Programs

CHAPTER ONE

The Nurse Home Visitation Program

Joseph Alper

Editors' Introduction

In this chapter, Joseph Alper, an award-winning journalist specializing in health care, examines nurse visitation programs. These programs arrange for nurses to pay regular visits to disadvantaged first-time mothers during and after their pregnancies to help them become better parents and to link them with social services and other support systems. They are the brainchild of David Olds, currently a professor of pediatrics, psychiatry, and preventive medicine at the University of Colorado Health Sciences Center.

Along with other foundations and the federal government, The Robert Wood Johnson Foundation funded a test of the idea in Elmira, New York, in 1978. When home visits by trained public health nurses appeared to improve the health of poor children and their mothers, the Foundation, among others, next funded a test in Memphis, Tennessee. Since then, Olds and others have demonstrated and tested variants of the concept at various locations around the country.

A number of lessons emerge from three decades of experience with nurse home visitation programs. First, evaluations of various approaches to home

visits indicate that only the original model yielded unambiguously positive results. This raises an important issue: how close do replications of an innovative program have to be in order for researchers to consider the results the same as those of the original? A tension often arises between imposing a single model in diverse settings and letting individual communities bend a model to fit local circumstances. Nurse home visiting is one case where the model does not seem very bendable.

A second lesson is the importance of carefully testing a new service delivery idea before advocating its widespread adoption. Although the series of nurse home visitation experiments takes this idea to something of an extreme, a precise understanding of the strengths and limits of the approach would not have emerged without testing in a variety of circumstances. Moreover, the findings that did emerge influenced other Foundation-supported child development programs, such as the Infant Health and Development Program and the Urban Health Initiative, which were discussed by Sharon Begley and Ruby Hearn in last year's *Robert Wood Johnson Foundation Anthology*.

A third lesson is the value of foundations' sticking with an idea for a long time. The Robert Wood Johnson Foundation has nurtured the nurse home visitation program for almost three decades. The field has gained insights that would not have emerged with the three to five years of funding that normally characterizes grants from foundations.

It was a rainy, cold October day in Oklahoma City as Margaret Black, a nurse in Oklahoma's Children First program, sat waiting in her car outside Yolanda Harris's home.[1] Yolanda, an 18-year-old high school senior, was running late for her appointment with Black, but the nurse was not surprised. "First, she's a teenager, and second, between school and being a mom, she's got a very full plate." Just then, a car pulled up to the worn-down house in one of Oklahoma City's poorer neighborhoods, and out bounded Yolanda carrying her school book bag over one shoulder and her nine-month-old son, Sierra, over the other. As she waved goodbye to the relative who had dropped her off, she said, "Sorry I'm late, but I had to talk to one of my teachers after school. Come on in."

It was time for Black's semi-monthly home visit with Harris, an obviously intelligent girl trying to cope with the demands of being both a first-time mother and a high-school student. Today's visit was supposed to focus on methods that parents can use to help their babies when they are crying inconsolably. Instead, Harris had other issues that needed immediate attention. "I have a new social worker and he's making me fill out more forms—again—before the day care center can get paid, and I'm afraid that I'm going to be dropped from the center," said Harris, who hopes to win a scholarship and attend college but is clearly upset by this new roadblock in her path. "And I also have to get my application form in so that I can take my ACTs."[2]

Black, who has been an inner-city public health nurse for two decades and has run into this situation before, calms the teenager and then asks her what she thinks she needs to do to resolve the situation. Harris finds a piece of paper and starts making a list. First, call the day care center and tell them that the paperwork is on its way. It will be the first time she's ever been late in filling out any forms for the day-care center, so it's unlikely that the center will drop her immediately. Second, get the ACT application in the mail by the deadline, which is the day after this particular visit. Third, find her copy of the forms she filled out previously and copy the information to the new forms. Fourth, do her homework. After making the list, Harris was in a brighter mood and was ready to talk to Black about her son and today's parenting lesson.

Though the discussion between the two women was interrupted frequently by the comings and goings of various people passing through the house, Harris was focused on the advice that Black was giving her. At the same time, she was keeping an eye on her very inquisitive son, who was intent on exploring everything in Black's bag. "Sierra, let me see that," she said as the boy picked up the weighing tray of Black's portable scale. With a big smile on his face, he handed it to her and then started to pull out the wooden alphabet blocks that Black brings with her as a diversion.

As the 90-minute visit came to a close, Black handed Harris some materials about nine-month-olds and commended her on how she handled both the current crisis and her son. Later, commenting to a visitor, the nurse said, "I'm proud of that girl. She has really benefited from this program, particularly in the way that she's learned how to solve problems on her own. She's become a strong parent, and she's doing a great job with her son under circumstances that would crush many new parents. And while nothing's certain in this world, I have a good feeling that she's going to make something of herself and that her son is going to do just fine."

Nurses Helping New Mothers Help Themselves . . . And Their Child

Yolanda Harris and her son are fortunate. "I don't know what I would have done without Mrs. Black's help, because I really didn't know how to be a mom, let alone how to be an adult," she said. "And I know that Sierra is getting a better start on life than I ever did."

That improved start is something that thousands of infants and toddlers nationwide have already received and tens of thousand more have an opportunity to get from their parents' involvement in programs that have grown out of a 20-year research and development project that has helped economically disadvantaged first-time mothers become better parents. By providing a better start to both parenthood and childhood, the Nurse Home Visitation Program[3] hopes to avoid some of the adverse consequences faced by many children born into less-than-optimal circumstances.

"Children of economically disadvantaged first-time mothers are more likely to be low-birth weight babies, more likely to be abused, more likely to live in a family where abuse occurs, more likely to get

involved in juvenile crime, and are less likely to get the good parenting and developmental stimulation children need to live up to their fullest potential," said David Olds, who is currently a professor of pediatrics, psychiatry, and preventive medicine at the University of Colorado Health Sciences Center. He has been developing, testing, and refining the Nurse Home Visitation Program over the past two decades with continuing long-term support by The Robert Wood Johnson Foundation and grants from the U.S. Department of Justice, the U.S. Department of Health and Human Services, the National Institute of Mental Health, the Carnegie Corporation, the Commonwealth Fund, the David and Lucile Packard Foundation, the Ford Foundation, the William T. Grant Foundation, the Pew Charitable Trusts, and the Colorado Trust.

"By using trained nurses to provide a fairly intensive amount of training and instruction to mothers throughout pregnancy and during the first two years of a newborn's life, we hope to counteract many of these negatives and get mothers and their children pointed along a better path in life," Olds says.

The basic premises of Olds' work are that poor, first-time parents often lack the problem-solving and interpersonal skills that make for a good parent, and that an intensive program of regular visits, starting during pregnancy, by specially trained nurses can provide those skills. As a corollary, this approach can also give the mothers the intellectual resources to take charge of their own lives and better their circumstances, which in turn will also benefit their children.

"Most of the women who participate in this program are young, and don't have the financial resources or sense of direction to take good care of themselves or their babies," Olds said. "Therefore, our program places most of the emphasis on the mother—getting good prenatal care to start with, and then building on the idea that women will be better mothers and create a better environment for their child if they are armed with the skill and confidence that they can succeed, both as adults and as parents."

The purveyors of that skill and confidence are nurses, whom Olds considers to be the key to the program. "Not only do nurses receive extensive training in women's and children's health, but good nurses are also great at managing the kind of complex clinical situations that occur in at-risk families," he said.

There's another benefit to using nurses, too, according to Annette Jacobi, the director of Oklahoma's Children First program—the first

statewide implementation of the Nurse Home Visitation Program. "We've found in Oklahoma that most women, and particularly poorer women, hold nurses in higher esteem than they do other professionals or paraprofessionals, and that works to the program's advantage, because it's so heavily grounded in teaching. That's not a knock on social workers or other professionals, but, rather, a credit to how mothers perceive the strengths of nurses. They are thought of as both caring and able to help pregnant mothers with their health concerns, and that's something that most women need as they learn to become parents."

The Nurse Home Visitation Program recruits public health nurses and provides them with extensive training in matters relating to maternal and infant development and teaching problem-solving skills to new mothers. The nurses are schooled on the program's home visitation protocols, which focus on five specific areas: personal health, environmental health, maternal role development, maternal life-course development, and family and friend support. The content of these protocols is organized to reflect the challenges which women are likely to confront at different stages of pregnancy and during the first two years of the child's life. The nurses are also trained in the various standard physical and emotional assessments, that they will use at each stage of the mother's and child's development over the two-plus years to spot any potential problems while they are still easily addressed.

During home visits, nurses carry out four major activities. First, they promote changes in behavior that will positively affect pregnancy, the health and development of the child, and maternal life course, or how the mother's life unfolds. Second, they help women build supportive relationships with family members and friends; such relationships help mothers feel that they are not alone in the world, but rather that they have a nurturing and caring support group that can help them through the inevitable times that try any parent. Third, they try to link family members with health and human services. Fourth, they perform a general health assessment of the child, which includes measuring the child's weight and height.

The nurses are trained to help with problems that come up, but to do so by guiding mothers to develop their own solutions. This helps prevent home visits from turning into gripe sessions, and keeps both nurse and parent from straying from the activities that need to occur. "There's always the opportunity to get too involved in the day-to-day problems families face, but the training stresses again and again the importance of

coming back to the curriculum, to staying on-message," said Chris Russell, who is both a visiting nurse in the local Denver program and a trainer for the national Nurse Home Visitation Program office. "I think that's one of the keys to this program and one of the big differences from your more typical public health effort at home visiting."

A Program Built on Theory and Research

The Nurse Home Visitation Program began when David Olds was a graduate student in developmental psychology at Johns Hopkins University in Baltimore. "Inner-city Baltimore in the early 1970s was a rough place, and it was frustrating working with kids who had experienced so much trauma in their lives that what we were able to do for them was too little and too late," Olds said. "So when I got my Ph.D. I started thinking about how we could reach kids early and perhaps have a bigger positive influence on their lives. The conclusion I came to was that we needed to start with the mothers, to really focus on helping a mother be a better parent from the time her child was born."

Olds landed his first job as an assistant professor at the University of Rochester, and soon after arriving there he designed an experiment to test the hypothesis that working intensively with first-time mothers would benefit their children significantly. Olds set up the first test in Elmira, New York, a town of approximately 100,000 residents in a semi-rural Appalachian county. Funding for the ambitious project designed by an unknown assistant professor came from The Robert Wood Johnson Foundation. Program officers remember being impressed with both the scientific design of the experiment and the fact that the program had sound theoretical underpinnings.

The program Olds developed is grounded in theories of human ecology, self-efficacy, and human attachment. "Together, these theories suggest that behavior change is a function of a family's social context as well as an individual's beliefs, motivations, and emotion," Olds explained. "For example, human ecology theory emphasizes that a child's development is influenced by the type of care that the parents provide, and that, in turn, is influenced by characteristics of the family, its social networks, its neighborhood and community, and by the interrelations among them." As a result, the program trains nurses to enhance the material and social environment by involving other family members, including fathers, in the home visits and by linking families with needed health and human services.

Self-efficacy theory, on the other hand, provides a useful framework for understanding how women make decisions on their own, apart from their social support network, about their health-related behavior during pregnancy, the ways they care for their children, and how they approach their own personal development. According to Olds, self-efficacy theory implies that a woman's perceptions of her abilities can influence the choices that she will make and how much effort she will put into overcoming any obstacles she encounters.

Building on this idea, Olds designed the Nurse Home Visitation Program curriculum to help a woman understand what is known about the influence of particular behaviors on her health and on the health and development of her baby. In addition, the curriculum places a heavy emphasis on developing mothers' realistic goals and achievable objectives. The nurses help women recognize their successes in managing their lives and, through the acknowledgment of their small successes, help women develop the confidence that they can achieve their goals. Over the course of the program, such activities increase a woman's confidence in taking on ever larger challenges.

The third theoretical underpinning, which comes from the literature on attachment theory, stresses the importance of a child's biologically driven attachment to a few specific caregivers and the role of that attachment in developing a child's trust in the world and a capacity for empathy and responsiveness. The curriculum therefore emphasizes sensitive, responsive, and engaged parenting in the early years of a child's life. In addition, the nurses work hard to help mothers and other caregivers review their own childhoods and make decisions about how they wish to care for their children in light of how they were raised. The nurses also promote empathic, trusting relationships between the new mothers and other family members.

In April, 1978, armed with a curriculum designed around these basic tenets, Olds and his colleagues started training nurses and recruiting pregnant, first-time mothers-to-be in Elmira, New York. Over the next 30 months, their efforts resulted in 400 women being enrolled in the experiment; 62 percent of the women were unmarried, 48 percent were younger than 19 years of age, and 59 percent were poor. After stratifying the women by socioeconomic status, the researchers randomly assigned them to one of four groups. In the first group, 100 women received home visits from trained nurses during pregnancy. In the second group, 116 women received home visits during pregnancy and during the first two years of their children's lives.

There were two control groups. In the first control group, 90 women received no home visits from nurses and the children received sensory and developmental screening at ages one and two years. The second control group of 94 women also received no home visits but were given free transportation to regular prenatal and well-child visits, and their children, too, were screened at ages one and two.

Over the course of the experiment, nurses completed an average of nine visits during pregnancy and 26 visits in the two years after birth. Typically, nurses were scheduled to visit women once a week during the first month of enrollment, and then every other week until the baby was born. For women in the second group, weekly visits were scheduled for the next six weeks to help the mother and the newborn adjust, after which time visits occurred every other week until the baby was 21 months old. For the last three months, visits were monthly.

The results of this experiment were very promising, though only among low-income mothers. "For example, during pregnancy, nurse-visited women improved their diets and made a substantial cut in the amount they smoked," Olds said. "Their children were born with higher birth weights and the mothers made better use of local services and had a more extensive network of social support by the end of their pregnancy. We also saw an 80 percent drop in child abuse and neglect, which was a very nice surprise."

Follow-up studies found that subsequent pregnancies dropped 42 percent among women who had received the full course of nurse visits through the second year, while rates of high school completion and employment increased. "Evidently, the women were learning their lessons and taking steps to better their lives and the lives of their children," Olds said. One surprising finding was that middle-income women who had enrolled in the program showed very few benefits from the interventions in comparison to middle-income women in the control groups.

Fifteen years after the last woman graduated from the program, Olds and his colleagues from the University of Rochester, Cornell University, the University of Denver, and the University of Colorado revisited the children and found that the program had benefited these children in significant ways far beyond their toddler years. At the time of the assessment, the then-adolescent children had run away less than their peers who had been in the control groups, had fewer arrests, convictions, and parole violations, fewer sex partners, smoked fewer cigarettes per day, and drank alcohol less frequently. Their parents

reported that the children had fewer behavioral problems related to the use of alcohol and drugs.[4]

"This is a remarkable finding," said Shay Bilchek, a former Justice Department official who oversaw youth violence prevention programs and who is now the executive director of the Child Welfare League of America in Washington, D.C. "It's one thing to see positive outcomes a year or two after an intervention, but to see these kinds of benefits 15 years later says to me that we as a nation should be putting the resources into making this program available to every low-income first-time mother in this country."

On to Memphis and Denver: Repeated Tests in Different Settings

Although the initial Elmira results were promising, Olds believed that his study, while well-designed, was limited by the population of women he had studied. "I firmly believed that we needed to replicate the Elmira work in a bigger, preferably urban area and in a different ethnic population," said Olds, who settled on Memphis and surrounding Shelby County as the next place to test the Nurse Home Visitation Program.

Besides using a different test population, the Memphis trial was designed to simulate what Olds considered to be a more "real-world situation." The study would rely on Memphis's system of public health nurses, who would receive training from Olds and his colleagues but would then administer the program with minimal input. An unexpected complication—a severe nursing shortage—led to high staff turnover, but this was the sort of problem that would affect the program if it ever expanded to a national scale.

The Memphis study began in June of 1990, and over the next 15 months 1,159 women who were less than 29 weeks into their pregnancy were recruited from the Regional Medical Center at Memphis. Enrollment was restricted to low-income mothers-to-be who met two of three criteria: they were unmarried, had not graduated from high school, or were unemployed. "We wanted to concentrate our resources on the highest-risk families," Olds explained. Once again, the women were stratified according to age, race, and income status, and were randomly assigned to a treatment or control group.[5]

Perhaps not surprisingly, given the less-controlled conditions, the results from the Memphis trial were not as overwhelmingly positive

as they were in Elmira. On the plus side, women receiving home visits from nurses were healthier at the end of their pregnancies than those women in the control group, and children whose mothers received nurse visits suffered fewer injuries than did the children in the control group. Women receiving nurse visits also had fewer subsequent pregnancies, replicating the finding in Elmira.[6]

Unlike Elmira, the Memphis study did not find that the birth weight of newborns increased, and did not measurably reduce child abuse and neglect, probably because the rate of state-verified cases was too low—3 to 4 percent in the target population. Nor did it produce a significant drop in smoking, though this probably resulted from the fact that so few women in the Memphis trial smoked. In general, the improvements seen in the Memphis study were not as large as in the Elmira experiment. The most likely explanation for this is that the Memphis study did meet Olds' objective of representing a more real-life, less strictly controlled situation. "The fact that the Memphis study did replicate the meaningful reductions in childhood injuries that we saw in Elmira was very exciting, because it means we can allow some latitude in how the program is implemented and still expect positive results," Olds said.

This last point is particularly important. "What we've seen with many social programs aimed at improving parenting and child outcomes in at-risk populations, including some of the other home visitation programs, is that they work very well under hothouse conditions, where quality control is tight, where the developers are involved in every step of the implementation," said Ruby Takanishi, president of the Foundation for Child Development in New York City. "But when these programs enter the real world, we usually see that the outcomes are far less impressive. I think that's why the results from David Olds' work are so notable—there is enough quality control built into the program that it continues to generate positive outcomes in real world settings."

When reports on the Memphis study began appearing in the literature in the mid-1990s, they attracted the attention of many, including the Justice Department, who thought the results were strong enough to move the program out of the experimental stage. "We were quite impressed with the results on child abuse and maltreatment, because those are antecedents of adolescents getting involved in drugs and crime," Shay Bilchek said. "We secured funding under the auspices of Operation Weed and Seed and worked with David to set up six sites

in high crime, inner-city settings, including Los Angeles, Oklahoma City, and Oakland, California."

At about the same time, Olds was setting up yet another trial, this time in Denver, where he had relocated to join the faculty at the University of Colorado School of Medicine. In 1993, the Colorado Trust had invited Olds to talk about the Nurse Home Visitation Program. Impressed with the plan, officials from the university recruited him to create the National Center for Children, Families and Communities, with the goal of disseminating this program to 100 communities.

But before embarking on a national dissemination effort, Olds wanted to run one more trial of the program, in Denver, both to refine the curriculum and training methods further and to test one important question—is it necessary to use nurses instead of trained paraprofessionals, which include certified nurses aides, community health care aides, physician assistants, and social workers? "Using nurses is expensive, and we wanted to address the criticism that we had heard that this program was too costly, that we could save money by using paraprofessionals without sacrificing efficacy," Olds said.

Preliminary results from the Denver randomized study, which ran from March of 1994 to June of 1999 and included 735 low-income first-time mothers, answered this criticism. Nurses were able to complete more visits than paraprofessionals, and the turnover among paraprofessionals was nearly twice that of nurses. In addition, paraprofessionals were less comfortable sticking to the defined home-visit guidelines and intervention strategies, a factor that would not bode well for obtaining the best outcomes.[7] Indeed, further analysis of the study data, which was presented in April 2001 at the Society for Research in Child Development meeting, has shown that nurse visits produced better outcomes than did paraprofessional visits.[8]

Three Home Visiting Programs

There are, of course, other home visitation programs with similar aims—to improve the lives of children by giving them a better start on life. According to a 1999 report by the David and Lucile Packard Foundation on home visitation programs,[9] the number of young children served by such home programs more than doubled in the 1990s, from about 200,000 in 1993 to over 550,000 in 1999. "Much of this growth, we think, has resulted at least in part because of the well-documented findings of the Nurse Home Visitation Program research effort," said Deanna Gomby, deputy director of the David and Lucile

Packard Foundation's Children, Families, and Communities program and coauthor of the 1999 study.

Hawaii's Healthy Start Program

Hawaii's Healthy Start Program is the oldest continuing home visitation program. Started in 1975 as a single-site test on the island of Oahu, the program has now been adopted statewide with an annual budget of $6 million. It has also been modified and adopted by Healthy Families America, a home visitation program being disseminated by Prevent Child Abuse America, based in Chicago.

Healthy Start's goal is to identify vulnerable families before their day-to-day stresses, isolation, and poor parenting skills lead to abusive and neglectful behavior toward their children.[10] Trained paraprofessionals recruited from the community visit at-risk families for at least three years after the birth of their child. Visits are weekly at first and gradually decrease to quarterly as family functioning improves. Home visits focus on establishing trusting relationships with family members and then with imparting problem-solving skills. In addition, home visitors help families connect to various social services agencies when appropriate, and make sure that the children in the families receive appropriate medical care and nurturing parenting.

Evaluations of the first few Healthy Start projects were problematic. There were no control groups, for example. Nevertheless, abuse and neglect rates and stress levels among visited families were lower after the families participated in the program when compared to data from historical records. Even with these limited results, the Hawaii state legislature decided to expand the program statewide beginning in 1989.

With funding from The Robert Wood Johnson Foundation, the Annie E. Casey Foundation, the David and Lucile Packard Foundation, and the U.S. Department of Health and Human Services, the state conducted a more thorough, controlled evaluation of the program in 1994 and 1995. The evaluation found that the program was not implemented uniformly across the sites studied, retaining families in the program was difficult (attrition was as high as 50 percent after one year), and home visits rarely occurred as often as planned.

Although the effects of the program were modest after one year, at some sites the benefits increased in subsequent years. For example, mothers in the home visiting group were less likely to hold jobs at a one-year follow-up than were those in the control groups, but were

more likely to be employed two years after completing the program. Overall, however, there were few differences between families who had received home visits and those in the control group who had not.

Healthy Families America

Before the results of the more thorough evaluation were in, Prevent Child Abuse America, with funding from the Ronald McDonald House Charities, decided to take Hawaii's Healthy Start Program and make it the basis of a nationwide effort to reduce child abuse in at-risk families. Thus in 1992 was born Healthy Families America, which is not so much a defined home visiting program as an initiative to help local communities create their own home visiting project based on some shared principles. "We're not a curriculum-based program," said Kathryn Harding, director of the National Center on Child Abuse Prevention Research, the research arm of Prevent Child Abuse America. "Instead, we help communities create their own programs based on 12 critical elements, such as the need for programs to start prenatally or when the child is first born and the need for services to be culturally relevant. In addition, our program stresses the importance of integrating the project with existing social support networks and social services organization in each community. We believe that the role of Healthy Families America is not to be an island but to enhance the existing service provider networks by adding a home visiting component."

While Olds stresses uniformity across program sites—staying faithful to the model—as a critical key to obtaining the best outcomes possible, Healthy Families America takes the opposite stance. "This is not a monolithic approach but, rather, a commitment to a set of principles," Harding said.

Because of that, evaluation of the program has been difficult. Harding's assessments have found that few of the programs actually follow the organization's guidelines or integrate themselves into the local public health systems in their communities. Despite this problem, some assessment has been possible. The program's effect on child abuse has been mixed. In some cases, the incidence of child abuse among mothers receiving home visits appeared lower than the rate for a comparable population, but other studies found no difference. More promising, however, is that participating families showed improvement in the quality of parent-child interactions and parental skills, and made more effective use of health care services.[11] "The nature of the Healthy Families America initiative has made it difficult to accu-

rately assess the impact of the program, but I think the data we do have suggest that intensive home visiting does have a positive impact on families," Harding said.

The Parents as Teachers Program

Begun in Missouri in 1981, Parents as Teachers is a home visiting program whose goal is to have healthy, well-developed children who are ready for school. The program uses trained and certified parent educators—preferably educators, health care workers, and social workers—to make monthly visits, starting before, but no later than six months after, birth and continuing for the first three years of the child's life. The parent educators strive to increase parents' ability to nurture their children and prepare them for success in school. Group meetings supplement the home visits by allowing parents to share insights and build informal networks.

An assessment conducted by SRI International in Palo Alto, California, suggests that the Parents as Teachers program should be judged as popular but largely ineffective.[12] According to the study, parents did not show an increase in parenting knowledge or parenting attitudes despite these elements being the main focus of the program. There were, however, small but inconsistent advances in children's cognitive development; the children in the Parents as Teachers program may have enjoyed a little more than a month advantage over their peers who were not in the program. Children of Spanish-speaking Latina mothers, in particular, showed the most benefit from the program.

Since this evaluation was completed, the Parents as Teachers program has changed in several ways. The most significant change is the development of a new curriculum that reflects the latest research about how the brain develops during the first three years of life. The new curriculum, which will require more home visits by the certified parent educators, is based on neuroscience principles linked to infant and toddler development that have been translated into language that parents can understand and apply. It became the standard curriculum used by the Parents as Teachers program starting in 1999.

Limitations and Promise of Home Visitation

While it is hard to find fault with the good intentions that every home visitation program has at its core—to use home visitors to help improve the lives of at-risk children and their parents—it is equally

difficult to deny the fact that the majority of these programs do not work as advertised. “Home visitation programs are really empty vessels into which you pour many, many different curricula and different philosophies of working with at-risk families,” said the Packard Foundation’s Gomby, who has spent a substantial amount of time over the past decade assessing these programs. “But aside from the work that David Olds has done, I think that most of these programs have neglected issues of implementation in real-world settings and of quality control in ensuring that the programs are actually carried out as designed. And that, I believe, is the biggest reason that we see the majority of these programs do so poorly when critically evaluated.”

One problem, Gomby says, is that national program offices often put all of their resources into developing curricula and getting their programs adopted by various localities, and pay little attention to issues such as staff training and pay and how to retain families throughout the entire course of any given program. “Remember, these programs are trying to change people’s lives with what amounts to at most 50 hours of contact spread out over a few years,” Gomby said. “So when a significant number of the families don’t even get that much attention, then perhaps it shouldn’t be a surprise that the programs don’t show much benefit.”

In addition, assessments indicate that home visitation is not something that should be offered to all families, at least not with the goal of improving children’s lives. “I think the data show that at best most of these programs are effective in helping only very narrow slices of the population, and, as such, we shouldn’t be spending our limited resources trying to reach all women and all children who may be at risk,” Gomby said.

That narrow slice, says Gomby, includes the most at-risk women and children: poor, single, and first-time mothers who often do not have access to the same social supports available to middle- and upper-income mothers. This is the very population that the Nurse Home Visitation Program serves and, in part, explains why it has been successful.

Gomby adds another reason. “The positive results that the Nurse Home Visitation Program generated show that when you work hard to maintain quality control, retain families in the program, and test various components of your program under rigorous conditions and then make changes when appropriate, you can have a measurable impact on the lives of children and their mothers,” she concludes. “I

think that it's also clear that we need to have realistic expectations about what these programs can accomplish. They are not a panacea, but they can make a difference when done right."

Olds wholeheartedly agrees with Gomby's remarks, "That's why we work so hard to make sure that the program is implemented correctly, that there's continual assessment and feedback to keep the local programs on track," he said. In fact, Olds and his colleagues have designed an internet-based information system to improve monitoring and provide more rapid feedback for local programs.

That is also why Olds has been reluctant to see the Nurse Home Visitation Program spread quickly. Four years ago, when the Oklahoma state legislature approached him about implementing the program statewide, he initially balked at the idea. But when it became clear that the state was going to proceed with or without his help, he reluctantly agreed to train the first group of nurses who would then act as trainers for the 240 nurses that Oklahoma planned to hire to blanket the state. Since then, he and his staff have kept close tabs on the program, providing regular feedback to help keep the effort on track and true to the curriculum.

What does Olds think of the program now? "Under the circumstances, they've done very well," he said. "Getting 240 nurses hired and trained and in place was an amazing feat, and I think the administrators' dedication to doing this right, to sticking to the curriculum, to maintaining quality control has been tremendous. I also think that the enormous amount of political support for the program and realistic expectations that people there have for the program have made it easier to do things correctly."

By the end of 2000, the 240 nurses in the Oklahoma program were seeing 7,000 clients, with hopes of adding a couple of thousand more women to the program. Annette Jacobi, the program director, believes that while it is still too early to tell if the program has had a positive impact on children, it is getting good results in terms of reducing smoking among pregnant women and problem pregnancies overall. "We also think we're seeing a drop in abuse and neglect among our clients, but we haven't had the positive effect we'd hoped for in terms of reducing subsequent pregnancies," she said. In addition, she said, the program has had a difficult time getting Native American women to participate.

Despite Oklahoma's success in getting its program up and running quickly, Olds would rather see states follow the 10-year adoption

timetable set by Colorado. "I think that rapid dissemination should be, and will be, the exception rather than the rule, if for no other reason than most states won't have the resources to commit to ensure a high quality of implementation over a short time frame," Olds said.

One thing Colorado does share with Oklahoma is good political support for the program. But while that support came directly from the legislature in Oklahoma, it has been a grassroots effort—led by a group of lawyers—that is driving the process forward in Colorado. Jennifer Atler, a former corporate lawyer who gave up the boardroom to become director of the Denver-based nonprofit organization Invest in Kids, says her organization exists to spearhead the local adoption of what in Colorado is called the Nurse-Family Partnership program. "Believe it or not, a group of lawyers and other concerned citizens became aware of David's work and were so impressed that we formed Invest in Kids to build local support for this amazing program," Atler said.

Atler and her colleagues worked hard on two fronts: convincing the state's governor and legislature to commit funds from its share of the national tobacco settlement, and to generate local interest and support for the program. By all appearances, they were successful. Colorado made a commitment to increase funds for the program steadily through 2008 when the amount will reach $17 million—19 percent of the state's tobacco settlement funds in that year. The plan is to add between three and five new sites annually to the base of twelve sites that existed in 2000.

Lessons Learned

The problems facing poor first-time mothers, many of them single, at times seem so large as to be insurmountable, and it is alarming that so many programs designed to help these women and their children do not produce the intended results. Yet the trial in Elmira, and to a lesser degree the Memphis trial, found benefits for the mothers and children receiving nurse home visits. As Olds and his colleagues disseminate this program nationwide, with substantial funding from The Robert Wood Johnson Foundation, there are a number of important lessons to be learned from the successes and failures of home visitation programs.

QUALITY CONTROL IS ESSENTIAL FOR SUCCESS. Too many programs that work well in carefully controlled academic settings fail when transferred into the world at large, primarily because local imple-

mentations do not remain true to the original program design. One of the strengths of the Nurse Home Visitation Program has been the insistence of the program's developers that every community must follow the curriculum with only some room for adaptations that reflect local issues. Using a system of monitoring and regular feedback helps programs keep their nursing staff on target.

YOU GET WHAT YOU PAY FOR. The most positive results from any home visitation program have come when nurses are the home visitors. Yes, nurses are the most expensive home visitor option, but the available data from a randomized, controlled trial indicate that mothers and children visited by nurses experience more positive gains than they do when the visitors are trained paraprofessionals.

CONTROLLED, RANDOMIZED TRIALS OF HOME VISITATION PROGRAMS MUST BE A CRITICAL COMPONENT OF ANY DEVELOPMENT WORK. Retrospective analyses of many home visitation programs have failed to show much, if any, positive effect on the lives of mothers and their children. According to the authors of these assessments, the lack of scientifically designed and implemented trials has hindered meaningful analysis.

POLITICAL SUPPORT IS CRUCIAL. Home visitation is an intensive—and potentially intrusive—means of intervening in the lives of at-risk families, and as such it must have strong support in local communities. Building that support may take time and a substantial amount of effort, but it invariably eases the adoption of such programs. Good grass-roots political support also translates into realistic expectations for these programs.

Notes

1. "Yolanda Harris" is a pseudonym.
2. The ACT Assessment is a curriculum-based test for admission to college and university and an alternative to the SAT.
3. The Nurse Home Visitation Program is now called the Nurse–Family Partnership.
4. D. Olds, C. R. Henderson, Jr., R. Cole, J. Eckenrode, H. Kitzman, D. Luckey, L. Pettitt, K. Sidora, and J. Powers, "Long-term Effects of Nurse Home Visitation on Children's Criminal and Antisocial Behavior: 15 Year Follow-up

of a Randomized Controlled Trial," *Journal of the American Medical Association*, October 14, 1998, volume 280, number 14, pp. 1238–1244.

5. H. Kitzman, D. L. Olds, C. R. Henderson, C. Hanks, R. Cole, R. Tatelbaum, K. M. McConnochie, K. Sidora, D. W. Luckey, D. Shaver, K. Engelhardt, D. James, and K. Barnard, "Effect of Prenatal and Infancy Home Visitation by Nurses on Pregnancy Outcomes, Childhood Injuries and Repeated Childbearing," *Journal of the American Medical Association*, August 27, 1997, volume 278, number 8, pp. 644–652.
6. Ibid.
7. J. Korfmacher, R. O'Brien, S. Hiatt, and D. Olds, "Differences in Program Implementation Between Nurses and Paraprofessionals Providing Home Visits During Pregnancy and Infancy: A Randomized Trial," *American Journal of Public Health*, December 1999, volume 89, number 12, pp. 1847–1851.
8. D. Olds, R. O'Brien, D. Luckey, S. Hiatt, and C. Henderson, "Comparison of Pregnancy and Infancy Home Visitation by Nurses versus Paraprofessionals: A Randomized Controlled Trial," paper presented at the 2001 Biennial Meeting of the Society for Research in Child Development in Minneapolis, Minnesota, on April 19, 2001.
9. D. S. Gomby, P. L. Culross, and R. E. Behrman, "Home Visiting: Recent Program Evaluations—Analysis and Recommendations," *The Future of Children*, Spring/Summer 1999, volume 9, number 1, pp. 4–26.
10. J. D. Gray, C. A. Cutler, J. G. Dean and C. H. Kempe, "Prediction and Prevention of Child Abuse and Neglect," *Journal of Social Issues*, January 1979, volume 35, number 1, pp. 127–139.
11. D. A. Daro and K. A. Harding, "Healthy Families America: Using Research to Enhance Practice," *The Future of Children*, Spring/Summer 1999, volume 9, number 1, pp. 152–176.
12. M. M. Wagner and S. L. Clayton, "The Parents as Teachers Program: Results from Two Demonstrations," *The Future of Children*, Spring/Summer 1999, volume 9, number 1, pp. 91–115.