WRITTEN STATEMENT OF

KRISTIN SALVI
GOVERNMENT RELATIONS MANAGER, NORTHEAST REGION
NURSE-FAMILY PARTNERSHIP NATIONAL SERVICE OFFICE

SUBMITTED TO THE
VERMONT HOUSE COMMITTEE ON HUMAN SERVICES ON

S. 261 - An act relating to mitigating trauma and toxic stress during childhood by strengthening child and family resilience

APRIL 11, 2018

Nurse-Family Partnership
Helping First-Time Parents Succeed®

Our ask: We respectfully ask the Legislature to continue its support of Nurse-Family Partnership for at-risk first-time mothers and allow NFP to work together with State officials and other home visiting groups to create the best possible Home Visiting System to serve all residents of Vermont, including high-risk, first-time mothers.

A future where all children are healthy, families thrive, communities prosper, and the cycle of poverty is broken.

That is the vision statement of Nurse-Family Partnership, a rigorously researched community health intervention developed over 40 years ago in the United States that offers a comprehensive and holistic prevention model for first-time mothers living in poverty. Through ongoing home visits conducted by registered nurses from pregnancy until the child's second birthday, nurse home visitors form a much-needed, trusting relationship with pregnant women, instilling confidence and empowering them to achieve a better life for their children and themselves. Once that relationship is formed, our nurses are in a unique position to deliver services that can **impact important outcomes for multiple generations, all the while saving taxpayers money.** One independent analysis found that state and federal cost savings would average $39,153 per family served by the time the child reaches age 18, or nearly four times the cost per family. Societal benefits represent an $11.80 return on investment for every dollar invested.[i]

While the NFP program began operations in the United States in 1996, the program began serving Vermont families in 2012. At present, the NFP program in Vermont serving over 300 vulnerable Vermont families at any given time—this is a high-risk population that is young (median age 21), unmarried (89% of the mothers who enroll are unmarried) and low income (82% are Medicaid eligible at enrollment).

As part of the Maternal, Infant and Early Childhood Home Visiting (MIECHV) program, Vermont chose to integrate evidence-based nurse home visiting into the menu of Children's Integrated Services (CIS) available to families. Nurse-Family Partnership is embedded in the statewide network of community-based home health agencies. The home health agencies that currently implement NFP include the Caledonia Home Health Care and Hospice, the Franklin County Home Health Agency, the Rutland Area Visiting Nurse Association & Hospice, the Central Vermont Home Health and Hospice and the Visiting Nurse Association and Hospice of Vermont & New Hampshire. All five agencies have a long history of providing myriad health-related community supports and services, such as maternal child health and medically-focused nursing, rehabilitation, community wellness and prevention, psychiatric nursing and medical social work, among others.

The Vermont Department of Health functions as the lead agency for the MIECHV program and, in collaboration with the Vermont Department for Children and Families, designated Nurse-Family Partnership as its evidence-based home visiting model for this federal initiative. The state initially used formula funding to launch three NFP programs in Caledonia, Essex and Orleans Counties (known locally as "The Northeast Kingdom"), Franklin and Lamoille Counties, and Bennington and Rutland Counties. In September 2012, Vermont was awarded a competitive MIECHV program grant that supported expansion to Orange, Washington, Windham and Windsor Counties—bringing service coverage to 12 of 14 counties. The state is actively seeking funding to bring the program to the two

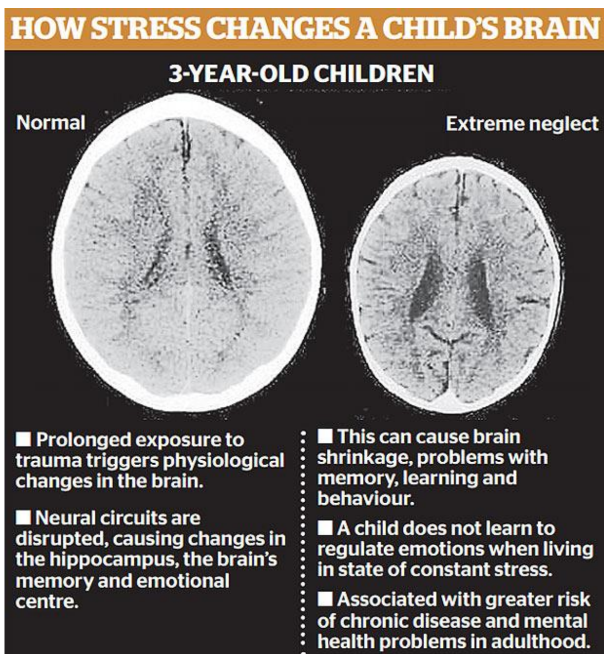
remaining counties. While NFP services are fully funded through the MIECHV program, state officials are exploring Medicaid and other funding options to support long-term sustainability.

***NFP is excited to learn that this committee has been discussing S.261, an act relating to mitigating trauma and toxic stress during childhood by strengthening child and family resilience*.**

Why is Nurse-Family Partnership so important?

Babies who are born into, and experience the effect of, challenging environments in their early years – especially during the first 1,000 days – are much more likely to fall victim to *toxic stress* (see Figure B). The **toxic stress response** can occur "when a child experiences strong, frequent, and/or prolonged adversity—such as physical or emotional abuse, chronic neglect, caregiver substance abuse or mental illness, exposure to violence, and/or the accumulated burdens of family economic hardship—without adequate adult support.

This kind of prolonged activation of the stress response systems can disrupt the development of brain architecture and other organ systems, and increase the risk for stress-related disease and cognitive impairment, well into the adult years" (Center on the Developing Child at Harvard University).

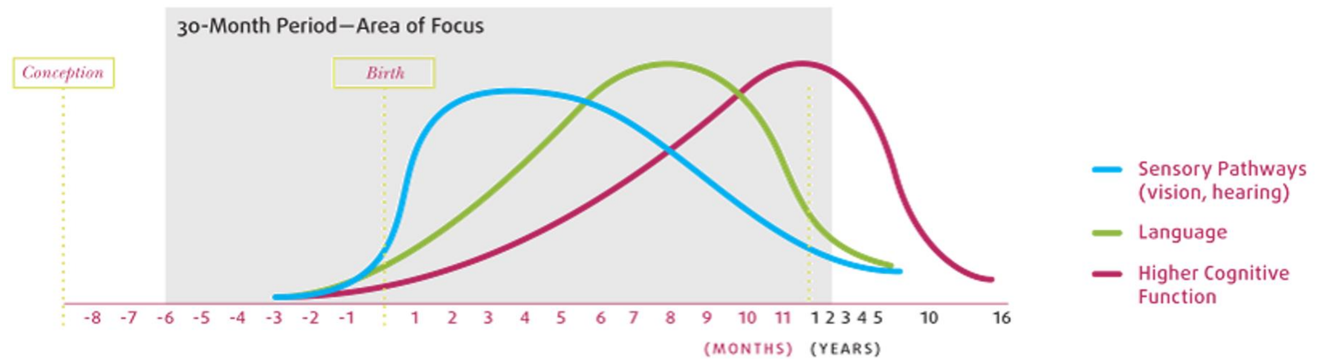


Nurse-Family Partnership intervenes at this most opportune time – when those pregnant, first-time mothers face challenges such as poverty, social isolation, abuse and other stressors. Our nurses enable women who are born into the most difficult circumstances to give their babies the care necessary for them to thrive during the critical early stages of development and beyond. Nurse-Family Partnership is helping to **build healthy brains as early as possible.**

Nearly 40 years of research, replication and innovation show that Nurse-Family Partnership impacts health and social outcomes for multiple generations. Outcomes include long-term improvements in health, child welfare, school readiness, crime and self-sufficiency.

Human Brain Development

Synapse formation dependent on early experiences



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

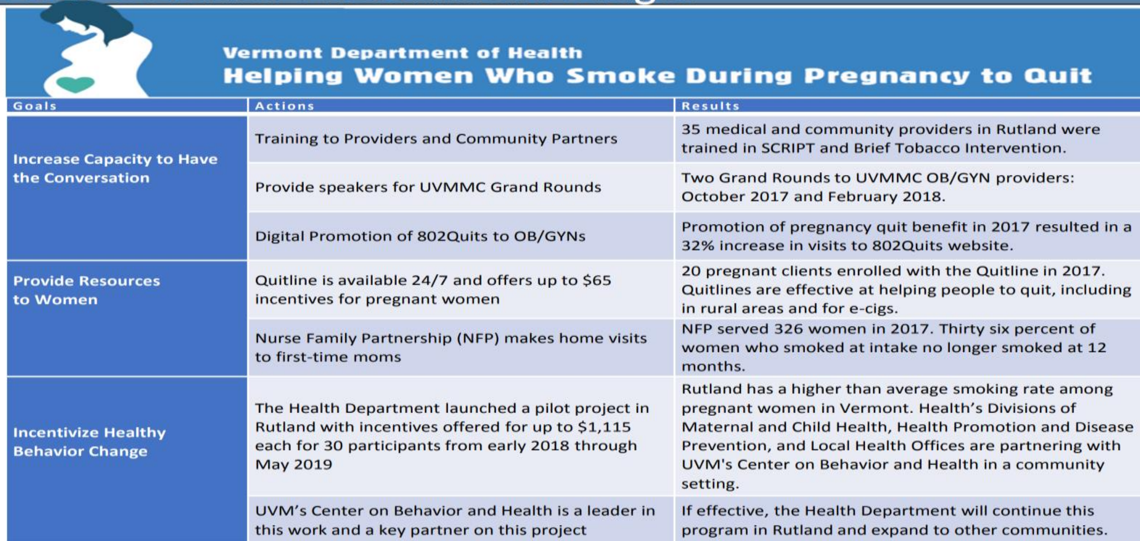
You can see by the chart above that NFP is there when it matters most, making sure vulnerable moms get the support they need to be competent parents by virtue of a trusting relationship with a registered nurse.

NFP's strong evidence of effectiveness **predicts that Vermont agencies can achieve outcomes** such as the following when implemented with fidelity.[ii]

Nurse-Family Partnership ***promotes healthier pregnancies and birth outcomes:***

- 25% reduction in tobacco smoked
- 33% reduction in pregnancy-induced hypertension
- 15% reduction in births below 37 weeks gestation
- 37% reduction in closely spaced, high-risk pregnancies within 15 months postpartum during four years after the first birth
- 25% reduction in second births within 15 months postpartum
- 41.9 fewer subsequent preterm births per 1,000 families served

In fact, Vermont Department of Health Commissioner Mark Lavine provided testimony to the House Committees on Appropriations and on Human Services and to the Senate Committees on Appropriations on Health and Welfare for FY 2019 that NFP had a substantial impact on helping women smoke during pregnancy. Commissioner Lavine highlighted that NFP served 326 women in 2017 and 36% of those women who smoked at pregnancy no longer smoked at 12 months.



Agency of Human Services
Department of Health
FY 2019 Governor's Recommend Budget

Vermont Department of Health
Helping Women Who Smoke During Pregnancy to Quit

Goals	Actions	Results
Increase Capacity to Have the Conversation	Training to Providers and Community Partners	35 medical and community providers in Rutland were trained in SCRIPT and Brief Tobacco Intervention.
	Provide speakers for UVMMC Grand Rounds	Two Grand Rounds to UVMMC OB/GYN providers: October 2017 and February 2018.
	Digital Promotion of 802Quits to OB/GYNs	Promotion of pregnancy quit benefit in 2017 resulted in a 32% increase in visits to 802Quits website.
Provide Resources to Women	Quitline is available 24/7 and offers up to $65 incentives for pregnant women	20 pregnant clients enrolled with the Quitline in 2017. Quitlines are effective at helping people to quit, including in rural areas and for e-cigs.
	Nurse Family Partnership (NFP) makes home visits to first-time moms	NFP served 326 women in 2017. Thirty six percent of women who smoked at intake no longer smoked at 12 months.
Incentivize Healthy Behavior Change	The Health Department launched a pilot project in Rutland with incentives offered for up to $1,115 each for 30 participants from early 2018 through May 2019	Rutland has a higher than average smoking rate among pregnant women in Vermont. Health's Divisions of Maternal and Child Health, Health Promotion and Disease Prevention, and Local Health Offices are partnering with UVM's Center on Behavior and Health in a community setting.
	UVM's Center on Behavior and Health is a leader in this work and a key partner on this project	If effective, the Health Department will continue this program in Rutland and expand to other communities.

E.312 (b)(3) The Commissioner shall report to the House Committees on Appropriations and on Human Services and to the Senate Committees on Appropriations and on Health and Welfare during fiscal year 2019 budget testimony on the progress made toward reducing the rates of pregnant women who smoke during pregnancy...

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Nurse-Family Partnership ***has a significant impact on healthy child and adolescent development:***

- 12% increase in mothers who attempt to breastfeed
- 48% reduction in risk of infant death (3.0 fewer deaths per 1,000 families served)
- 34% reduction in injuries treated in emergency departments, ages 0-2
- 14% increase in full immunization, ages 0-2
- Reductions in child mortality. 1.6% of children not receiving NFP died from preventable causes, including sudden infant death syndrome, unintentional injuries and homicide, while none of the NFP children died from these causes, through child age 20.[iii]
- 56% reduction in alcohol, tobacco, & marijuana use, ages 12-15
- 33% reduction in child maltreatment through age 15
- 25% reduction in crimes and arrests, ages 11-17

Nurse-Family Partnership ***improves school readiness:***

- 41% reduction in language delay
- 67% reduction in behavioral and intellectual problems at child age six[iv]

Nurse-Family Partnership ***improves maternal self-sufficiency and wellbeing:***

- 17% reduction in assaults through intimate partner violence, prenatal to child age five
- 7% reduction in TANF payments through year 13 post-partum
- 10% reduction in Food Stamp payments through at least year 15 post-partum
- 8% reduction in months of Medicaid coverage needed through at least year 15 post-partum
- Subsidized child care cases reduced by 3.7 children per 1,000 families served
- Significant reductions in maternal mortality. Mothers who were not in Nurse-Family Partnership were eight times more likely to die from external causes, including unintentional injuries, suicide, drug overdose and homicide (through child age 20)[v]

The Need for Nurse-Family Partnership in Vermont. For nearly four decades, Nurse-Family Partnership has successfully provided first-time mothers with the knowledge, support and tools to take control of their lives and to come away from their Nurse-Family Partnership journey as strong, capable parents and with plans for a healthy, stable and bright future (see Table 1 with detailed outcomes below).

Table 1. Expected Life Status and Financial Outcomes When First-Time Low-Income Mothers Receive Nurse-Family Partnership Home Visitation Services in Vermont

Outcome	Change
Smoking During Pregnancy	24% reduction in tobacco smoked
Complications of Pregnancy	27% reduction in pregnancy-induced hypertension
Preterm First Births	28% reduction in births below 37 weeks gestation (37.6 fewer preterm births per 1,000 families served)
Infant Deaths	60% reduction in risk of infant death (3.4 fewer deaths per 1,000 families served)
Closely Spaced Second Births	31% reduction in births within 2 years postpartum
Very Closely Spaced Births	24% reduction in births within 15 months postpartum
Subsequent Birth Rate	31% reduction in second teen births (73.5 fewer children per 1,000 families served within 2 years postpartum & lifetime)
Subsequent Preterm Births	37.5 fewer subsequent preterm births per 1,000 families served
Breastfeeding	14% increase in mothers who attempt to breastfeed
Childhood Injuries	38% reduction in injuries treated in emergency departments, ages 0-2
Child Maltreatment	31% reduction in child maltreatment through age 15
Language Development	39% reduction in language delay; 0.14 fewer remedial services by age 6
Youth Criminal Offenses	46% reduction in crimes and arrests, ages 11-17
Youth Substance Abuse	53% reduction in alcohol, tobacco, & marijuana use, ages 12-15
Immunizations	23% increase in full immunization, ages 0-2
TANF Payments	7% reduction through year 9 post-partum; no effect thereafter
Food Stamp Payments	9% reduction through at least year 10 post-partum
Person-months of Medicaid Coverage Needed	7% reduction through at least year 15 post-partum due to reduced births and increased program graduation
Costs if on Medicaid	4% reduction through age 18
Subsidized Child Care	Caseload reduced by 3.6 children per 1,000 families served

Ted R Miller, PhD, developed this fact sheet and the cost model underpinning it. His contact information is Pacific Institute for Research & Evaluation, 11720 Beltsville Drive, Calverton MD 20705; e-mail miller@pire.org. This calculator was funded in part by NIDA grant 1-R01 DA021624

Thank you for the opportunity to provide this testimony. NFP is excited at the opportunities that exist in Vermont and look forward to working together. If you have any questions, please feel free to reach out at Kristin.Salvi@nursefamilypartnership.org or at (518) 331.1881.

[i] Ted R Miller, PhD, Societal Return on Investment in Nurse-Family Partnership Services in New York, 11/08/2016. Ted Miller of the Pacific Institute for Research and Development developed this fact sheet and the cost model underpinning it. His contact information is Pacific Institute for Research & Evaluation, 814 Bromley St., Silver Spring, MD 20902; e-mail miller@pire.org. This calculator was funded in part by NIDA grant 1-R01 DA021624. Calculator Date: 11/5/2016, Fact Sheet Date: 11/8/2016 22:18.

ii Unless otherwise cited, these data points are New York State-specific. Ibid Ted Miller. National statistics are presented in "Projected Outcomes of Nurse-Family Partnership Home Visitation During 1996-2013, USA." *Prevention Science*. Published online 6/16/15.

[iii] Olds DL, Kitzman H, Knutdson M, Anson E, Smith JA, Cole R. Effect of home visiting by nurses on maternal and child mortality. *JAMA Pediatrics*; July 2014; doi: 10.1001/jamapediatrics.2014.472.

[iv] Olds DL, Kitzman H, Cole R, Robinson J, Sidora K, Luckey D, Henderson C, Hanks C, Bondy J, Holmberg J. Effects of nurse home visiting on maternal life-course and child development: age-six follow-up of a randomized trial. *Pediatrics* 2004;114:1550-9.

[v] Olds DL, Kitzman H, Knutdson M, Anson E, Smith JA, Cole R. Effect of home visiting by nurses on maternal and child mortality. *JAMA Pediatrics*; July 2014; doi: 10.1001/jamapediatrics.2014.472.