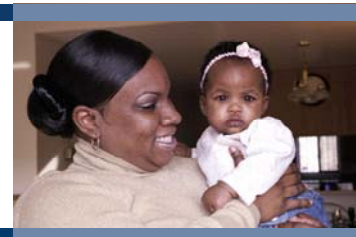




## Costs & Benefits: The Economic Return on Investment



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### Benefits

Nurse-Family Partnership (NFP) is an evidence-based, nurse home visitation program that improves the health, well-being and self-sufficiency of low-income, first-time parents and their children. Several independent studies have weighed the costs and benefits of implementing the NFP program and concluded that the program, when implemented with fidelity to the model, produces significant benefits for children and their parents, and over time will return a minimum of \$2.88 for every dollar invested. **Savings accrue in the following areas:**

- ▶ Health Care
- ▶ Child Protection
- ▶ Education
- ▶ Criminal Justice
- ▶ Mental Health
- ▶ Government Assistance
- ▶ Taxes Paid by Employed Parents

In the first trial of the program, costs were recovered by the time children reached the age of four and cost savings continued to build throughout the lives of both mother and child.

The ability to get maximum return on investment depends on three important factors:

- Highly educated registered nurses deliver home visits to low-income mothers who are pregnant for the first time;
- The program is implemented with fidelity to the intervention model tested in the randomized controlled trials; and
- Services are delivered at sufficient scale to benefit from basic operational efficiencies (at least 100 families served).

### Summary of Independent Cost-Benefit Studies

#### Washington State Institute for Public Policy (WSIPP)

Nurse-Family Partnership (NFP) ranked highest in terms of cost return among pre-kindergarten, child welfare, youth development, mentoring, youth substance abuse prevention and teen pregnancy prevention programs. Implementation costs for NFP were estimated (in \$2003) at \$9,118 and benefits were estimated at \$26,298, leaving a net return to society of \$17,180 per family served, which equates to a \$2.88 return per dollar invested in NFP.<sup>1</sup>

This estimate is based on the entire sample of the first NFP randomized trial and is likely to be larger for the higher risk families served by the program. The estimate does **not** include additional cost savings related to reductions in preterm births, subsequent pregnancies, welfare usage, or child injury and immunizations. Actual cost savings are likely to be larger given the significant expenses associated with these conditions.

#### Summary of Benefits & Costs Per Youth for Child Welfare/Home Visitation Programs

Program	Benefits	Costs	Benefits per Dollar of Cost	Benefits Minus Costs
Nurse-Family Partnership	\$26,298	\$9,118	\$2.88	\$17,180
Other Child Welfare/ Home Visiting Programs	\$10,969	\$4,892	\$2.24	\$6,077
	\$4,724	\$1,296	\$3.64	\$3,427
	\$2,052	\$3,314	\$0.62	(\$1,263)
	\$0	\$2,531	\$0.00	(\$2,531)
	\$0	\$49,021	\$0.00	(\$49,021)

<sup>1</sup> Benefits and Costs of Prevention and Early Intervention Programs for Youth. S. Aos, R. Lieb, J. Mayfield, M. Miller, and A. Pennucci. Washington State Institute for Public Policy: Olympia, WA, 2004. <http://www.wsipp.wa.gov/pub.asp?docid=04-07-3901>

## *NFP More Than Pays for Itself*

**1998 RAND study identified at least four types of significant savings to government:<sup>2</sup>**

- ↑ **Increase in tax revenues** from increased employment and earnings by program participants, including state and federal income taxes, Social Security contributions and state and local sales taxes;
- ↓ **Decrease in government assistance** including Medicaid, Food Stamps, welfare and general assistance by counties;
- ↓ **Decrease in expenditures for education, health and other services**, including special education, emergency room visits and homeless shelters;
- ↓ **Decrease in criminal justice system** spending on arrest, adjudication and incarceration.

**2005 RAND study reported greater savings from higher-risk populations:<sup>3</sup>**

The study found a net benefit to society of \$34,148 per participant, with the bulk of the savings accruing to government, which equates to a \$5.70 return per dollar invested in Nurse-Family Partnership.

<sup>2</sup> Investing in Our Children: What We Know and Don't Know About the Costs and Benefits of Early Childhood Interventions. L.A. Karoly, P.W. Greenwood, S.S. Everingham, J. Hoube, M.R. Kilburn, C.P. Rydell, M. Sanders, and J. Chiesa. RAND Corporation, Santa Monica, CA, 1998. <sup>3</sup> Early Childhood Interventions: Proven Results, Future Promise. L.A. Karoly, M.R. Kilburn, J.S. Cannon. RAND Corporation, Santa Monica, CA: MG-341-PNC, 2005 <http://www.rand.org/pubs/monographs/MG341/>

## New York City Department of Health and Mental Hygiene

**Anticipated program effects and savings per 100 participating families include:<sup>4</sup>**

- ▶ 50% decrease in language delays at 21 months, saving between \$133,000-\$440,000;
- ▶ 50% reduction in reported child abuse and neglect through the child's second birthday, saving \$38,500;
- ▶ 29% decrease in subsequent births within two years and a 14% increase in time (months) between births of first and second child, reducing the risk for preterm birth. Preventing three preterm births saves \$242,800.

<sup>4</sup> Division of Financial and Strategic Management, Office of Research and Evaluation T. Dumanovsky, H. Muttana. New York, NY, September 2004. Based on published evidence from randomized trials.

*Further savings may accrue from longer-term benefits:*

**Education costs** associated with developmental delays and learning disorders.

**Medical costs** associated with fetal growth retardation, pre-eclampsia, and prematurity-related problems such as respiratory distress syndrome.

**Social services spending** for public assistance, child abuse and neglect and foster care.

**Spending for emotional and psychological problems** including aggressive behavior and conduct disorders.

**Financial burdens on families** that result from limited economic, social, and emotional support of non-resident fathers; productivity losses among caregivers and injured children later in life; permanent disability by injury.

## *Investments in NFP Can Drive Decreases in Public Spending*

- ▶ Medicaid pays for 40% of births and 50% of preterm/low birthweight births in the U.S.<sup>5</sup>
- ▶ Average cost per diagnosis of preterm birth is \$77,000. Preterm births can cost up to 60 times more than uncomplicated births. Preterm births account for 35% of all U.S. health care spending for infants.<sup>6</sup>
- ▶ Implementation of the Nurse-Family Partnership reduced the incidence of preterm births for high-risk mothers by over 40% in two states.<sup>7,8</sup> Studies also report increases in birth intervals.<sup>9</sup> NFP program benefits have the potential to translate into significant cost savings for Medicaid.

<sup>5</sup> Healthy Babies: Efforts to Improve Birth Outcomes and Reduce High Risk Births Cassandra O'Neill, NGA Center for Best Practices 2004. <sup>6</sup> Costs of Prematurity, The Big Picture: Hospital Costs. March of Dimes, November 2005, at [www.marchofdimes.com/prematurity/15341\\_10734.asp](http://www.marchofdimes.com/prematurity/15341_10734.asp). <sup>7</sup> Boris, N. Nurse-Family Partnership Preliminary Year-end Report, July 2003, LA Dept. of Health. <sup>8</sup> Carabin, H., Cowan, L., Beebe, L., Skaggs, V., Thompson, D., and Agbangla, C. Does Participation in a nurse visitation programme reduce the frequency of adverse perinatal outcomes in first-time mothers? 2005, *Paediatric and Perinatal Epidemiology*, 19, 194-205. <sup>9</sup> Kitzman, H., Olds, D.L., Sidora, K., Henderson, C.R. Jr, Hanks, C., Cole, R., Luckey, D.W., Bondy, J., Cole, K., & Glazner, J. (2000). Enduring Effects of Nurse Home Visitation on Maternal Life Course: a 3-Year Follow-up of a Randomized Trial. *JAMA*, 283 (15), 1983-9