

Researcher finds nurse-family partnership reduces preventable mortality

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Low-income mothers and their first-born children who received home visits from nurses were less likely to die from preventable causes during a two-decade period studied by a University of Colorado School of Medicine professor, according to a report published in *JAMA Pediatrics* – a leading, peer-reviewed journal of the American Medical Association.

David Olds, PhD, professor of pediatrics and lead investigator of the study, reviewed data covering a two-decade period to understand the impact of the Nurse-Family Partnership® (NFP) program and found that low-income mothers and their first-born children living in disadvantaged, urban neighborhoods were less likely to die when they received in-home nurse visits when compared to mothers and children randomly assigned to receive comparison services. This is the first randomized, clinical trial of an early intervention program conducted in a high-income country to find evidence of reductions in maternal and child death.

"Death among mothers and children in these age ranges in the United States general population is rare, but of enormous consequence," said Olds. "The high rates of death among mothers and children not receiving nurse-home visits reflect the toxic conditions faced by too many low-income parents and children in our society. The lower mortality rate found among nurse-visited mothers and children likely reflects the nurses' support of mothers' basic human drives to protect their children and themselves."

Beginning in 1990, this trial enrolled low-income, primarily African-American mothers living in disadvantaged neighborhoods in Memphis, Tenn., and assessed maternal and child mortality for over two decades until 2011. Olds announced today these findings at a press conference held at Le Bonheur Children's Hospital, which serves families through NFP in Memphis.

Nurse-Family Partnership produced a significant reduction in preventable child death from birth until age 20. Children in the control group not receiving nurse-home visits had a mortality rate of 1.6 percent for preventable causes – including sudden infant death syndrome, unintentional injuries and homicide. There were zero preventable deaths among nurse-visited children.

In addition, over the same two-decade period, mothers who received nurse-home visits had significantly lower rates of death for all causes compared to mothers not receiving nurse-home visits. Mothers in the control group who did not receive nurse-home visits were nearly three times more likely to die than were nurse-visited mothers. The reduction in maternal mortality was even greater for deaths due to external causes – those tied to maternal behaviors and environmental conditions – including unintentional injuries, suicide, drug overdose and homicide. Mothers not receiving nurse-home visits were eight times more likely to die of these causes than nurse-visited mothers.

"We intend to continue this research to see whether Nurse-Family Partnership reduces premature mortality at later ages and corresponding health problems as the mothers and children grow older," said Olds.

Earlier follow-up studies of the Memphis trial found that nurse-visited mothers, compared to those assigned to the control group, had better prenatal health and behavior; reduced rates of closely-spaced subsequent pregnancies; decreased use of welfare, Medicaid and food stamps; fewer

behavioral impairments due to substance use; and fewer parenting attitudes that predispose them to abuse their children. At earlier phases of follow-up, nurse-visited children, compared to children not receiving nurse-home visits, were less likely to be hospitalized with injuries through age 2; less likely to have behavioral problems at school entry; and less likely to reveal depression, anxiety and substance use at age 12.

The Nurse-Family Partnership program is a national home visiting program for low-income women who are having their first babies. Each woman is paired with a registered nurse who provides her with home visits throughout her pregnancy until her child's second birthday. The program's main goals are to improve pregnancy outcomes, children's health and development and women's personal health and economic self-sufficiency.

This follow-up study of the Memphis trial is the most recent report from a series of randomized, clinical trials of the NFP program conducted over the past 37 years. Families in these trials are being followed over their life-course to estimate NFP's long-term effects. The Coalition for Evidence-Based Policy – a nonprofit, nonpartisan organization – has identified Nurse-Family Partnership as the only prenatal or early childhood program that meets its "Top Tier" evidence standard, which is used by the U.S. Congress and the executive branch to distinguish research-proven programs.

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