Second child birthweight: How home visiting dose and first child birthweight interact

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Introduction & Background

• Home visiting often targets first-time mothers
• Birth outcomes have limited evidence of improvement with home visiting
• Birthweight
  – Associated with a variety of later risk for the child
  – Previously found reduced risk of low birthweight with home visiting -- only for those who had a first child with low birthweight*

Objectives & Aims

1. Determine if the number of visits contributed to birthweight for second children
2. Determine if there was an interaction between number of visits and having a previous low birthweight child
Study Rationale

• Visit dose impacts
  – Engagement in the program
  – Opportunities to gain knowledge and support

• Visit dose impacted by
  – By various factors: client, HV, site

• High risk clients may have greatest benefit from home visiting
  – If previous low birthweight child, may have elevated risk for second low birthweight child
Methods - data

• Secondary data analysis
• Memphis New Mother’s Study
  • One of the trials that led to Nurse-Family Partnership
  • Recruited primiparous pregnant women at clinic serving Medicaid women
• 512 mothers had a second child within 18 years
• Variables
  – Birthweights obtained from birth certificates
    (dichotomized: < 2500 g vs ≥ )
  – Covariates that were unequal (p<.3) between home visited & control groups were included
Methods - analysis

• Logistic regression

• Dependent variable
  – Low birthweight of second child

• Key independent variables
  – Number of visits: total or during pregnancy
  – Low birthweight of first child
  – Number of visits * Low birthweight of first child
Results

• Sample description
  – 94% African-American
  – Mean age = 17.7 years (range 12 to 29) at intake
  – Mean discretionary income = $967/year at intake

• Average number of visits
  – 7.8 during pregnancy (75% of recommended)
  – 38 total (67% of recommended)

• Low birthweight
  – First children: 11.7%
  – Second children: 12.8%
Additional results withheld because a manuscript is being prepared for publication
Conclusions

• After a first LBW child, more home visits may reduce the likelihood of a subsequent LBW child
• # of visits during 1st pregnancy decreases likelihood of LBW in the future
• Possible reasons for interaction
  – Mothers with first LBW child may be more concerned about repeating the experience
  – Risk factors for second LBW may have been identified and home visitor helped address them
Implications

• Consider targeted interventions for mothers with LBW first children

• Interaction with dose suggests a ceiling effect
  – more visits did not yield additional benefits (for this outcome)

• Next steps
  – Examine in other settings & programs
  – Consider roles of content, relationship, other possible active ingredients during these important visits
Thank you!

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