

New research on intensive nurse home visiting program shows no impact on birth outcomes; study is ongoing

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A paper in the *Journal of the American Medical Association* found that [Nurse-Family Partnership](#) (NFP), a prenatal and early child home

visiting program, did not improve birth outcomes for low-income mothers in South Carolina. In the coming years, researchers will continue to evaluate other outcomes related to child health and development and the spacing of subsequent births.

The randomized evaluation measured maternal and [newborn health](#) as a composite outcome indicating whether a participant experienced any of the following adverse birth outcomes: preterm birth, low birthweight, small for gestational age, or perinatal death. Researchers found that individuals randomized to receive NFP services experienced adverse birth events at a rate of 26.9 percent, compared to a rate of 26.1 percent experienced by individuals randomized to the control group—a statistically insignificant difference. There was also no statistically significant effect on any individual component of the composite, nor on nine other secondary outcomes.

Adverse birth outcomes can lead to mortality, morbidity, and lifelong child developmental challenges. In the United States, there are substantial racial and socioeconomic inequities in these outcomes. Strategies to address these disparities are therefore top priorities for policymakers.

Motivated by the state's high preterm birth rate, the South Carolina Department of Health and Human Services (SC DHHS) led an innovative expansion of NFP home visiting services between 2016 and 2020 to scale services statewide and learn about the program's impacts. The expansion of NFP services was enabled by a Pay for Success contract that coupled \$17 million in philanthropic funding with a Medicaid waiver that supported the project's costs.

To rigorously evaluate the program's impacts, the state commissioned the South Carolina Nurse-Family Partnership Study. The research team is using South Carolina's linked administrative data system to learn about

NFP's impacts on health, developmental, education, economic, and other outcomes over a 30-year period. The evaluation was supported and implemented by J-PAL North America, with a research team of academics from MIT, Harvard University, Rutgers University, Tulane University, Boston Children's Hospital, Beth Israel Hospital, and University of Chicago.

NFP is a national maternal and [child health](#) program serving more than 60,000 families each year across forty states, the US Virgin Islands, Washington D.C., and many Tribal communities. NFP pairs each participant with a personal nurse who provides [home visits](#) starting during the pregnancy until the child's second birthday. From April 2016 through March 2020, 5,670 first-time Medicaid-eligible mothers across urban and rural areas in South Carolina were enrolled into the study. Study eligibility criteria mirrored NFP's eligibility: individuals with a pregnancy less than 28 weeks who had never given birth before, were eligible for Medicaid, and resided in a NFP-served county. Participants were either self-referred or referred through multiple channels, including clinicians, schools, or Medicaid, to one of nine NFP implementing sites embedded in government agencies and hospital systems throughout South Carolina.

Approximately two-thirds of study participants were randomly assigned to receive NFP services, while the remaining individuals received the usual care available to Medicaid-eligible pregnant people in their communities. For individuals assigned to receive NFP services, nurses conducted home visits with participants during pregnancy and through the first two years of the child's life. Nurses tailored activities to clients' strengths, risks, and preferences using motivational interviews, educational tools, health assessments, and goal-setting related to prenatal health, child health and development, and maternal life course. They encouraged health care utilization when needed and made referrals to health and social services.

Reflecting national trends in similar populations, rates of adverse birth outcomes in the trial were relatively high, with approximately 26 percent of moms experiencing an adverse birth outcome. Among non-Hispanic Black individuals, 31 percent experienced an adverse birth outcome. Interrelated structural factors, such as poverty, racism, environmental exposures, and neighborhood characteristics influence both pre-conception and prenatal health, and ultimately affect the risk of adverse birth outcomes. Identifying programs that effectively address adverse birth outcomes is an urgent public policy priority. More evidence is needed on effective interventions to address racial and structural inequities.

The evaluation reports on only a subset of the outcomes of interest. A complete assessment of the overall effectiveness of NFP requires analysis of a wide range of additional outcomes. The study team has not yet assessed two additional primary outcomes focused on [birth](#) spacing and child injury, which will be analyzed when the data become available. Over the coming decades, the evaluation will continue to assess program impacts on a range of outcomes related to families' health and well-being, such as other maternal and child health outcomes; child school-readiness and performance; maternal educational attainment; criminal justice involvement; and the use of government programs and social services such as Medicaid, WIC and SNAP. Other research has demonstrated that programs can generate long-term impacts on child and family outcomes even when short-term impacts appear limited.

"As the largest trial of NFP—and one of the largest trials of home visiting programs in general—this study is an exciting opportunity to deepen our understanding," says J-PAL North America Co-Executive Director Vincent Quan. "Large trials like this one enable researchers to examine potential treatment effects on less common but critical health outcomes that require a high degree of statistical power. We are thrilled to support this study and look forward to better understanding the

program's impacts over time."

"The results of this study underscore the urgent need to better understand how to address inequities in [birth outcomes](#)," says Margaret McConnell, lead author on the study and associate professor of global [health](#) economics at Harvard T.H. Chan School of Public Health.

"Evaluating efforts to improve maternal and neonatal outcomes requires openness and transparency on the part of programs and invested collaboration between programs, government, researchers, funders, and others. We hope this research partnership with NFP and SC DHHS encourages more organizations to follow the example they have set to rigorously evaluate program impact."

The study is titled "Effect of an Intensive Nurse Home Visiting Program on Adverse Birth Outcomes in a Medicaid-Eligible Population."

Readers interested in learning more about the evaluation of Nurse-Family Partnership are encouraged to visit the Harvard T.H. Chan School of Public Health's [dedicated webpage](#).

More information: Effect of an Intensive Nurse Home Visiting Program on Adverse Birth Outcomes in a Medicaid-Eligible Population, *JAMA* (2022). [DOI: 10.1001/jama.2022.9703](https://doi.org/10.1001/jama.2022.9703)

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