Improving Implementation of the Nurse-Family Partnership

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September 21, 2010
NURSE FAMILY PARTNERSHIP

- Prenatal and infancy home visiting

- Activates parents’ instinct to protect
  - Makes sense to parents
  - Nurses bring caring, competence, & respect
  - Program model focuses on critical influences on early development

- Rigorously tested
FAMILIES SERVED

• Low income pregnant women
  – Usually teens
  – Usually unmarried

• First-time parents
NURSE FAMILY PARTNERSHIP’S THREE GOALS

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

Elmira, NY
1977

- Low-income whites
- Semi-rural

N = 400

Memphis, TN
1987

- Low-income blacks
- Urban

N = 1,138

Denver, CO
1994

- Large portion of Hispanics
- Nurse versus paraprofessional visitors

N = 735
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
  (low resource mothers)
- Effects greatest for most susceptible
Indicated Cases of Child Abuse and Neglect 0 to 15 Years - Elmira

*P = .03

JAMA, 1997;278:637-643
Months Between Birth of First and Second Child (Poor Unmarried Mothers) - 0-15 Years Elmira

*P = .001

JAMA, 1997; 278: 637-643
Months of Receiving Cash Assistance Welfare (AFDC) for Poor Unmarried Mothers 0-15 Years Elmira

*P=.005

JAMA, 1997; 278: 637-643
Counts of Children’s Arrests
0-15 Years Elmira

*P=.03

JAMA, 1998:280(14), 1238-1244
Memphis Design

- Urban Setting
- Sample (N = 1138 for prenatal and N = 743 for postnatal)
  - 92% African American
  - 98% Unmarried
  - 85% < Federal Poverty Index
  - 64% < 19 years at intake
  - 2.4 SD above mean neighborhood adversity
Memphis Program

• Registered nearly entire population (88%)
• Memphis/Shelby County Health Department
• Conducted at height of nursing shortage
% Behavioral / Mental Health Problems
Age 6 - CBCL

P = .04, OR = .32

Pediatrics, 2004;114; 1550-1559.
Percentiles of Reading & Math Achievement Test Scores - Grades 1-3
(Born to Low-Resource Mothers)

p = .002, Effect Size = 0.33

Percent of Children Who Used Tobacco, Alcohol, or Marijuana (Last 30 Days)

Memphis – Child Age 12

P = .04   OR  = 0.31

Arch Pediatr Adolesc Med, 164(5) 412-418
Percent of Children with Depression-Anxiety – Child Age 12

P = .04 OR = 0.31

Arch Pediatr Adolesc Med, 164(5) 412-418
Total Discounted Government Spending (2006 US dollars) after Birth of First Child for Food Stamps, Medicaid, & AFDC/TANF

The graph shows the government spending over time, with two lines representing control groups and those visited by nurses, respectively. The y-axis represents government spending in dollars, while the x-axis represents the study child's age in years.
Pattern of Denver Program Effects

Maternal and Child Functioning

Comparison | Para | Nurse
Nurse Family Partnership produced large return on investment:

- Implementation costs $9,118
- Benefits $26,298
- Return on investment $17,180

NATIONAL REPLICATION

Now operating in over 380 counties in 32 states, serving over 22,000 families per day.
FROM SCIENCE TO PRACTICE

- Nurturing Community, Organizational, and State Development
- Training and Technical Assistance
- Program Guidelines
- Clinical Information System
- Assessing Program Performance
- Continuous Improvement
Implementation Standards – Structural
Requirements for Sites

- Target correct population
- Hire right staff
- Enroll participants within gestational age limits
- Nurses complete training
- Employ visit-by-visit guidelines
- Meet nurse-to-participant ratios
- Meet supervisor-to-nurse ratios
- Hold supervision and case conferences at required intervals
- Use web-based information system to monitor implementation and outcomes
Sites Can Download Performance Reports – Continuous Quality Improvement

- All of above +
- Completed visits
- Nurses allocation of time during visits on program domains
- Participant retention
- Maternal and child health indicators
  - Changes in prenatal tobacco use
  - Birth weight by race and ethnicity
  - Rapid successive pregnancies
  - Maternal employment
  - Language development
  - Immunizations
Research to Improve NFP Program Model and Implementation

- Develop and test model to improve participant attrition
- Develop and test model for nurses to use in addressing intimate partner violence
- Develop and test new method for nurses to use in observing caregiver-child interaction
- Develop new methods for nurses to use in promoting competent care-giving
Model Development

Original Trials
- Trial 1
- Trial 2
- Trial 3

Articulate Essential Model Elements

Develop/Test Model Innovations

Studies of Implementation Process

International Replication
- Adapt and Test Original Model

US Community Replication
- Community Preparation
- Training/Coaching of Nurses
- Performance Monitoring
- Continuous Quality Improvement