adaptation*. The results of the initiative weren't encouraging. Some sites were never able to move to the full implementation phase. Others had significant trouble with participation rates. Two sites that were able to experimentally evaluate a fully implemented intervention found no significant differences between the treatment and comparison groups in achieving stable and permanent homes for children, and a third site found that the experimental results actually favored the comparison group.

The authors "principal finding" is that "none of the promising innovations tested in this initiative yielded meaningful improvements in … stable permanence when rigorously evaluated." Discussing the implications for child welfare programs in general, they raise a fundamental issue: Should such programs primarily deal with maltreatment only after it has occurred? Or should they also work to prevent maltreatment from happening in the first place through early, universal interventions that strengthen protective factors within families?

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Research over the past half-century has shown that children's health and emotional wellbeing is best assured in the context of permanent family relationships.[1] This issue of *Future of Children* highlights a range of prevention programs that attempt to provide community supports to parents and children—strengthening parental capacity, increasing child safety, and enhancing child development—so that children can remain safely in their own homes. Child welfare policy leans toward maintaining children at home, and most children who come to the attention of child protective services do remain in the custody of their parents. However, approximately one-fifth of the victims involved in investigations or assessments for maltreatment (that is, abuse or neglect) are placed in foster care.[2] Some children return home quickly, but others remain in foster care for years, without permanent family relationships. As federal policy has shifted to prioritize family permanence, the number of children who stay in foster care for longer than three years has fallen—by 50 percent between 2000 and 2010, from 172,000 to 87,000.[3] Still, many children continue to experience long-term foster care.

The child welfare system reacts to crises, rather than preventing crises from happening. That is, it intervenes in families' lives only after those families are in crisis, rather than helping them avoid crises in the first place. We still have much to learn about how to effectively serve children and families in crisis, particularly those facing the most difficult challenges, so that children can return safely to their birth parents or more quickly achieve other permanent family relationships. Although foster care is needed to protect children and youth from unsafe environments, too many children remain in foster care for years without achieving permanence in the form of reunification, adoption, or guardianship.

Few evidence-supported interventions are geared to the needs of children at risk of long-term foster care. We need more innovations and more well-supported evidence of what works to ensure timely permanence and support children's social and emotional wellbeing in family relationships. Moreover, we need the capacity to generate this evidence. In this article, we present an initiative that's designed to test whether innovative interventions can meet the evidence standards necessary to conclude that the interventions produce positive results for children in foster care.

Permanency Innovations Initiative

The Children's Bureau of the US Administration for Children and Families (ACF) launched the Permanency Innovations Initiative (PII) in 2010 to support implementation of innovative intervention strategies and to evaluate their effectiveness in improving outcomes for children at risk of long-term foster care. The Children's Bureau oversaw the initiative jointly with the ACF's Office of Planning, Research and Evaluation (OPRE). PII was a multi-year, $100 million federal program that funded promising innovations at six sites. The idea was that if reliable implementation and rigorous evaluation showed that any of the interventions effectively improved family permanence and other measures of child wellbeing, those interventions could be scaled up nationally to minimize the number of children who experience long-term foster care.

Box 1. The Six PII Grantees

- Arizona Department of Economic Security
- California Department of Social Services
- Illinois Department of Children and Family Services
- Los Angeles LGBT Center
- University of Kansas Center for Research
- Washoe County, NV, Department of Social Services

Each of the six grantees identified the population in their community of children and youth that faced the most serious barriers to family permanence. Even though these children, youth, and families had already come to the attention of child protective services, PII's aims were preventive in the sense that it sought to avert long-term foster care for traumatized children who were at high risk of remaining in care. The grantees implemented innovative programs that were intended to prevent children in the target population from experiencing long stays in foster care—or, in some cases, from entering foster care at all—and to ensure that when the children exited care, they went to a permanent family home.

PII set high standards for building evidence. It helped the sites conduct rigorous evaluations that could demonstrate a sustained intervention effect when compared to a randomized or matched comparison group, in which "permanent" exits endured beyond the finalization of legal permanence (the benchmark in prior studies). Such high standards meant that fewer than one out of five promising innovations could be expected to pass successfully through all phases of evidence building, but PII's goal was not to advocate for a single cure-all solution.[4] Rather, building on the experimentalist approach advocated by social psychologist Donald Campbell, PII aimed to develop and sustain a continuous cycle of evidence building while testing innovative strategies to reduce long-term foster care. That is, it aimed to systematically explore, reliably implement, and rigorously test strategies to reduce the problem of long-term foster care, and to test alternative solutions should evaluation show that the initial intervention was ineffective or possibly even harmful.[5]

Child welfare lagged well behind in its capacity to generate systematic evidence for what works for whom under what conditions.

Status of Evidence Building in Child Welfare

PII was an example of the federal government's approach to evidence-based policy making, which also included initiatives in education, maternal and child health, teenage pregnancy prevention, community service, and workforce development.[6] Compared with these other human service areas, however, child welfare lagged well behind in its capacity to generate systematic evidence for what works for whom under what conditions.

In 2010, only 20 (9 percent) of the 223 programs cataloged on the California Evidence-Based Clearinghouse for Child Welfare website were well supported by research evidence. As of March 2018, among the 433 programs cataloged, the number was higher in absolute terms at 31, but proportionally lower at 7 percent. Only two of the 31 well-supported interventions were specifically designed or commonly used for children and families served by

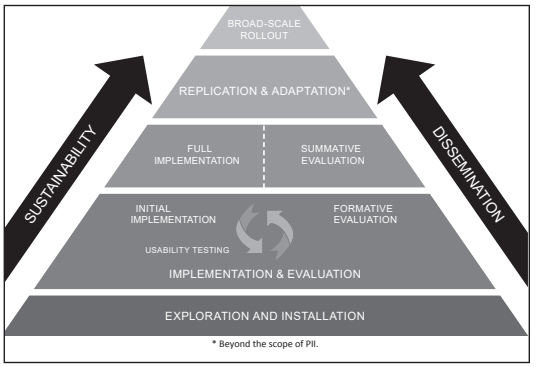
the child welfare system. Still, evidence-supported interventions stemming from the fields of mental health and developmental science held some promise for ameliorating the behavioral and emotional problems of children who come to the attention of the child welfare system.[7] Several PII projects examined how far this promise could extend to children in the usual court-ordered, out-of-home settings.

PII Approach to Evidence Building

In response to the dearth of evidence-supported interventions geared specifically to the needs of children at risk of long-term foster care, the Children's Bureau and OPRE asked the PII Evaluation Team (PII-ET) and the PII Training and Technical Assistance Project to organize a systematic, phased approach to developing, adapting, and implementing interventions with *integrity* (that is, implementing them as planned or as previously tested, in support of their efficacy or effectiveness) and showing empirically that they would work with other similar children and youth beyond those in the studies (what researchers call *external validity*).

In PII's approach, evidence building progresses through four phases, or "tollgates," before a program can move to broad-scale rollout.[8] Figure 1's pyramid illustrates how at each tollgate, many interventions fail to progress to the next phase of evidence building. Thus, when properly evaluated, few interventions prove to be effective or even marginally successful.[9] Given this reality, the earlier in the evidence-building process that a tollgate warning can be sounded, the better. Otherwise, much time and effort may be misspent in implementing and evaluating promising innovations that ultimately fail to produce positive results.

Figure 1. The PII Approach



As figure 1 shows, the four PII tollgates are:

1. *Exploration and installation:* choosing promising innovations to install in real-world settings, based on the best available research evidence of past success.

2. *Initial implementation and formative evaluation:* confirming a program's usability and statistically testing whether its outputs and primary short-term outcomes are trending in the desired direction.

3. *Full implementation and summative evaluation:* supporting implementation as planned (with integrity) and rigorously evaluating whether the intervention creates practical improvements in primary long-term outcomes that can plausibly be attributed to causal effects of the intervention.

4. *Replication and adaptation:* spreading evidence-supported interventions and assessing whether similar positive outcomes can be reproduced with diverse populations at different time frames and in different settings.

Exploration and Installation

The first tollgate involves the *construct validity* (that is, whether a test measures the

concept it's intended to measure) of the research questions and the logic model (a tool that describes the key implementation activities, program outputs, and short-term outcomes each site deems necessary to attain the desired results). Construct validity is strengthened by 1) starting with a clear exposition of the population, intervention, comparison, and outcome (or PICO) constructs of interest; 2) choosing reliable indicators of these higher-order constructs; 3) assessing the fit between the particular indicators and the constructs; and 4) revising and summarizing the PICO construct descriptions in the form of a question.[10]

During the exploration and installation phase, the PII Training and Technical Assistance Project helped the sites set up implementation teams and create a supportive context to solidify child welfare system leadership and stakeholder buy-in and to sustain the site's investment in successful implementation.[11] The long-term outcome measure (the O in PICO), developed by the PII-ET and PII Training and Technical Assistance Project in consultation with the sites, extends the federal measure of permanence. The PII measure stipulates that a child's exit from foster care to reunification, adoption, or guardianship qualifies as *stable* only if it lasts at least six months after exit, without reentry into foster care. The extension helps make sure that sites don't register quick improvements by simply discharging more children than before from state custody without adequately preparing families or offering services to support family permanence.

Even though the Children's Bureau specified that the target population (P) should constitute subgroups of children who experience the most serious barriers to permanence, it left the selection of particular subgroups to the local sites' discretion. To verify that the subgroups proposed in each site's application faced the most serious barriers to permanence, PII-ET extensively mined administrative data. Their analyses ranked the subpopulation characteristics at each site that correlated most strongly with children remaining in foster care for two or more years. In some cases the analysis confirmed the site's original selection; in other cases, it helped the project refocus on risk factors that more strongly predicted long-term foster care.

Several sites had to collect their own data to estimate the target population's size and needs. For example, the Los Angeles LGBT Center funded a survey of foster care youth aged 12 years and older in Los Angeles. A sample of 1,881 youth, split into two groups by age (12–16 and 17–21), was chosen randomly from a population of approximately 7,000 youth in foster care. A total of 786 youth completed telephone surveys, 42 percent of the sample.[12] Based on their responses to a set of questions on sexual attraction and identity, the researchers estimated that approximately 19 percent of youth in foster care in Los Angeles identified as LGBTQ. This was 1.5 to 2 times greater than the percentage of LGBTQ people estimated for the population at large.[13] Extrapolating to the entire population of youth in foster care, researchers estimated that some 1,400 foster care youth in Los Angeles identified as LGBTQ and could potentially benefit from the Los Angeles LGBT Center's services.[14]

Theory of Change, Logic Model, and Research Review

The two technical assistance teams helped each site develop a *theory of change* that 1)

elaborated on the site's basic understanding of the nature of the problem, and 2) outlined a *logic model* specifying the key implementation steps and the underlying causal pathways that were hypothesized to bring about the desired changes. PII-ET then conducted a research review to identify the best available evidence of past success producing the desired outcomes among the interventions the sites were considering.

With the logic model and research reviews in hand, each site selected one or more interventions. Table 1 summarizes the evidence ratings and the interventions (I) selected by each site. Evidence ratings are based on PII-ET's assessment of the rigor and consistency of the evidence of a program's effectiveness: level 1 is the highest rating (well supported, with positive evidence from two or more randomized clinical trials), and level 4 the lowest (promising and acceptable).[15] The other columns identify the remaining PICO components. Also listed are short-term outcomes, which PII-ET evaluated in addition to the primary long-term outcome (O) of time to stable permanence.

Some of the selected interventions were those originally proposed by the sites, but others had to be developed anew. For example, both California sites developed system-focused interventions targeting structural inequities and institutional biases that expose stigmatized groups and racial minorities to a disproportionate risk of removal from their homes and retention in long-term foster care. Because no existing system-focused interventions were geared specifically to the needs of LGBTQ youth in foster care, the Los Angeles LGBT Center created its own program. Similarly, the California Department of Social Services constructed its own Child and Family Practice Model that integrated common elements from a variety of practices with research evidence to support them. The department focused on African American and Native American youth because data mining reinforced its original assessment that these two minority groups were at a particularly high risk of long-term foster care.

Each of the other sites chose one or more existing person-focused or relationship-focused interventions. Kansas selected Parent Management Training–the Oregon Model (PMTO) for reorienting family interactions away from coercive parenting and toward positive parenting practices that help reduce problematic child behavior and reinforce prosocial behaviors.[16] Illinois selected the person-focused Trauma Affect Regulation: Guide for Education and Therapy for Adolescents (TARGET-A) intervention, which helps child maltreatment victims and their caregivers prepare for and manage destructive reactions to neurobiological changes induced by childhood trauma and toxic stress.[17] Arizona chose two relationship-focused interventions that aim to increase the supply of permanency resources: Family Finding, which searches for relatives, neighbors, and other caring adults from a youth's past who might be recruited as legal guardians or adoptive parents; and 3-5-7, which helps children come to terms with unresolved issues of separation, loss, trust, and self-identity and open up to joining a family permanently.[18] Washoe County, NV, integrated two relationship-focused programs into a unified intervention: SAFE, that helps parents accept what must change to protect their children; and Family Connections, which helps parents arrange

Table 1. PICO Components for Grantees: Population, Intervention, Comparison Group, and Outcomes

Target Population	Intervention Selected *(Evidence Level*)*	Comparison Group	Short-Term Outcomes
Arizona Department of Economic Security			
Population 1: Children and youth aged 5–17 years who at one year after removal were deemed at risk of long-term foster care	3-5-7 *(4)*	Randomized comparison group	• Readiness for permanence • Behavioral health • Placement stability
Population 2: Youth aged 13–17.5 years who have been in care two or more years	Family Finding *(4)*		
California Department of Social Services			
African American and Native American children	Child and Family Practice Model (constructed) integrating common elements after reviewing a series of interventions	Matched historical comparison groups	• Family perceptions of changed practice behaviors • Racial disparities in time to family permanence
Illinois Department of Children and Family Services			
Youth aged 11–16 years who are in traditional, relative and specialized foster homes and, after two years of care, are experiencing mental health symptoms and/or have had more than two placement changes	Trauma Affect Regulation: Guide for Education and Therapy for Adolescents (TARGET-A) *(1)*	Randomized comparison group	• Placement stability • Parenting skills in responding to youth's emotional and behavioral dysregulation: CANS and Abbreviated Dysregulation Inventory
Los Angeles LGBT Center			
LA caseworkers and children and youth aged 5–19 years who self-identify as LGBTQ+ and/or gender nonconforming	Recognize, Intervene, Support & Empower (RISE); Outreach & Relationship Building (ORB) *(4)*	One group tested before and after intervention	• Knowledge of LGBTQ+ competencies • Perceived agency support
	RISE–Care Coordination Team (CCT) *(4)*	Randomized comparison group	• Family support • LGBT identity • Integration into LGBT community
University of Kansas Center for Research			
Children and youth aged 3–16 years who meet criteria for serious emotional disturbance	Parent Management Training–Oregon Model (PMTO) *(1)*	Randomized comparison group	• Positive parenting behavior based on parental reports of child's compliance and own parenting behavior, and independent ratings of Family Interaction Task (FIT) observations
Washoe County (Nevada) Department of Social Services			
Population 1: All new cases with a report of child abuse or child neglect who are deemed unsafe	Safety Assessment Family Evaluation (SAFE) *(4)*	Randomized comparison group	• Caregiver readiness for change (Readiness for Parenting Change scale)
Population 2: Children in foster care for at least 12 months with one or more risk factors	Family Connections (FC) *(3)*		• Parenting Stress Index (PSI-Short Form)

**Evidence level* refers to PII-ET's assessment of the level of evidence of program effectiveness using criteria suggested by Barbara Thomlison (2003), where level 1 is the highest rating (well supported, with positive evidence from two or more randomized clinical trials), and level 4 the lowest (promising and acceptable).

for supports and services so their children can either remain safely in their custody or, in cases where removal is necessary, quickly return home.

Initial Implementation and Formative Evaluation

The second PII tollgate involves program usability and the *statistical (*or *conclusion) validity* of differences in program outputs and short-term outcomes. Statistical validity refers to the likelihood that any observed differences in outputs and outcomes between the intervention and comparison groups are greater than what could be expected simply by chance.[19]

Early on, each site tested its intervention's usability with a small sample of the target population. This road testing allowed the sites to quickly revise both the interventions and the implementation activities (such as an assessment form to be completed by program participants) before formative evaluation began. It also gave the sites a chance to reappraise their capacity for the initiative and their interest in participating. After usability testing, the Arizona site underwent a change in leadership and withdrew from PII.

If a program has trouble passing its own logic model, decision makers should think twice before embarking on full implementation.

The remaining five sites then implemented their programs with a larger but still small sample of children and youth as part of the *formative evaluation*. (Formative evaluation tests whether an intervention is associated with expected program outputs and short-term outcomes.) During this phase, sites need to pay close attention to whether what's actually happening follows what was supposed to happen according to the logic model.[20] Small formative samples limit the ability to accurately infer a program's effectiveness. Nonetheless, if a program has trouble passing its own logic model, decision makers should think twice before embarking on full implementation and summative evaluation.[21]

Formative evaluation doesn't require as rigorous a design as summative evaluation does, although such a design can be used. Each of the three sites that progressed to summative evaluation used an "early warning" summative design for their formative evaluation. This type of formative evaluation pilots the same unbiased assignment mechanism to form intervention and comparison groups (for example, random assignment) that will be used at summative evaluation. California's intervention didn't use a similar early warning design because too few counties were enrolled in the demonstration to mount a county-level randomized controlled experiment. Instead, California compared the outcomes for children served by the practice model to a matched historical comparison group—that is, children who, based on administrative data, had been served sometime in the past and were similar to the children receiving the intervention. The Los Angeles LGBT Center planned to randomize child cases to its Care Coordination Team intervention, compared to services as usual. But because they had fewer referrals than anticipated, randomized allocation to intervention and comparison groups wasn't feasible.

Therefore, both California sites relied on comparisons of children and youth who received the interventions to matched historical cohorts who did not, in order to assess the statistical validity of the association between interventions and outcomes and draw tentative inferences about program effectiveness. Neither of the California sites moved on to full implementation and summative evaluation.

The formative results for the LGBT Center's training showed a modest improvement in caseworkers' foundational knowledge and practical use of LGBTQ concepts. However, heavy attrition of participants from the two-month follow-up survey made it hard to measure how well the caseworkers applied the knowledge in practice. Among the 21 percent of respondents who reported not applying the knowledge, nearly 60 percent said they didn't think the information was relevant for their clients. Considering that the exploratory findings had suggested that about 19 percent of surveyed foster youth identify as LGBTQ, it would be important to learn whether the lack of perceived relevance reflected the caseworkers' failure to recognize LGBTQ youth, their discomfort with the issue, or actual differences with respect to the ages and other characteristics of the clients.

The Child and Family Practice Model implemented in five locations in four selected California counties was a system-focused intervention designed to reduce racial disparities in permanency. The formative evaluation tested whether children who were served by caseworkers trained in the new practice model showed evidence of a lower risk of long-term foster care as compared to a similar matched historical group of children in foster care. When children served under the new practice model in one of the five locations were assessed at 12 months after removal from the home, they showed a small but statistically significant improvement (three percentage points) in the time taken to achieve stable permanence. In the other four locations, testing found no differences in the time to stable permanence between the intervention group and the matched historical comparison group. Nor was a statistically significant drop found in disparities among African American and Native American children, compared to other children.

Full Implementation and Summative Evaluation

The person-focused and relationship-focused interventions in Illinois, Kansas, and Washoe County, NV, progressed to full implementation and summative evaluation to test *internal validity*—that is, to determine whether the short- and long-term outcomes were achieved and whether the statistical association observed between intervention and outcomes could plausibly be attributed to the intervention's causal impact.[22] These three sites randomly assigned eligible children and families to intervention and comparison groups. We compared outcomes of all children and families assigned to the intervention (whether or not they had participated fully in their assigned treatment) to outcomes of all children and families assigned to the comparison group. This design, called *intent-to-treat* analysis, provides an internally valid estimate of the intervention's impact in the real world, where some families refuse to participate or don't do so fully. As expected, the extent to which families and youth participated in the treatment at each site varied. Administrative child welfare data made it feasible to

measure time to stable permanence for all children in the study. This approach provides macro-level information to help decide how to invest limited resources in policies and programs.

Program Participation

Illinois

Of the 233 youth assigned to TARGET-A, 48 percent didn't participate in any TARGET sessions. By the end of the two-year summative evaluation period, only 25 percent had completed the full course of ten to 12 sessions. Sixteen percent completed three to nine sessions, and 12 percent completed only one or two. Though the participation rate was lower than organizers had hoped, it was consistent with other TARGET studies of both adults and justice-involved youth.[23]

Kansas

Seventy-eight percent of the Kansas Intensive Permanency Project sample consented to participate in PMTO and data collection. Among those who consented, 73 percent fully complied with and completed the intervention (15 modules in six months or less).

Washoe County, NV

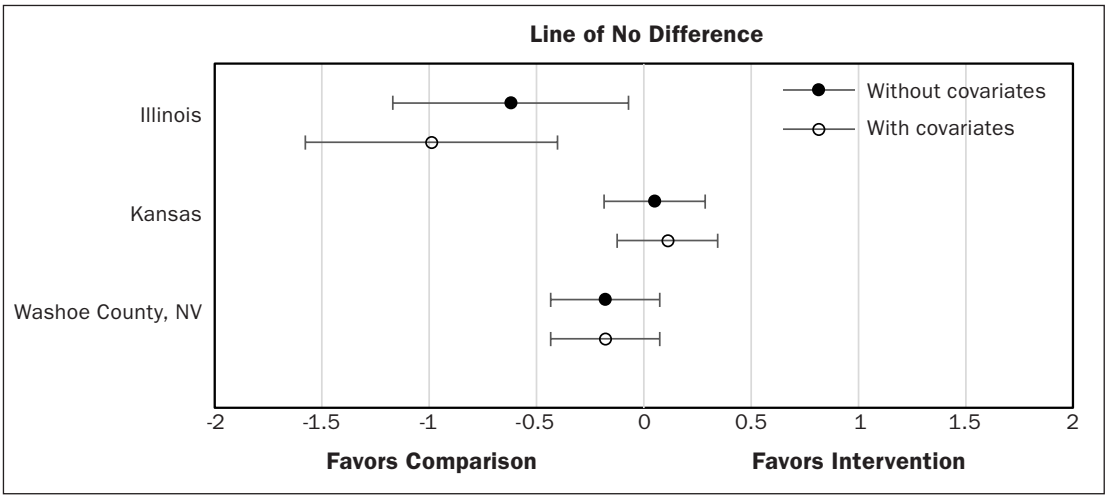
All cases assigned to SAFE-FC received the intervention until the case was closed and services to the families stopped. But even though all cases were exposed to treatment, the proportion of missing data on short-term outcomes ranged from 70 to 80 percent. One-third of the families chose not to provide contact information for primary data collection, and many who had agreed to do so didn't complete one or more of the before-and-after assessments. With so much data missing, the evaluation team couldn't estimate SAFE-FC's effect on short-term outcomes. But because they had administrative data for all cases, the team was able to estimate the intervention's effect on the long-term outcome of timely and stable permanence for all those in the treatment group.

Summative Findings: Timely and Stable Permanence

The summative evaluation estimates how each of the three interventions affected timely and stable permanence, the primary long-term outcome. Figure 2 shows the estimated intervention effect and confidence interval for each site, indicating whether there was a statistically significant difference between intervention and comparison groups in the rates at which children exited foster care to stable permanent homes.[24] In Kansas and Washoe County, the confidence intervals (lines) cross the zero line, indicating no statistically significant difference between intervention and comparison groups in time to stable permanence. In Illinois, the confidence intervals fall below zero, indicating that the comparison group fared better than the intervention group. Confidence intervals entirely above zero would indicate that the intervention had a positive effect, that is, a shorter time to permanence.

Figure 2 presents two estimates for each site: both a crude (simple) analysis and an analysis that's fully adjusted to account for other variables. Including important predictive variables as controls in statistical models can make effect estimates more precise.[25] Crude estimates (the black circles) show the intervention's impact on timely and stable permanence without covariates; adjusted estimates (white circles) account

Figure 2. Timely and Stable Permanence: Intervention Effect and Confidence Intervals



for important covariates—variables selected for their significant association or interaction with the outcome. The adjusted estimates don't differ much from the crude estimates except in the case of Illinois: when important predictive factors are included, that estimate favors the comparison group over the intervention group.

Primary Short-Term Outcomes

Each of these three sites identified a primary short-term outcome of focus from their logic model. In Illinois, it was placement stability; in Kansas, improved parenting behaviors; and in Washoe County, caregivers' readiness to change their own parenting behaviors. The primary short-term outcomes were chosen based on the pivotal role they were hypothesized to play in supporting the long-term outcome of timely and stable permanence.

Illinois

The short-term outcome of placement stability was measured using administrative data that was available for all youth in the intervention group whether or not they received services. Compared to the randomized control group, youth assigned to TARGET-A showed no differences with respect to the number of foster home or institutional placements, or whether running away, detention, or psychiatric hospitalization temporarily interrupted a spell of foster care.

Kansas

Changes in parenting behaviors were measured by the Family Interaction Task, used in previous studies of PMTO to track changes in parenting behaviors.[26] Trained coders, blind to the assigned treatment, viewed videotapes of family members working together on interactive tasks. Coders rated behaviors in six areas: positive involvement, skill encouragement, monitoring, problem solving, inept discipline, and child noncompliance. Only 65 percent of assigned families completed the Family Interaction Task when the study began, and 46 percent did so at follow-up. Given the large amount of missing data, the analysis used imputed data values (meaning estimated or substituted data values) for families who missed the measure.

Contrary to expectations, the families assigned to PMTO fared worse than families in the comparison group on measures of inept discipline and child noncompliance. There were no significant differences for the remaining areas of positive involvement, skill encouragement, monitoring, and problem solving. When all six subscales were added up for an overall measure of parental effectiveness, the results showed no differences between the intervention and comparison groups.

Washoe County, NV

SAFE-FC assessed caregivers' initial readiness for change using a validated instrument called the Readiness for Parenting Change scale.[27] Even though the analysis showed no effect, the results' usefulness is limited by the large amount of missing data that had to be imputed (69 percent of the data was missing at the beginning of the assessment and 77 percent at follow-up).

Promising Directions for Replication and Adaptation

After the average effectiveness of an intervention has been demonstrated through summative evaluation, the PII Approach envisions clearing the fourth tollgate to qualify the intervention as well supported by research evidence—that is, to establish the *external validity* of the intervention's causal impact.[28] External validity refers to whether and how well an intervention's impact can be transferred to other settings or to variations in time frames, populations, and outcomes. The last phase before broad-scale rollout—replication and adaptation—was beyond the scope of PII. But during summative evaluation, researchers explored the statistical associations between secondary short-term outcomes and assignment to the intervention. They also examined outcomes within different subgroups and across settings (such as substance dependence, placement type, and racial group). The purpose was not to cherry-pick confirming results but rather to identify promising directions that could guide future replication and adaptations.

Illinois

Reports from youth indicated that the intervention had the intended effect of increasing in-person monthly visits with fathers and other types of monthly parental contact. Youth self-reports also showed a marginally significant reduction in later exposure to trauma (meaning a single traumatic event). There was no significant impact, however, on later exposure to complex trauma (that is, multiple traumatic events) or on mental health symptoms as documented by caseworkers in the Child and Adolescent Needs and Strengths assessments (a tool that supports decision making, service planning, and outcomes monitoring for children's services). Nor was any association found between assignment to the intervention and a change in the availability of adults as sources of emotional support, or in the youths' capacity to form and maintain relationships. More concerning, assignment to the intervention unexpectedly trended in the wrong direction with respect to behavioral and emotional dysregulation. Youth assigned to the intervention reported a greater increase, on average, in symptoms related to behavioral and emotional/affective dysregulation than did youth assigned to the comparison group. There was no significant intent-to-treat effect on either cognitive dysregulation or the dysregulation

measure in the Child and Adolescent Needs and Strengths assessments.

Kansas

Assignment to treatment showed a significant intent-to-treat effect in the form of improving child functioning scores given by caseworkers, from severe to minimal functional impairment. Parental assessments showed the same positive impact: parents reported that children exhibited fewer problem behaviors and more prosocial skills regarding communication, cooperation, assertion, responsibility, empathy, engagement, and self-control. On the North Carolina Family Assessment Scales, a tool that measures family functioning, a difference in family readiness for reunification wasn't statistically significant, and none of the other domains—parental mental health, substance abuse, or use of community resources and social supports—showed a difference between the intervention and comparison groups.

Discussion and Conclusions

PII's principal finding is discouraging: when rigorously evaluated, none of the promising innovations we tested yielded meaningful improvements in the primary outcome of timely and stable permanence. However, this finding is understandable given past accomplishments in reducing long-term foster care, and the Children's Bureau's focus on achieving permanence for children and families who face the most serious barriers to doing so. PII's limited efficacy in reducing the problems associated with long-term foster care suggests that we need a sustained commitment to developing more evidence-supported interventions in child welfare. The results for Illinois and Kansas, in particular, raise questions about whether person- and relationship-focused interventions from the fields of mental health and developmental science can be transferred to the usual court-ordered, out-of-home settings. It's not entirely clear whether parenting interventions such as PMTO are effective for birth parents who are working toward reunification with their children, particularly given their lack of opportunity to practice the newly learned parenting techniques at home with their children. The same may be said for the effectiveness of TARGET-A in helping children in foster care regulate trauma symptoms, and helping foster caregivers manage child behavior problems that disrupt regular family life. Perhaps to ensure that more children achieve permanence faster, we need to systematically test innovations that cover the spectrum of maltreatment prevention.

The fact that the national foster care population has been increasing since 2012 suggests that we should fundamentally question exactly what the child welfare system is designed to accomplish and what interventions best serve children and families. For example, does child welfare exist only to protect against further harm after a child becomes involved in the system? Or should it also help avoid maltreatment (and thus involvement in the system) in the first place? If its purpose is to help avoid maltreatment, any discussion of evidence building should focus on interventions to strengthen families, such as the Triple P or Family Connects programs discussed elsewhere in this issue, before the need for foster care presents itself—and certainly before children suffer the trauma of neglect and abuse.

We should fundamentally question exactly what the child welfare system is designed to accomplish and what interventions best serve children and families.

Other human service institutions have understood and acted on the belief that developing interventions and safeguards to prevent bad things from happening is far more effective than responding only after the case. The public health system, the food industry, the auto industry, and even our athletic institutions are good examples. In contrast, federal child welfare policy remains largely uncommitted to either funding or seriously tackling true prevention of the initial occurrence of child maltreatment—precisely the social problem for which child welfare systems exist. As long as child welfare systems remain reactive, we will continue to focus on what children need only *after* they're maltreated or removed from the home, and we'll likely spend our energies trying to remedy trauma rather than prevent it, and trying to achieve permanence faster for children who are already in foster care.

We know that lifelong connections to supportive adults are key to improving outcomes for youth in foster care. We also know that however strained or struggling the relationships, the most important sources of such connections are parents and extended family. Thus a critical part of the solution is to develop relationship-focused interventions and supports with parents early and universally to strengthen protective factors. With the vast amount of research now available on trauma, brain science, and wellbeing, child welfare can't just be concerned with securing foster care beds and protecting the physical safety of maltreated children. Yes, physical safety is core to the mission of child welfare, but its presence alone doesn't equate to social and emotional wellbeing, nor does it necessarily guard against repeated cycles of maltreatment across generations.

In 2018, Congress passed and President Trump signed the Family First Prevention Services Act (Family First), a positive step toward preventing some of the damage that can be inflicted by child maltreatment. Family First provides prevention dollars that weren't previously available—an option for states to use the largest pool of federal child welfare funds, Title IV-E, for certain types of prevention services for foster care candidates (that is, children identified in a prevention plan as being at imminent risk of entering foster care). This flexibility will help many children and families avoid foster care placement after becoming involved with the child welfare system. To build on this important initial step of putting families first, however, we must also try to make families better equipped to deal with adversity and to protect their children before they're in crisis and require child protection interventions. Also, we must systematically build evidence about what works and what doesn't work in preventing maltreatment and, ultimately, ensuring that more children grow up in safe and permanent homes.

The PII approach and some of the lessons learned from it are relevant for establishing evidence for the primary prevention of maltreatment and across the child welfare continuum. In the future, as we review potential interventions in the exploration

stage, we must carefully consider whether interventions that work in one relational context would generalize well to other such contexts. For example, and as we saw in Illinois and Kansas, well-supported interventions from behavioral health may not translate well to a family separated by foster care. If implementation as intended isn't feasible, even after considering creative strategies to overcome barriers, then we must move on to another intervention or consider adapting interventions to suit the context. At the initial implementation and formative evaluation stage, we must confront the difficulty of measuring the effectiveness of system-focused interventions that are all-inclusive and not limited to specific person- or relationship-focused interventions. Such broad-based programs often comprise an array of supports to strengthen and assist families and to create environments that are strong in the protective factors that help families avoid the need for child protection. Administrative data make it possible to measure some key outcomes for entire populations so we can assess the impact of a systemwide intervention, even though other data may not be recorded in administrative systems. We shouldn't shy away from keeping the desired outcomes front and center even when they're difficult to measure, such as the short-term outcomes that California and the LGBT Center sought to enhance—namely, treating vulnerable families and youth with respect, compassion, and decency. Primary data collection with targeted populations and carefully planned sampling methods can give us rich information that supplements the more readily available administrative data. Another challenge is that some system-focused interventions, such as those at the California sites, don't lend themselves to randomized controlled trials because too few counties or participants are enrolled. Instead, rigorous quasi-experimental alternatives, such as those described earlier, may be the best alternative for assessing impact.

The difficulty that Illinois, Kansas, and Washoe County faced in reproducing the positive impacts of person- and relationship-focused interventions suggests that interpersonal relationships are key to the success of specific clinical interventions. Evidence-based policy making is largely concerned with improvements on average. Rigorous evaluations may miss the impact made by a single individual—say, a social worker, attorney, judge, or service provider—on the life of a particular child or parent. Further, interventions that work well on average in one relational context may not transfer well to other relational contexts, as we saw in both Illinois and Kansas. Besides building evidence for the generalized efficacy of specific interventions, we need to find a way to add both system-focused interventions and more individualized, relationship-focused interventions to our storehouse of what works for children and families. We must look at the approaches that can really make a difference for families whose needs don't meet the criteria for a specific clinical service that works on average—that is, families who may require system-focused interventions of universal family support and decent treatment of all people.

As we consider building the evidence for primary prevention of child maltreatment, at least three areas should figure into our review of programs and into the question of what constitutes evidence. First, effective primary prevention services should be universal, and offered without regard to which families have demonstrated a risk of maltreating their children. The reason is simple: anyone could become at risk, and

if we wait for the risk to appear, the family may already be in crisis. Also, offering family support services universally reduces the stigma that can prevent a family from seeking and using the very services that might keep it from becoming involved in the child welfare system.

Second, primary prevention services should be designed and offered at the community level, and perhaps be unique to the needs of particular communities, depending on demographics and other characteristics. To reshape the child welfare system so that it focuses on preventing children from being maltreated, we must be able to describe and stand behind successful community-based programs that meet that test—despite the measurement challenges.

Third, primary prevention services and approaches will almost always comprise a combination of services and activities to strengthen and support families' protective capacities. It may be difficult if not impossible to determine what made the difference for a family—whether it was the legal advocacy and services, the housing support, the food pantry, the after-school parent engagement work, or some combination of these. Nevertheless, we should make every effort to understand the value of these approaches in preventing maltreatment, and to consider what evidence can best establish that value to children and families.

The path to well-supported interventions laid down under Family First is admittedly an arduous one. Family First devotes the majority of federal funding to evidence-supported interventions. To qualify as *supported*, the effect must be sustained at least six months beyond the end of treatment, when compared to a control group. To qualify as *well supported*, another rigorous study must replicate the results, and the effect established in one of the studies must be sustained for at least one year beyond the end of treatment. Given the four-to-one odds against showing improvements, we need to learn new and more efficient ways of building evidence, as a routine part of government operations, to achieve the high standards of effectiveness envisioned by Family First.[29]

Showing that an idea doesn't work as intended can be just as valuable as showing that it does. The statistical associations found in post-hoc evaluations of TARGET-A and PMTO point to some promising directions that policy makers and administrators should consider in the next cycle of evidence building. To sustain a supportive, enabling context for evidence building in child welfare, we should heed the advice dispensed by Donald T. Campbell a half-century ago:

> Administrators and parties must advocate the importance of the problem rather than the importance of the answer. They must advocate experimental sequences of reforms, rather than one certain cure-all, advocating Reform A with Alternative B available to try next should an honest evaluation of A prove it worthless or harmful.[30]

It's well established that child maltreatment and the absence of stable family attachments have adverse effects on later physical and mental wellbeing. Despite the challenges, ending the practice of long-term foster care and promoting family permanence to support the future social and emotional wellbeing of children and adolescents are policies that deserve sustained public commitment.

Endnotes

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