Long-term Effects of the Nurse Family Partnership Program

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Background

• Preventive interventions for young parents may reduce health and developmental problems later in life
• There is much recent interest in home visitation services aimed at promoting maternal health and caregiving
• There have been no studies of children in randomized trials of home visitation programs as they enter young adulthood

U.S. Policy Initiative

• Patient Protection and Affordable Care Act of 2010
• includes $1.5 Billion over 5 years in mandatory funding for an innovative Home Visitation Grant Program for States

Objectives

• To review the long-term effects of the Nurse-Family Partnership program on mothers and children through age 19
• Special focus on prevention of child abuse and neglect in the Elmira Trial
• Discuss implementation

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www.nursefamilypartnership.org.
FOUR PHASES OF PREVENTION RESEARCH

1 Problem Analysis
2 Intervention Design
3 Field Trial
4 Widespread Diffusion

Risk Factors

PROGRAM

Pre-natal Health Related Behaviors
Child Neurodevelopmental Impairment
Emotional/Behavior Dysregulation
Cognitive Impairment
Child/Adolescent Functioning
Antisocial Behavior
Substance Abuse

Material Life Course
Closely Spaced Unplanned Pregnancy
Welfare Dependence
Substance Abuse
Partner support

TRIALS OF PROGRAM

Elmira, NY
Memphis, TN
Denver, CO

N = 400
N = 1,138
N = 735

- Low-income whites
- Semi-rural
- Low-income blacks
- Urban
- Large portion of Hispanics
- Nurse versus paraprofessional visitors

FAMILIES SERVED

- Low income pregnant women
  - Usually teens
  - Usually unmarried
- First-time parents

THREE GOALS

1. Improve pregnancy outcomes
2. Improve child health and development
3. Improve parents’ economic self-sufficiency

Elmira Trial
Families Served

- 400 women
- First live birth
- Demographic risk (teen, poor, or single)

(Random Assignment)

Comparison Group
Screening & referral only

Nurse Visited Group
Screening & referral plus
Nurse visitation through child’s 2nd birthday
15-Year NFP Sample

- 324 Families were Assessed
  - 81% of the Randomized Sample
  - 92% of Families Eligible at 15 Years

- No differences in attrition based on:
  - Treatment group status
  - Key demographics

Enduring Effects on Low-Income, Unmarried Mothers’ Behavior
Elmira 15-Year Follow-up

- 79% fewer verified reports of child abuse and neglect
- 32% fewer subsequent births
- 30 fewer months of welfare use
- 44% fewer behavioral problems due to alcohol & drug abuse
- 69% fewer arrests


Number of Substantiated Child Protective Services Reports by 15

Survival functions for age at first CPS report:
High-risk sub-group

Number of Maltreatment Reports by Treatment Status and Level of Domestic Violence

Number of Maltreatment Reports by Treatment Status and Level of Domestic Violence
How Does Nurse Home Visitation Prevent Child Maltreatment?

- Home Visiting
- Less child maltreatment over 15 years

ELMIRA SUSTAINABLE RESULTS:

- Adolescents
- Arrests: 54%
- Convictions: 69%
- Sexual Partners: 58%
- Cigarettes Smoked: 28%
- Number of days consuming alcohol: 51%

19-Year Follow-Up

- N = 310 with an average age of 19, representing 78% of youth eligible for follow-up from earlier phases of the research
- There was no indication of attrition bias
- Data were collected through phone interviews
- Main outcomes: criminal involvement, reproductive behaviors, educational achievement, public assistance use
- Funding: Smith Richardson Foundation

Cox proportional hazard curves showing the hazard of first arrest for boys in the comparison (n = 67) and nurse-visited (n = 47) groups.
• The program showed enduring effects on girls’ criminal involvement
• For girls born to unmarried and low income mothers, childbearing and Medicaid use was lower.
• These findings were consistent with results reported in earlier phases of the trial for the mothers.
• Further analyses will seek to determine why there were few program effects for boys.

CONSISTENT RESULTS ACROSS TRIALS
• Improvements in women’s prenatal health
• Reductions in children’s injuries
• Fewer subsequent pregnancies
• Greater intervals between births
• Increases in fathers’ involvement
• Increases in employment
• Reductions in welfare and food stamps
• Improvements in school readiness

Cumulative Cost Savings: Elmira Home Visits (High-Risk Families)

• Implications for future research in this area
  – A 27 year follow-up study of the youth in this trial will allow for a more complete assessment of life course outcomes.
  – More scientific attention to girls in observational and interventional studies of criminal behavior is needed.
  – More long-term studies of early intervention trials should be conducted.
• Implications for health policy
  – Prenatal and infancy home visiting by nurses to higher risk mothers having their first child may have a long-term benefits for their children.