



Robert Wood Johnson
Foundation

The Story of **David Olds** and the Nurse Home Visiting Program



Grants Results Special Report
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Table of Contents

M is for the Model	3
More Than a Visit	4
Gestating the Model	6
Putting the Model to the Test	9
Elmira, N.Y.	10
Memphis, Tenn.	12
Denver, Colo.	14
Roll Out	15
Growing the Program	18
Appendix	20

M is for the Model

Motherhood, inspiration of myth and song, can be particularly daunting for low-income, first-time mothers. In 1977, David Olds, Ph.D., began developing a nurse home-visitation model designed to help these young women take better care of themselves and their babies. Nearly 30 years later, with support from the Robert Wood Johnson Foundation and others, the “Olds Model” has blossomed into the Nurse-Family Partnership, a nonprofit organization serving more than 20,000 mothers in 20 states across the United States. Today, despite decades of evidence confirming the efficacy of the program, as well as recognition at the highest levels, Olds continues to refine his model, still dedicated to helping mothers provide the many things their children need.



David Olds, Ph.D.

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On this clear, crisp January morning, the visit will happen inside a nondescript split-level home with an American flag displayed outside. The house is one of dozens in a development that has sprung up like so many others on the once-grassy plains of Colorado, bringing with it new roads lined with a familiar assortment of big-box stores and fast-food outlets. If you ever wondered what sprawl looks like, just drive north from Denver to Westminster (population 100,000 and growing) and you will get a good picture.

Julie Wilber, a registered nurse based at St. Anthony Central Hospital in Denver, has just made this 15-minute drive to visit her client, Leah, the 28-year old mother of Lance, who recently turned one. Dressed in a sweater, sleeveless down vest and corduroy pants, Julie could easily be mistaken for a friend or relative as she rings the doorbell, but the clipboard, stack of notes, and stethoscope poking out of her bag suggest there is more to the visit than a neighborly chat. Julie has been meeting regularly with Leah since June 2004, when Leah was 12 weeks pregnant, and the friendship that has developed over the ensuing months is evident the moment the door opens and the women hug.

Leah escorts Julie upstairs, opening the plastic safety-gate to the living room and apologizing for the mess, an apology Julie waves off. She's a mom, too, and knows exactly what it's like. Julie sits cross-legged on the carpeted floor, Leah takes a position across from her leaning against a couch, and Lance toddles around, between, and over both of them as they talk. Dressed in a blue and orange Denver Broncos T-shirt and jeans, and wearing an irrepressible smile, Lance is the just-walking, not-yet-talking definition of "all boy." Julie's bag has been on the floor beside her less than a minute before Lance has her stethoscope in his hands. "He's into everything," Leah says apologetically as she reaches to take the stethoscope from her son. Another knowing smile and no-worries wave from Julie.

After a brief discussion of Lance's diet—turkey sticks and Chef Boyardee ravioli are the newest additions—Julie shifts the conversation to the subject matter for this visit, topics carefully chosen to coincide with Lance's development. Taking a couple of blue pages out of her bag, she tells Leah that it is very important for her to take some time and honor the fact that she has successfully guided Lance through the first year of his life. Julie encourages Leah to answer the questions in a two-page "Mom's Memo," which will help her reflect on her accomplishments so far. A sample question from the memo: "What was it like the first time baby smiled at you?" Leah takes the pages and promises to fill them out before Julie's next visit.

Julie's second subject is "emotional refueling," making sure that Leah "takes time for me so I can take care of him," a sentence that Julie begins and Leah finishes, though it's obvious from Leah's wry smile that this is much easier said than done. Leah expresses anxiety about not getting anything accomplished around the house when she is busy following Lance around. "If I don't do the chores," she tells Julie, "I feel like, 'What did I do all day?'" When Leah mentions Travis, her husband of eight years, it is evident that she's not the only one asking this question, so there is definitely some tension around this point.

Julie gives Leah a journal and asks her to spend some time writing about her experiences and feelings. She tosses out a handful of ideas to help Leah get started. List five things you like about yourself. Pick three people you admire and explain why. Write how you feel about your mothering skills. Leah's brow furrows at this suggestion, and Julie immediately picks up the cue. "I'm very confident about you as a mother," she says.

Leah looks at her wide-eyed. “Really?” she asks as a number of feelings play across her face—self-doubt, relief, gratitude. Julie smiles and nods, and in that moment you can almost feel her confidence flowing directly into Leah. The visit will continue for the remainder of the scheduled hour, Julie will work her way through the prescribed topics until it’s evident that Lance is ready for his midday nap, but in a sense the day’s work was done in that one exchange.

Julie Wilber regularly visits 22 clients through the Nurse-Family Partnership, and in many ways, Leah is exceptional among them. She is married when most others are not; she is a college graduate when most others have barely made it through high school; and her family’s income (from Travis’ full-time job as an auto mechanic and her part-time work as a waitress), while modest, is higher than most.

What passed between these two women on a brisk January morning, though, is emblematic of the program, and it is one of the driving forces behind its success. While Julie Wilber, registered nurse, was providing her client with information and professional advice in this meticulously scheduled and scripted home visit, Julie was giving Leah confidence and hope. It is that scientific and that simple. And most important of all, it works.

Gestating the Model

“Give me a lever long enough and a fulcrum on which to place it,” said Archimedes, “and I shall move the world.” Three decades ago, David Olds decided to set his lever under the weighty institution of motherhood, and he has been laboring ever since to elevate the parenting skills of vulnerable young women across the United States. Help them become healthier, stronger mothers, his theory goes, and they will raise healthier, stronger children—strong enough to move the world in a better direction on their own.

Olds would probably blanch at such a description of his model—it’s both too sweeping and too simplified at the same time, and it omits his two favorite words: evidence based. In health care circles, he is well known for his scrupulous devotion to data, and when he speaks, he measures his words just as carefully. At the same

time, Olds is someone who flat out loves his job (he is professor of pediatrics, psychiatry and preventive medicine at the University of Colorado), and this gives the 57-year old “man of science” an almost boyish quality, especially when he talks about his model.

Long-Term Impact

New data from the 15-year follow-up in Elmira, N.Y., shows positive effects on nurse-visited families more than a dozen years after the visits were concluded. Some of the metrics of success (from pregnancy through child age 15) include:

- 56 percent fewer doctor and hospital visits due to childhood injuries through child age 2.
- 25 percent reduction in cigarette smoking by mothers during pregnancy.
- 48 percent less incidence of child abuse and neglect through child age 15.
- 69 percent fewer convictions of nurse-visited children at age 15.
- 83 percent increase in workforce participation by low-income, unmarried mothers by the time their child is 4 years old.

When others have written the history of Olds’ home-visitation model, they usually begin in Elmira, N.Y., where it was tested for the first time in 1977. The inspiration for what would become Olds’ life’s work, however, can be found in Ohio. Born in Ashtabula in 1948, Olds moved to Conneaut, Ohio, the following year and lived in the same house until he graduated from high school. Although he acknowledges that his father, Bob, had a drinking problem and changed jobs frequently, Olds has fond memories of these early years—until he turned 11. In that year, his parents were divorced, his father moved to Florida, and his grandmother, who had lived with the family, passed away. His devoted mother worked in a factory, providing for and caring for Olds and his sister throughout their childhood.

Looking back on that time, Olds sees a turning point. “I knew that I wanted to do something to help people,” he says, even though the 11-year-old David may not have fully understood why. In high school, Olds started to think about careers in journalism, medicine or even the clergy. “I had romantic visions of going off to India or some exotic place,” he confesses with a self-deprecating chortle. In 1965, he applied to Johns Hopkins University and was accepted with a scholarship to pursue a five-year B.S./M.S. program in international relations sponsored by the School for Advanced International Studies. He started the program in 1966.

By his sophomore year, however, Olds’ interest in international studies had waned. His desire “to help people” was moving much closer to home, literally. He started signing up for courses in developmental psychology with a focus on early infant attachment. “I think there is a part of me that has always wanted to recapture that sense I had of a happy family in my earliest years,” Olds says. When he officially changed his major to social and behavioral sciences, he forfeited the remainder of his scholarship and had to take a part-time job cutting grass for the city of Baltimore to pay his tuition. Clearly, this was not an easy decision to make, but Olds had no doubt it was the right one.



A visiting nurse, mother and toddler visit a park.

After graduation from Hopkins in 1970, he landed his first full-time job at the Union Square Day Care Center, three cramped rooms in the basement of a church in West Baltimore. The center served children ages 3 to 5, with roughly 15 to 18 kids in a room, supervised by a teacher and an assistant. Olds was the youngest teacher on the staff, which had a mix of veteran teachers, recent graduates and everything in between. One of his closest friends on the staff was an African-American woman named Pocahontas Wilkinson, or Pokie as her fellow teachers called her. (“You have to remember, we came out of the Sixties,” Olds says with a smile.) His experiences there, though brief, would play a significant role in propelling him towards his life’s work.

Right from the start, Olds says, he had the sense that some of his colleagues were approaching their work “as glorified baby-sitting, with not a lot of aspirations for the kids or their parents.” Most of the activities at the center were pure play. “I wanted the kids to have fun, but wanted to create more cognitive stimulation and structure for the kids,” he says, so he brought in a new curriculum, the Perry Pre-School program, which he had learned about while at Hopkins and which was being tested in Michigan. He also started inviting parents to come into his classroom during naptime so he could discuss their child’s behavior at school and talk about activities the parents could try at home.

While his colleagues looked on skeptically, Olds felt he was making progress with his new approach, but a couple of incidents offered painful reminders of how much work still lay ahead. Olds recalls one blue-eyed, blond 4-year-old boy who was being cared for by his grandmother. The child, who Olds describes as “a fragile boy with a sweet disposition,” communicated only with barks and grunts. In classroom meetings with the grandmother, Olds learned that the boy’s speech was so severely delayed because his mother was a drug addict and alcoholic, and had been using throughout her pregnancy.

Bobbie, another 4-year-old with thick glasses and a partially crossed eye, was always restless at naptime, Olds says. “He would be rolling around, half out of his cot most of the time.” On one occasion, Olds and Pokie tried to talk with Bobbie about this problem, and the boy fired back a string of expletives that stunned his teachers. Eventually Bobbie calmed down, and it was only then that Olds discovered why his young charge was so restless: at home, Bobbie would wet himself when he took naps, and his mother would beat him as punishment. Bobbie could not fall asleep because he was too afraid the same thing was going to happen here.

Olds began to develop a sense that his work at the center was futile. For many of the children in his classroom, irreparable damage had already been done. The best Olds could do there on a day-to-day basis was triage. The laissez-faire attitude of some of his colleagues further reinforced his feeling that the system was not inclined to expect more of these inner-city kids. And even though he was taking more courses in statistics and early development at Hopkins while working, Olds felt that he did not have the knowledge necessary to take this understanding and do something meaningful with it. He had to go back to school.

While still working at the center, Olds started to read books by Urie Bronfenbrenner, a professor at Cornell University who wrote about “human ecology”—the networks that form among parents, educators and others to provide care for children. He wrote letters in longhand challenging Bronfenbrenner on his theories, and to his surprise Bronfenbrenner wrote back. The scholarly correspondence eventually yielded an invitation for Olds to attend one of the professor’s lectures

in Washington. “He’s the reason I decided to go to Cornell,” says Olds, who entered the School of Human Ecology in 1972.

While Olds’ work at the Union Square Day Care Center ultimately drove him back to school, the hands-on experience in those cramped basement classrooms also made him impatient with a purely academic life. “I almost dropped out of Cornell,” he says, but Bronfenbrenner, who was Olds’ mentor by this point, counseled him to stay and get the Ph.D. in developmental psychology that Olds was working towards. So he stayed put, but in 1975, Olds took a part-time job at Comprehensive Interdisciplinary Developmental Services (better known by its unfortunate acronym, CIDS) where he could work more closely with children.

Based in Elmira, N.Y., CIDS conducted programs intended to prevent health and developmental problems in young children by providing them with screening services and then referring them for further evaluation and treatment. Olds says that he “doubted just how effective that kind of service might be and recognized immediately that their program was not set up to deliver really rigorous scientific results,” and this provided even more incentive to develop a program of his own. John Shannon, executive director of CIDS, gave him the go-ahead to develop a preventive program that could be studied rigorously. For some time, Olds had been thinking about a home visitation program, but now he felt certain that he knew all the elements that had to be present to ensure a positive impact:

- The program had to work with **first-time parents**, because this would provide the best chance of promoting positive behaviors before negative ones had taken hold.
- The program had to be conducted **in the home**, because this was where the vast majority of parenting occurs, and because it would not rely on parents traveling to a program site. (Olds’ experience in Baltimore spoke loudly here: the parents who needed the most help had been the least likely to show up for his parent group meetings.)
- The program would rely on **nurses as in-home visitors**, because the mothers would trust them to know about pregnancy and the care of babies, and prefer them to doctors, and because much of the necessary training for nurses would already be in place.
- The **visits would begin during pregnancy**, because negative influences on the prenatal environment can have long-term and possibly irreversible effects after birth. Starting at this point would also help build a bond between the visiting nurse and the parents before all the pressure of caring for a newborn begins. (“We didn’t want to stigmatize the mothers and make them feel, ‘You’re here because I’m not going to be a good parent,’” Olds adds.)

The program would have three major goals:

- To improve pregnancy outcomes by improving women’s prenatal health.
- To improve child health and development by reducing the amount of dysfunctional caregiving for infants.
- To improve the mothers’ life course by helping them develop a vision for their futures, plan future pregnancies, stay in school and find employment.

The basic elements of the Olds Model were in place. The young man who watched his family fall apart at age 11, and who set out on a path “to help people,” now had a plan to do just that.

Putting the Model to the Test

Before 1975 was out, Olds submitted a proposal to the Office of Maternal and Child Health of the U.S. Public Health Service to conduct a randomized control trial in the city of Elmira. It was rejected, which is not uncommon for first-time applicants, so he made some modifications and tried again, this time at the Office of Child Development at what was then called the Department of Health, Education and Welfare (HEW). Officials at HEW accepted the proposal and offered \$1.5 million to conduct a five-year study in Elmira. Olds turned the money down.

“I was able to map this out,” he recalls today with a touch of embarrassment, “but I didn’t really know how to actually put it all together.” How would the nurses be trained? What curriculum would they use? Olds knew the questions to ask, but he was concerned that he would not be able to pull together the answers quickly enough to conduct a trial that would produce meaningful results.

After withdrawing his proposal from HEW, he turned for help from advisers at the University of Rochester, which had a program in child health that Olds respected.

Advisers at Rochester helped him conceive a new proposal that included an entire year up front for planning, as well as a smaller pilot study that would give the model a six-month test run before a wider study was launched.

Olds calls his decision to reject the HEW offer and retool his proposal “the smartest decision I ever made in my life.” He went back to the office at the U.S. Public Health Service that had rejected his first proposal and presented his new plan. Officials there responded with enough money to fund the first two years of the plan as well as a promise to consider additional support upon a review of the results.



A visiting nurse goes over the visit's topics with a new mother.

This time, Olds enthusiastically accepted the offer and prepared to launch the first test of his model.

Two years later, the Robert Wood Johnson Foundation would make a grant to support continuation of the Elmira study. Ruby Hearn, the program officer responsible for this initial grant, had been working with officials within the Carter Administration to find a program that could positively influence maternal and child health. When she went to Elmira for a preliminary site visit and a closer look at Olds’ home-visitation model, she met Olds for the first time. “I was surprised at how young he was to be taking on such an ambitious project,” she says today, “but he was very impressive.”

Olds confesses to some surprise himself. “I was astonished,” he says, “that a major foundation would take a chance on a young person who had no track record and who was not affiliated with a major university. That initial Johnson grant was a god-send that solidified everything we have done since.”

Elmira, N.Y.

By the late 1970s, Elmira and the surrounding towns in Chemung County had been suffering from high unemployment for some time. The incidence of premature birth, infant mortality and child abuse at the time were among the highest in the state of New York, making the region a particularly (if sadly) appropriate testing ground for Olds' model. For the study, 400 families were selected from a population that was predominantly white, rural and hovering around the poverty level. Out of this group, about half were randomly assigned to nurse-visitation services and the rest were assigned to a control group that would receive transportation for prenatal and well-child care and the CIDS screening services for children, but no nurse visits.

This kind of study method is necessary to rigorously compare the effects of the program on the children and mothers receiving the home-visit services to those children and mothers who received the optimum that the community currently might offer through existing resources. Moreover, by providing some services to the control group, the study provides a conservative test of the nurse-visiting model.

For women in the study who would receive nurse visits, the program would begin during pregnancy, ideally within the first trimester. During the first month of visits, registered nurses would check in weekly with their clients, primarily to build a level of trust—an essential element if the young mothers were expected to heed the nurses' advice, especially in times of crisis. For the rest of the pregnancy, visits would be scheduled every other week.



A visiting nurse uses a doll to show a new mother techniques for caring for her child.

Once the baby was born, nurses would resume weekly visits and continue at this frequency through the next six weeks, often a trying adjustment period for any young family. After this, visits would return to an every-other-week basis until the baby's 21st month, when they would be scheduled monthly. The program officially ends at the baby's second birthday. For every phase—pregnancy, infancy and toddler—nurses had detailed guidelines for the care they were to give and the information they were to provide to the young mothers (and fathers whenever possible) in the study.

While the Elmira trial began enrolling women in 1978, the recruitment would not end until 1981. And of course it took another two and a half years to complete the study and gather the data following registration of the last participant. The first report on the trial was not published until 1986, but the early findings were remarkable. Within two years following the birth of the first child, the Elmira study started to generate results that showed nurse visits were having the desired positive impact. For example:

- In the group of low-income, unmarried teen mothers who did not receive nurse visits, the incidence of child neglect or abuse was 19 percent. In sharp contrast, among low-income, unmarried teen mothers who did receive visits, the incidence was 4 percent.

- Nurse-visited mothers who were smokers smoked 25 percent fewer cigarettes over the course of their pregnancy than did smokers in the control group.
- Nurse-visited mothers who smoked cigarettes also had 75 percent fewer pre-term deliveries than did women in the control group who smoked.

Years before these findings were published these early promises of success began to attract attention outside Elmira. In 1979, Olds says, he was contacted by representatives of the Carter Administration who were interested in replicating the program. While the lure of federal support had to be strong, Olds demurred.

Unlike his previous rejection of government funds, however, his concerns were not with his own ability to administer a well constructed program. Looking to reduce costs, administration officials were already suggesting modifications in the program—e.g., using paraprofessionals instead of registered nurses for the home visits—and Olds was not ready to tinker with a design that, to his mind, still required more thorough testing.

This would not be the last time that “fidelity to the model” would be a guiding principle in Olds’ work.

What the Numbers Cannot Say

While the data from the Elmira study confirm the positive impact the nurses had on the lives of the women and children they visited, it may inadvertently paint a picture that is as clean and neat as a computer printout. Rarely was this the case, and there is no more dramatic example of how raw the picture could be than the story of Bonnie, an Elmira mother, and Stacy, the nurse who visited her. (While names have been changed to protect the privacy of the individuals in this story, the details are based on an actual case.)

Bonnie was 17, and her “home” was a dirt-floor basement apartment that was infested with roaches. She drank, smoked, was frequently in trouble with the law, but most important of all, she was pregnant. Stacy, a registered nurse who began visiting regularly with Bonnie, asked her if she would consider stopping smoking. “This baby’s taken everything else away from me,” Bonnie spat back referring to her swollen belly. “It’s not going to take my cigarettes.” She threatened to slap the nurse across the face, and given that she had already broken her mother’s ribs in a fight, it was not a threat to be taken lightly.

Bonnie had been tortured as a child and had cruelly mistreated babies entrusted to her for baby-sitting jobs, and while this might have appeared as one more indication that she would be a disaster as a mother, it actually turned out to be her saving grace. During one visit, she broke down and confessed, “I’m afraid I’m going to do that to my own baby—especially if it’s a crier,” and

for the first time Stacy felt that she could help—because when Bonnie revealed her fear, it was a cry for help.

During pregnancy, before the baby was even on the scene, Stacy asked Bonnie whom she would call for help if, when she returned home with her baby after delivery, the baby was crying inconsolably at night. Bonnie had no idea. After some probing by Stacy, Bonnie said a neighborhood “grandma” (not really related) would help. Stacy asked Bonnie to write down this woman’s phone number and tape it up on the wall so she would be prepared when she needed help, and she suggested some other strategies to help Bonnie cope with situations that she was worried about.

Bonnie’s baby was born prematurely, but she dutifully visited her child in intensive care every day. When the baby was discharged from the hospital, Bonnie moved in with the neighborhood “grandma” rather than return to her basement apartment so the baby could be raised in a safer environment. Even the baby’s father, who had been absent until this time, started participating in the home visits, and became deeply invested in his child. Bonnie and her boyfriend managed the care of their child remarkably well in spite of overwhelming odds against them. Today, her child has graduated from high school and avoided many of the difficulties experienced by her mother. Had Stacy not become a part of Bonnie’s life, such a happy ending is difficult, if not impossible to picture. It is also an outcome that numbers alone cannot describe.

Memphis, Tenn.

While the results in Elmira were encouraging, Olds and his team were not ready to assume that success in a white, rural region would automatically be duplicated in urban settings and in communities of color. As the New York test data continued to build a case for the model, Olds assembled a team to identify the best location for a second study working with inner-city, African-American families.

Beginning in 1984, the team considered every major metropolitan United States city with a population of 250,000 or more. Enormous cities such as New York, Los Angeles and Chicago were quickly ruled out because their very size created too many complications from the standpoint of coordinating research within the health care delivery system. For a while, it appeared that Philadelphia would be the best site, but then the team took a closer look at Memphis.

Like Elmira in the late 1970s, Memphis in the mid-1980s was a city with considerable room for improvement in the field of infant and maternal care. Rates of infant mortality and morbidity were among the highest in the nation. Rates of pre-term delivery and incidences of unusually low-birthweight babies equaled those of larger cities.

It would be another factor, however, that would ultimately swing the balance in Memphis' direction. For the inner-city, low-income women who would be prime candidates for the study, Olds says, "a single clinic managed registration for prenatal care. Women either remained at that clinic or were referred to neighborhood health centers for their care—and they all delivered in the same hospital."

For pediatric care, all children in low-income families were seen in the same system of neighborhood health centers and all children were taken to La Bonheur Children's hospital for emergency care and hospitalizations. Where research management was concerned, the team that would supervise the study could hardly have asked for better conditions.

Of the \$7 million needed to fund the study, the Robert Wood Johnson Foundation contributed roughly half. Eight other funding sources¹ combined to cover the rest of the budget. Olds' team identified 1,139 African-American women for the test of the prenatal phase of the program and 743 to be followed after delivery for the test of the infant and toddler phase, again with families randomly assigned to the program or to a control group. For the postnatal phase of the study, twice as many women were assigned to the control group as the nurse-visited condition to reduce costs of the research.

By 1991, the next study of nurse home visiting was under way. While the study of the program rolled out in Memphis, Olds remained in New York, monitoring new data from Elmira and drafting a proposal for additional research that would take another look at families in the Elmira study when the children reached age 15. (In 1992, the National Institute of Mental Health would accept Olds' proposal and provide the funding.)

¹ National Institute for Nursing Research (National Institutes of Health)
Bureau of Maternal and Child Health, (Department of Health and Human Services—DHHS)
Administration for Children and Families (DHHS)
Office of the Assistant Secretary for Planning and Evaluation (DHHS)
National Center for Child Abuse and Neglect (DHHS)
The Carnegie Corporation
The Pew Charitable Trusts
The W.T. Grant Foundation

Early results from the Memphis trials were as promising as the Elmira data.

- Nurse-visited women had 23 percent fewer hypertensive disorders in pregnancy than did women in the control group.
- Nurse-visited children had 80 percent fewer days of hospitalization for injuries or ingestions in the first two years of life as compared to the control group children.
- Mothers in the home-visited group had 23 percent fewer pregnancies by the first child's second birthday, and where a second pregnancy occurred, there was greater spacing between the first and second pregnancies compared to women in the control group.

Once again, Olds reports, he received inquiries about replicating the program in several other communities. Given such strong indications that the model's success was not tied to a particular race or geographic setting, it may have appeared to many interested observers that the moment for expansion had arrived.

But not to David Olds. From his perspective, there were still significant questions to be addressed. Elsewhere in the United States, there were similar home-visiting programs that used paraprofessionals instead of registered nurses. Olds had already heard suggestions that this approach would be an effective way to reduce the program's cost. But could anyone be certain that paraprofessionals would bring the same skills and generate the same level of trust as registered nurses? And even though positive results with Caucasians and African Americans were encouraging, this still left out a large portion of the U.S. population: Hispanics.

Back then, in the mid-1990s, just as he would in 2006, Olds preferred to move slowly, deliberately and always with fidelity to the model. Expansion would have to wait. There was more testing to do.



Mothers are grateful for the assistance they receive from visiting nurses.

Denver, Colo.

In January 1993, the Colorado Trust invited Olds to speak to its board of directors about his home-visiting model. After Olds shared the latest figures from Elmira and Memphis, he was asked where he intended to field his next study. The location was still up in the air, Olds told them, but the purpose of the third study was clear: Olds wanted to put the paraprofessionals-versus-nurses question to a rigorous scientific test. The board asked how much such a study would cost. Olds estimated \$7 million and added that it would probably take another four years to raise these funds.

The Colorado Trust came back with the money in four months, and the study Olds envisioned had found a home in Denver. (Olds himself also made Denver his home, relocating in 1993 from Rochester, N.Y.)

The basic format would be similar to Elmira and Memphis, but with two significant differences. In Colorado, not only would there be a control group (receiving no visits) and a registered nurse-visited group, there also would be a group visited by paraprofessionals—caregivers who were expected to have a high school education but no bachelor’s degree or any college preparation related to the tasks at hand. The study would also be Olds’ first chance to test his model with Hispanics, who were heavily represented in the Denver metro area.

By June 1995, Olds’ team had randomly assigned 735 first-time mothers into roughly equal groups—control, paraprofessional-visited and nurse-visited. Nearly half (46 percent) were Hispanic. A model founded on the principle that registered nurses were best qualified to conduct home visits was ready for its third and perhaps most crucial test.

Over the past two decades, the number of home-visiting programs had proliferated, and the use of paraprofessionals was growing rapidly. (In 1999, the journal *The Future of Children* would estimate that as many as half a million children were enrolled in six large-scale home-visiting programs, and five of these used paraprofessionals. The Olds Model was the sixth.)

The results of the Denver study, published in *Pediatrics* in 2002, confirmed Olds’ suspicions. When nurse-visited mothers and children were compared to their counterparts in the unvisited control group, there were important differences.

- Nurse-visited mothers were more likely to enter the workforce.
- They had fewer pregnancies before the first child’s second birthday.
- Nurse-visited children born to mothers who were more psychologically vulnerable had better language development and ability to control their behavior at ages 2 and 4.

In contrast, when paraprofessional-visited mothers were compared with the control group, there were virtually no differences. These visited mothers interacted better with their children and showed some reported reduction in psychological distress, but those were essentially the only measurable improvements.

Having put three large-scale tests into the field, invested millions of dollars in research, and devoted nearly 20 years to scrutinizing the data, David Olds was finally ready to consider more rapid and widespread deployment of his model. He would not have to wait long.

Roll Out

In 1991, the U.S. Justice Department launched “Operation Weed and Seed,” a nationwide initiative to attack gang activity, drug abuse and violent crime at their roots. Subsequently, in her tenure as U.S. attorney general, Janet Reno was very interested in the prevention side of her mission, and given the track record the Olds Model was building for fostering stronger, healthier families, Reno’s department saw an opportunity for long-term prevention. In 1996, officials from Justice approached Olds and proposed an expansion to six more cities: Los Angeles; Fresno, Calif.; Oakland, Calif.; Clearwater, Fla.; St. Louis; and Oklahoma City.

Clearly, such rapid growth would be an expensive enterprise, but the Justice Department was not offering funding anywhere near the scale of the Colorado Trust. Instead, the department proposed allocating \$25,000 per city as seed money. These funds, the department believed, would attract local organizations that could leverage them into the monies necessary to administer a nurse home-visiting program. Proceeding required a leap of faith—not exactly characteristic of Olds to date—but he approved of the plan.

Above and Beyond

The services nurses perform in the Nurse-Family Partnership have been carefully defined over the years thanks to the constant refinement of the Olds Model. But there are some things the model just never planned on. (Once again, names have been changed to protect the privacy of program participants.)

In Greensboro, N.C., Sherry, a registered nurse, was home-visiting a particularly young client named Alice. One of seven children, Alice had become pregnant as a teenager and at 14 was caring for her baby while still living at home. Not even old enough to drive, Alice needed someone to take her almost every time she had to transport her baby.

When nobody from her family was available to drive her to a WIC Program (a supplemental nutrition program for Women, Infants and Children) appointment one morning, Alice called Sherry to ask for a ride. Seeing it as an opportunity to spend some more time with her client, Sherry agreed.

In the car on the way to the appointment, Sherry asked how things were going, expecting little more than a perfunctory “Fine,” but Alice had startling news: her house had no power. “For how long?” Sherry asked. “A week,” Alice replied, not overly upset.

Sherry, on the other hand, instantly saw a host of problems and started asking questions rapid-fire: “How have you been eating? How have you been doing your

homework? When will the power go back on?” To the last question Alice could offer only an uncertain shrug.

After dropping Alice at her WIC appointment, Sherry found a phone and placed a call to the local Department of Social Services. Sorry, a voice at the other end of the line said, we can not see you today.

Miffed but not yet out of options, Sherry placed her next call to the House of Refuge, a community nonprofit that assists low-income families who run into difficulty paying for food and vital services. Better luck here: the nonprofit was glad to help, but they could only cover half of the outstanding electric bill.

Fortunately, Sherry had one more card up her sleeve. She called Project Homestead, another nonprofit with services similar to the House of Refuge. They committed to cover the other half. When Sherry returned Alice to her house, she let Alice tell her father that the power would be restored the next day.

Up until this point, Alice’s father never had much to say to Sherry—having a teenage mother in his home along with six other children had not made him more agreeable, and accommodating this frequent visitor, no matter how well-intentioned, was just more hubbub. But he could not let this moment pass unremarked. “A lot of people say they will help you,” he said to Sherry, “but you’re the one that really did.”



A visiting nurse joins a mother and daughter on an outing.

“I was okay with this,” Olds explains, “because it forced only committed organizations to get involved.” And so in 1996 the wheels started turning to roll out the nurse home-visiting model in California, Florida, Missouri and Oklahoma.

In 2006, the program was operating in every county in Oklahoma and a 2005 evaluation of the program there found that the rate of infant mortality among mothers having first babies in the program is less than half the rate among other first-time mothers, in spite of the fact that mothers in the nurse-home visiting program are younger, poorer and more likely to be unmarried.

At about the same time—1996—says Olds, “a group of lawyers walked through my door and said ‘We’re here to help you.’” The group was led by Bill Rosser, an advocate for the disadvantaged, and Bob Hill, both prominent Colorado attorneys who were interested in children’s issues. The group had been looking for programs that benefited children that they could bring to Colorado and “scale up.” It was in New York that they learned of a program that was already delivering results in their own backyard—Olds’ program.

The conversations that began in Olds’ office led to the formation of a new nonprofit, Invest in Kids, as well as an initiative to divert monies from the

state’s piece of the national tobacco settlement agreement to fund replication of Olds’ program in Colorado. By 2000, these funds totaled \$19 million per year, and two years after that, nurse home visits were underway in more than 30 counties across the state of Colorado.

While plans were percolating in Colorado, a similar story was being written in Pennsylvania. Then Governor Tom Ridge and his wife, Michele, were interested in finding programs that would prevent crime and delinquency. Clay Yeager, who was executive director of the Pennsylvania Governor’s Community Partnership for Safe Children, was assigned the task of bringing such programs to the Keystone State.

Yeager had already heard about the impressive results yielded by the Olds Model and he invited Olds to make a presentation. Using \$20 million in federal TANF (Temporary Assistance for Needy Families) funds, Yeager helped implement the nurse home-visiting program in 20 communities across Pennsylvania.

In 1999, the Robert Wood Johnson Foundation awarded a \$10-million grant to support a planned six-year national rollout that established the goal of reaching 100 communities and 10,000 families. “It’s because of David’s focus, persistence and standards,” says Senior Program Officer Jeane Ann Grisso, M.D., when asked to explain why the Foundation was willing to commit such a large level of support. “He invented the phrase ‘fidelity to the model.’ When we began to fund him for replication and dissemination, he insisted that close attention be paid to the intensity and frequency of visits, the quality of nurse training, and the quality of care delivery.” One year later, Colorado passed the Nurse Home Visitors Act, allocating \$75 million over 10 years to support the program in that state alone.

With such significant sums now earmarked for replication, new challenges emerged—to attract and train new staff, to ensure quality in each new site, and to find efficiencies and economies of scale for a program running in hundreds of sites simultaneously.

To meet these challenges, the Nurse-Family Partnership (NFP) was incorporated in 2003, and a national office was established in Denver. The nonprofit organization assumed responsibility for quality control, training nurses, monitoring existing programs and ensuring accuracy in reporting and coordinating the development of additional sites. It received start-up funding capital from the Edna McConnell Clark Foundation.

By the end of 2005, NFP was operating in 20 states, serving 20,000 families, and plans to more than triple the program’s presence in New Jersey were already on the drawing board.

“The Foundation’s major investment in 1999,” Olds explains, “propelled our growing momentum by ensuring that their earlier investment would yield returns in future public investments in the NFP and in saving lives.”

A happy family can be one result of the Nurse Home Visiting Program.



Growing the Program

Clay Yeager, who helped bring the program to Pennsylvania in the late 1990s, was named president and CEO of NFP in 2005. While David Olds continues to refine the model through research, the challenge of growing the organization has been handed to Yeager, and it is not a small one.

Nurse-Family Partnership is marketing its “product” using a business approach to replication, according to Yeager. See its [Web site](#) for more information on new developments. The current business plan calls for growth to 38 states by 2010 (from the current 20) and expanding NFP’s service to 34,000 families (from 20,000). This will entail hiring and training nearly 1,200 additional nurses and helping new sites find more than \$80 million to operate all the programs.

Plaudits

In its 1994 report, *Blueprints for Violence Prevention*, the Office of Juvenile Justice and Delinquency Prevention (within the U.S. Department of Justice), evaluated 600 programs to identify those that most contributed to violence prevention. The Nurse-Family Partnership was one of 11 programs cited by the report for its exemplary effectiveness.

In July 2003, the President’s New Freedom Commission on Mental Health issued a report entitled, *Achieving the Promise: Transforming Mental Health Care in America*. The report identified the Nurse-Family Partnership as a “model program” for “intervening early to prevent mental health problems.”

A RAND Corp. study, *Early Childhood Interventions: Proven Results, Future Promise*, released in January 2006, identified Nurse-Family Partnership as an early childhood program that “can return more to society in benefits than [it] costs.” (Another RAND study conducted in 1998 estimated that, over time, the Elmira program would save as much as \$4 in government spending for every \$1 in program costs.)

At a time when government officials at all levels are cutting funding for social services, nobody needs to remind Yeager how much he is swimming against the tide. The steady barrage of depressing headlines does not particularly trouble him, however, because Yeager believes his real battle is with a much larger foe: a long-standing bias buried deeply within the American psyche. “If given the choice between prison and schools,” he explains, “Americans will always choose prisons.”

The pessimistic words are not his own, having been uttered long ago by Thomas Jefferson. And they do not paint a pretty picture for a nonprofit executive who must help attract tens of millions of dollars for prevention when punishment remains a national priority.

But Yeager remains a happy warrior because he knows he will not be fighting this battle alone, and his strongest ally is unwavering in his commitment to prevention as our most powerful strategy. “I have worked with many researchers, academics and scientists,” Yeager says, “but David Olds is in a class of his own.”

And where is Olds today? As this is being written in early 2006, he is in Bogotá, Colombia, talking to government officials and representatives of the Colombian Pediatric Society about the possibility of testing his nurse home-visiting model yet again. He has received similar inquiries from officials in Australia,

Canada, Germany, Holland, Israel, Russia and Spain. All of the attention and interest has not altered his modus operandi, however, which remains deliberate, cautious and always with fidelity to the model.

Even now, with a 15-year longitudinal study further confirming the success in Elmira, recognition at the highest levels of government, and high profile coverage by CBS News, the *New York Times*, the *Wall Street Journal* and most recently a featured essay in the *New Yorker*, Olds still speaks modestly about the work that has consumed the better part of his life.

“This is what we can really stand behind,” he says of his model, speaking as if a battery of lawyers is standing nearby, poised to jump on the slightest inaccuracy. “It reduces injuries to children. It helps families plan future pregnancies and create better spacing between the birth of the first and second children. It helps women find employment. It helps improve prenatal health. It improves children’s school readiness.”

Reasonably certain that he has enumerated the merits of his model without overstating the case, Olds folds his arms and smiles. It is the smile of a man who has amassed a remarkable body of work, but who is by no means content to rest on his laurels. Not when there are still so many questions to be answered. Will it work in South America? In Europe? Everywhere?

The long lever is still in place, and Olds is not finished pressing on it.

The following individuals were interviewed for this story:

- David Olds, Founder, Professor of Pediatrics, Psychiatry and Preventive Medicine, University of Colorado
- Ann Jones, Former National Director
- Nan Butler, Acting Vice President of External Affairs
- Matt Buhr-Vogl, Senior Site Developer
- Pat Moritz, Board of Trustees
- Sandy Dunlap, Vice President of Finance
- Irene Bindrich, Nurse Educator, 2000–06
- Pat Uris, Vice President of Programs
- Sharon Sprinkle, Program Director for NFP in Guilford County, N.C.
- Eveline Hunt, NFP Nurse Supervisor, Detroit, Mich.
- Clay Yeager, President and Chief Executive Officer
- Ruby Hearn, Ph.D., Former Vice President, RWJF (retired)
- Jeane Anne Grisso, M.D., Senior Program Officer, RWJF
- Wade Horn, Assistant Secretary for Children and Families, U.S. Department of Health and Human Services