



NURSE-FAMILY PARTNERSHIP: *Transforming Lives*

HOME VISITING WORKS

As of October 2017,

103 families have graduated
from Contra Costa NFP.

92% of babies were born
full term

99.5% of mothers initiated
breastfeeding

92% of babies were born
at a healthy weight

98% of babies were fully
immunized at 24 months

NURSE-FAMILY PARTNERSHIP

Contra Costa Public Health's Nurse-Family Partnership (NFP) is a community health program that transforms the lives of vulnerable mothers in Contra Costa County who are pregnant with their first child.

Since the program was initiated, NFP has helped more than 300 mothers and their families. The life lessons that are taught extend beyond the program participant and reach generation after generation.

The program pairs each participant with a public health nurse throughout the pregnancy and through the first two years of the child's life. The nurse visits the home bi-weekly, providing health assessments and advice, life coaching and connections to resources that improve their lives.

Supported by funding from the Affordable Care Act, Contra Costa NFP is a recognized leader in California for implementing this innovative, evidence-based community health model and has been selected nationally to participate in a project to develop technological innovations to enhance client outcomes.

The statewide return on investments shows that for every \$1 spent in NFP there is a \$6 cost savings through better employment, less preterm delivery, and improved maternal and child health outcomes.

GOALS

- **Improve** pregnancy outcomes by promoting healthy practices, including regular prenatal care, healthy diet and reducing use of tobacco, alcohol and other drugs.
- **Improve** child health and development by helping parents provide responsible, competent care.
- **Improve** economic self-sufficiency by helping families plan for the future, including work, education and future children.





Hear Their Stories

Amber's Story

Amber was unemployed and living in low-income housing. But with the birth of her son and support from her home-visiting nurse, Alicia, this first-time mom sought to change her situation. Alicia says that her client "took advantage of all the community resources she had available to her," such as Welfare-to-Work and Early Head Start. Amber breastfed exclusively for those first critical months, and she continued breastfeeding past her son's second birthday. Mother and son flourished, and Amber turned to her newfound resources to search for schools and careers. She is now applying to work as a phlebotomist and plans to go back to school to become a Registered Nurse. Amber says that if not for the program, she would have been lost and less confident, and "the program helped me to push myself, keep goals and make them small and attainable."

"The program helped me push myself, keep goals, and make them small and attainable."

— Amber

Yesica's Story

Yesica suffered from debilitating anxiety. She was afraid to drive, unable to work and lived apart from her husband. In the past, she had not been able to carry a pregnancy to term. So when Yesica got pregnant this time, she enrolled in Contra Costa's Nurse-Family Partnership program. "I wanted to learn everything that was necessary," she says. Her home visiting nurse, Maritza, helped her learn about pregnancy and becoming a parent. They also worked on mental health, building a support system and accessing resources such as WIC and health care. "I learned many things with information that my nurse brought to my home. For example, all the topics that we cover from relaxation to how to eat healthy," Yesica says, adding that she feels supported by her nurse and trusts her very much."

"I learned many things with information that my nurse brought to me..."

— Yesica

Endia's Story

Having a new baby in a household can be challenging, especially for single moms like Endia, who lives at home and rely on the daily support of family. Her public health nurse, Nayeli, offered insight about caring for the baby and for improving family communication. Endia says she and her family now "get along well, communicate better and support each other." Nayeli also introduced Endia to many resources, such as WIC, HopeLab and Help a Mother Out. Endia now looks forward to getting her high school diploma, an apartment and a better job. "I want my daughter to be great. I want her to be strong, independent and successful, and experience everything good life has to offer," she says. "I am more loving, patient and nurturing, and I understand what it means to be a mother."

"I feel that I am more loving, patient and nurturing, and I understand what it means to be a mother."

— Endia



Nurse-Family Partnership: Outcomes, Costs and Return on Investment in the U.S.



Nurse-Family Partnership® (NFP) offers significant benefits to the families it serves and significant cost savings to society and government funders. Based on a review and analysis¹ of **more than 40 NFP evaluation studies, including randomized controlled trials, quasi-experimental studies and large-scale replication data**, Dr. Ted Miller of the Pacific Institute for Research and Evaluation predicts that when NFP achieves scale in the United States, it can produce the following outcomes:



- Smoking in pregnancy ↓25%
- Pregnancy-induced hypertension ↓33%
- Closely spaced births (15 months postpartum) ↓25%



- Emergency department use for childhood injuries ↓34%
- Full immunization ↑14%
- Language delay ↓41%



- First pre-term births ↓15%
- Infant mortality ↓48%
- Moms who attempt breastfeeding ↑12%



- TANF payments ↓7% (9 years post-partum)
- Person-months on Medicaid ↓8% (15 years post-partum)
- Costs if on Medicaid ↓10% (through age 18)



NFP's Cost Savings and Return on Investment

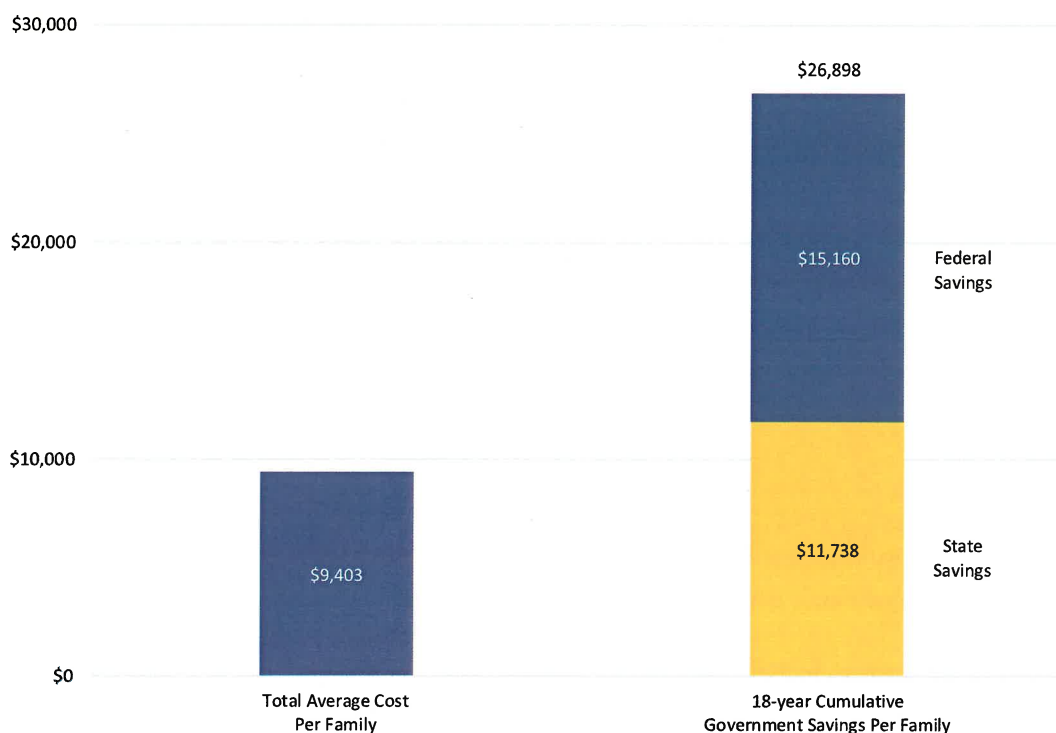
At a total average cost of **\$9,403 per family in the United States** (over an average enrollment of 527.2 days,² present value at a 3% discount rate, see Figure 1), Miller's model predicts that by a child's 18th birthday:

- State and federal cost savings due to NFP will average **\$26,898 per family served** or **2.9 times** the cost of the program.
- Analyzing broader savings to society, Miller takes into account less tangible savings (like potential gains in work, wages and quality of life) along with resource cost savings (out-of-pocket payments including savings on medical care, child welfare, special education, and criminal justice) to calculate:
 - NFP's total benefits to society equal **\$60,428 per family served**
 - This yields a **6.4 to 1** benefit-cost ratio for every dollar invested in Nurse-Family Partnership.

¹ Miller, T.R. (2015). Projected outcomes of Nurse-Family Partnership home visitation during 1996-2013, USA. *Prevention Science*. 16 (6). 765-777. This fact sheet relies on a state-specific return on investment calculator derived by Dr. Miller from published national estimates to project state-specific outcomes and associated return on investment. The calculator is revised periodically to reflect major research updates (latest revision: 3/27/2017).

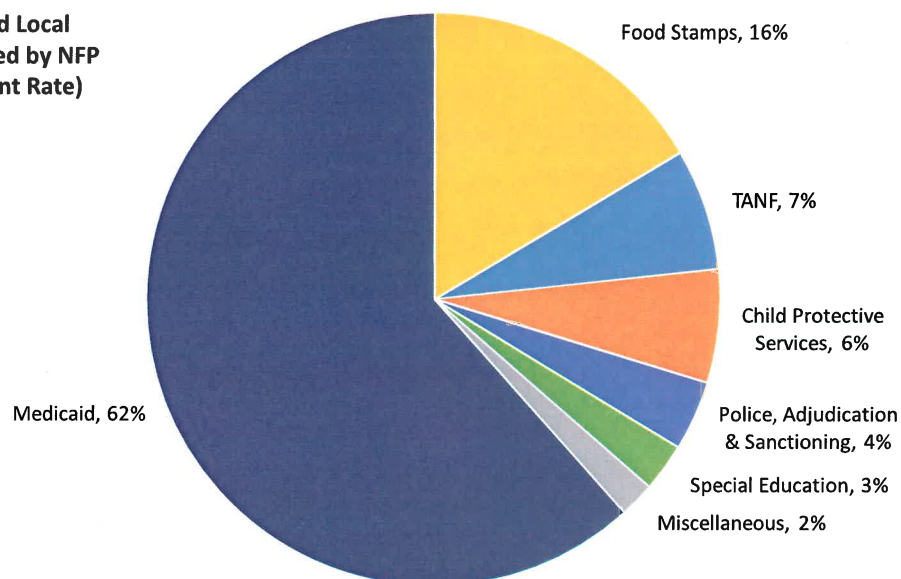
² Nationwide, the average cost to serve a family for a year is \$6,640 (2015 dollars).

Figure 1: Total Average Per-Family Cost and Estimated Government Savings of Nurse-Family Partnership Implementation in the United States (Present Value at a 3% Discount Rate)



Nationwide, Medicaid will accrue 62% of the government cost savings per family served by NFP. If Medicaid fully funded NFP in the United States, each level of government would reap Medicaid savings that exceed its share of undiscounted NFP costs when the child was age 6. By the child's 18th birthday, Medicaid would recoup \$2.20 per dollar invested (undiscounted).

Figure 2: Distribution of Federal, State, and Local Government Cost Savings per Family Served by NFP Nationwide (Present Value at a 3% Discount Rate)





OVERVIEW

Nurse-Family Partnership® (NFP) is an evidence-based, community health program that serves low-income women pregnant with their first child. Each vulnerable new mom is partnered with a registered nurse early in her pregnancy and receives ongoing nurse home visits. It is a life-transforming partnership, for the mom and her child. Nurse-Family Partnership helps families – and the communities they live in – become stronger while saving money for state, local and federal governments.

The Nurse-Family Partnership model is a unique maternal child health program that is based on rigorous evidence of effectiveness from randomized, controlled trials. Widespread replication of the Nurse-Family Partnership program in diverse communities and populations gives more confidence that investment in this program is money well spent. In fact, independent research shows that when communities adopt the Nurse-Family Partnership model, they are making a smart investment with a solid return on their investment. For example, the RAND Corporation reports that for every dollar a community invests in NFP, they can see up to \$5.70 in return.

DISTINGUISHING PROGRAM FEATURES

Nurse-Family Partnership focuses on first-time mothers because it is during a first pregnancy when the best chance exists to promote and teach positive health and development behaviors between a mother and her baby.

The Nurse-Family Partnership program is delivered by registered nurses who are perceived as trusted and competent professionals, fostering a powerful bond between nurse and mother.

Nurse-Family Partnership has sufficient duration, typically from the mother's

first trimester until her child's second birthday. This early intervention during pregnancy allows for any critical behavioral changes needed to improve the health and welfare of the mother and child.

Measurement of important and well-defined public health outcomes is a cornerstone of the Nurse-Family Partnership. The focus of the program and its ongoing measurement is on outcomes (such as childhood injuries or inter-pregnancy intervals) instead of "softer" factors believed to affect outcomes (such as quality of parental care or use of birth control). This strong focus on evidentiary standards is an important distinction that allows for entrenched

generational challenges to be addressed with confidence.

Quality program replication is possible because of detailed performance measurement at every NFP site using the national NFP data collection and reporting system. In addition, Nurse-Family Partnership combines its unsurpassed level of research through more than 37 years of randomized, controlled trials with ongoing research to ensure the program's continuous improvement and relevance to today's societal issues and ever more diverse populations.



NURSE-FAMILY PARTNERSHIP GOALS

1. Improve pregnancy outcomes by helping women engage in good preventive health practices, including thorough prenatal care from their healthcare providers, improving their diets, and reducing their use of cigarettes, alcohol and illegal substances;
2. Improve child health and development by helping parents provide responsible and competent care; and
3. Improve the economic self-sufficiency of the family by helping parents develop a vision for their own future, plan future pregnancies, continue their education and find work.

"They always say babies don't come with instruction manuals, but if there was one, the Nurse-Family Partnership program would be it."

- ANDREA
Mom from Pennsylvania

"My vision of the future would be to graduate from college with many honors and job offerings in the medical profession, going on to become a pediatrician."

- TYESHA
Mom from Michigan

A PROVEN SUCCESS

Nurse-Family Partnership is at the forefront of community health programs because it is evidence-based. Communities can be confident in choosing the program because more than 37



years of research from randomized, controlled trials prove it works — delivering multi-generational outcomes that benefit communities and reduce the costs of long-term social service programs. For example, the following outcomes have been observed among participants in at least one of the trials of the program:

- 48% reduction in child abuse and neglect;
- 56% reduction in emergency room visits for accidents and poisonings;
- 59% reduction in child arrests at age 15;
- 67% reduction in behavioral and intellectual problems at child age six; and
- 35% fewer hypertensive disorders of pregnancy.

THE REASON FOR PROGRAMMATIC RIGOR

Nurse-Family Partnership believes it is important to research what will work and then implement the proven model with fidelity.

And, in fact, Nurse-Family Partnership is a well-defined model with noted rigor in its research and replication. The standards are high for good reason. Simply put, it is hard to improve parents' behaviors and young children's early experiences.

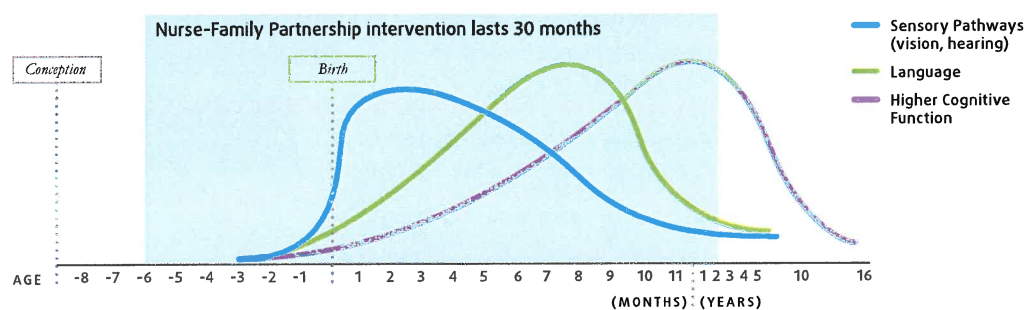


That is why Nurse-Family Partnership has provided clarity on how low-income women bearing their first children benefit most strongly from this early intervention and why the program's goals and implementation methods are clearly defined.

The Nurse-Family Partnership early intervention makes a difference today and for generations. A report from the Center on the Developing Child at Harvard University shows the extent to which very early childhood experiences influence later learning, behavior and health. (See graph below.) The report provides a framework for a variety of informed policy choices, one of which is early and intensive support by skilled nurse home visitors for vulnerable families expecting their first child.

Human Brain Development

Synapse formation dependent on early experiences



As the chart above shows, during the first 30 months of a child's life, basic brain functions related to vision, hearing and language develop. It is during this window of opportunity that experienced registered nurses can have a huge impact on the future of both mother and child.

Source: Nelson, C.A., In *Neurons to Neighborhoods* (2000). Shankoff, J. & Phillips, D. (Eds.)



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RESEARCH TRIALS AND OUTCOMES

A CORNERSTONE OF NURSE-FAMILY PARTNERSHIP

Nurse-Family Partnership® (NFP) is an evidence-based community health program that helps transform the lives of vulnerable, low-income mothers pregnant with their first child. Built upon the pioneering work of David Olds, Ph.D., Nurse-Family Partnership's model is based on more than 37 years of evidence from randomized, controlled trials that show it works.

Beginning in the early 1970s, Olds initiated the development of a nurse home visitation program for first-time mothers and their children. Over the next three decades, he and his colleagues continued to test the program in three separate, randomized, controlled trials with three different populations in Elmira, N.Y., Memphis, Tenn., and Denver, Colo. (see below). The trials were designed to study the effects of the Nurse-Family Partnership model on maternal and child health, and child development, by comparing the short- and long-term outcomes of mothers and children enrolled in the Nurse-Family Partnership program to those of a control group of mothers and children not participating in the program.

Trials of the Program

| | | | | | |
|---|-------------------|--|-------------------|---|-------------------------------|
|  | |  | |  | |
| YEAR | 1977 | YEAR | 1990 | YEAR | 1994 |
| LOCATION | Elmira, NY | LOCATION | Memphis, TN | LOCATION | Denver, CO |
| PARTICIPANTS | 400 | PARTICIPANTS | 1,138 | PARTICIPANTS | 735 |
| POPULATION | Low-income whites | POPULATION | Low-income blacks | POPULATION | Large proportion of Hispanics |
| STUDIED | Semi-rural area | STUDIED | Urban area | STUDIED | Nurses and paraprofessionals |

A LASTING IMPACT

Today, Olds and his team at the Prevention Research Center for Family and Child Health at the University of Colorado Denver continue to study the model's long-term effects and lead research to continuously improve the Nurse-Family Partnership program model. Since 1979, 14 follow-up studies tracking program participants' outcomes across the three trials have been (and continue to be) conducted. The implementation of longitudinal studies enables Nurse-Family Partnership to measure the short-term and long-term outcomes of the program. Although the Nurse-Family Partnership National Service Office maintains a close association with the Prevention Research Center, the two remain professionally independent.

"This is what we can really stand behind: The program reduces injuries to children. It helps families plan future pregnancies and create better spacing between the birth of the first and second child. It helps women find employment. It helps improve prenatal health."

DAVID OLDS, Ph.D.
Program Founder, Nurse-Family
Partnership

"It is not just empirical evidence [that Nurse-Family Partnership has] that's important; it's a certain type of empirical evidence, namely evidence from random assignment experiments. Because that's the gold standard of research and we have learned over and over again that any other kind of study is likely to produce an incorrect answer. So not only is there good evidence from the study, but the evidence is from the very best kind of research."

RON HASKINS,
Senior Fellow, Economic Studies
Co-Director, Center on Children
and Families
Brookings Institution

TRIAL OUTCOMES

Trial outcomes demonstrate that Nurse-Family Partnership delivers against its three primary goals of better pregnancy outcomes, improved child health and development and increased economic self-sufficiency — making a measurable impact on the lives of children, families and the communities in which they live.

For example, the following outcomes have been observed among participants in at least one of the trials of the program:

Improved Pregnancy Outcomes:

- **Improvement in women's prenatal health**
79% reduction in preterm delivery for women who smoke, and reductions in high-risk pregnancies as a result of greater intervals between first and subsequent births

Improved Child Health and Development:

- **Reduction in criminal activity**
59% reduction in child arrests at age 15
- **Reduction in injuries**
39% fewer injuries among children
56% reduction in emergency room visits for accidents and poisonings
48% reduction in child abuse and neglect
- **Increase in children's school readiness**
50% reduction in language delays of child age 21 months; 67% reduction in behavioral/intellectual problems at age six

Increased Economic Self-Sufficiency:

- **Fewer unintended subsequent pregnancies**
32% fewer subsequent pregnancies
- **Increase in maternal employment**
82% increase in months employed
- **Reduction in welfare use**
20% reduction in months on welfare
- **Increase in father involvement**
68% increase in father's presence in household
- **Reduction in criminal activity**
61% fewer arrests of the mother; 72% fewer convictions of the mother

ADHERENCE TO THE NURSE-FAMILY PARTNERSHIP MODEL

Today, Nurse-Family Partnership maintains fidelity to its model by using a web-based performance management system designed specifically to collect and report Nurse-Family Partnership family characteristics, needs, services provided and progress toward accomplishing program goals as recorded by NFP nurse home visitors. This process is fundamental to ensuring successful program implementation and beneficial outcomes that are comparable to those from the randomized, controlled trials.



A BASIS FOR EVIDENTIARY STANDARDS

The evidentiary foundations of the Nurse-Family Partnership model are among the strongest available for preventive interventions offered for public investment. Given that the original trials were relatively large, resulted in outcomes of public health importance, and were conducted with nearly entire populations of at-risk families in local community health settings, these findings are relevant to communities throughout the United States.

Nurse-Family Partnership's emphasis on randomized, controlled trials is consistent with the approach promoted by a growing chorus of evidence-based policy groups including the Coalition for Evidence-Based Policy, Blueprints for Violence Prevention, the RAND Corporation and the Brookings Institution, which seek to provide policymakers and practitioners with clear, actionable information on programs that work — and are demonstrated in scientifically valid studies.



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