Breastfeeding in Northeast Tennessee

Beth Bailey, PhD
Associate Professor
Department of Family Medicine
East Tennessee State University
Acknowledgements

Funding for this project, part of work done by the Tennessee Intervention for Pregnant Smokers (TIPS) Program, was provided by Governor Phil Bredesen’s Office of Children’s Care Coordination.
Southeastern United States has lowest rates of breastfeeding in the nation

Initiation rates in many areas are below 50%

Many recent efforts to improve rates have been undertaken – how successful have those been?

Additionally, what factors are related to how successful those efforts are?
Background

- National research has identified many factors associated with failure to breastfeed:
  - Maternal age
  - Maternal education level/SES
  - Marital status
  - Race/ethnicity
  - Negative health behaviors
  - PNC advice and available resources
  - Infant health at delivery
Current Investigations

Two separate studies:

- Analysis of all delivery data in the region over the last six years

- Data collection related to breastfeeding from women recruited during pregnancy and followed longitudinally to eight months post-partum
Participants

- All deliveries from January 1, 2006 through December 31, 2007 at two area hospitals
- Total sample size of 2323 women
Participants

- Delivery, newborn, and prenatal charts were reviewed
- Data collected included background characteristics, health and health behavior factors, and delivery outcomes
Variables of Interest

- Breastfeeding initiation
- Demographics
- Health history
- Health behaviors (smoking, alcohol and drug use, PNC)
- Birth outcomes
Results – Sample Description

- 95% Caucasian
- 2/3 H.S. grad
- 50% Married
- 2/3 TennCare
- Vast majority of newborns fullterm and assigned to regular nursery
Results – Sample Description

- 1 in 10 had some history of mental health issues
- 1/3 had less than adequate prenatal care utilization
- 1 in 10 had illicit drug use during pregnancy
- 2 in 5 smoked
Only 51% initiated breastfeeding, with 20% of these women already supplementing with formula by the time they left the hospital.
Results – Predictors

- Factors NOT associated with breastfeeding initiation:
  - Mental health history
  - Infant health status/birth outcomes
  - Adequacy of PNC utilization
Results – Predictors

- Factors PREDICTIVE of failure to breastfeed:
  - Age
  - Education
  - Type of medical insurance
  - Parity
  - Illicit substance use
  - Smoking
## Results – Predictors

<table>
<thead>
<tr>
<th>Predictors</th>
<th>% Breastfeeding</th>
<th>Relative Risk of NOT Breastfeeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some college or more</td>
<td>71%</td>
<td>0.43</td>
</tr>
<tr>
<td>HS grad or less</td>
<td>43%</td>
<td>1.42</td>
</tr>
<tr>
<td>Married</td>
<td>60%</td>
<td>0.68</td>
</tr>
<tr>
<td>Unmarried</td>
<td>41%</td>
<td>1.41</td>
</tr>
<tr>
<td>Private Insurance</td>
<td>70%</td>
<td>0.46</td>
</tr>
<tr>
<td>TennCare or None</td>
<td>43%</td>
<td>1.41</td>
</tr>
</tbody>
</table>
## Results – Predictors

<table>
<thead>
<tr>
<th>Predictors</th>
<th>% Breastfeeding</th>
<th>Relative Risk of NOT Breastfeeding</th>
</tr>
</thead>
<tbody>
<tr>
<td>No other children</td>
<td>60%</td>
<td>.70</td>
</tr>
<tr>
<td>One or more other children</td>
<td>45%</td>
<td>1.30</td>
</tr>
<tr>
<td>Non-Smoker</td>
<td>63%</td>
<td>.63</td>
</tr>
<tr>
<td>Smoker</td>
<td>36%</td>
<td>1.85</td>
</tr>
</tbody>
</table>
Results – Follow-up Analyses

- Smoking at higher levels associated with failure to breastfeed:
  - < ½ pack/day – 50% breastfeeding rate
  - ≥ 1 pack/day – 25% breastfeeding rate

- Longer history of smoking associated with failure to breastfeed:
  - < 5 yrs – 41%
  - ≥ 5 yrs – 35%
What Did We Learn?

- Very low rates of breastfeeding initiation (50% vs 75% nationally)
- Women at highest risk of not breastfeeding include those who are younger, unmarried, low income, second or later child, and have only a high school education
What Else Did We Learn?

- Women who smoke are at particularly high risk for not breastfeeding.
- Risk increases for women who smoke a pack or more per day, and who have smoked 5 years or more.
How Can We Use This Information?

- There is a clear profile of those at highest risk for choosing not to breastfeed
- Also, findings show that women who choose not to breastfeed are no less likely to receive consistent and regular PNC – opportunity for education and intervention
Final Comments – Breastfeeding and Smoking

- Quitting is best
- Even for babies of women who smoke, breastfeeding is still the best choice
- Any risks associated with increased nicotine exposure through breast milk are far outweighed by the benefits
- In fact, some evidence that breastfeeding may provide some protection against second hand smoke exposure
Final Comments – Breastfeeding and Smoking

- Additional research is needed to understand why smokers are choosing not to breastfeed
- Important to avoid a “double whammy”
- AAP says breastfeeding should be encouraged regardless of smoking status
Additional Data

- Ongoing study – interview women in third trimester about breastfeeding
- About 100 women so far
- Less than 5% undecided about feeding choice; 83% began thinking about choice before end of first trimester
- Only 41% committed to exclusive breastfeeding
Of those who already decided NOT to breastfeed, reasons given included going back to work (46%), uncomfortable with the thought of it (35%), and just don’t want to (27%)

51% said they would be uncomfortable breastfeeding in public

20% felt that if they breastfed they would be too restricted in smoking or taking medications

21% wanted to know more about risks and benefits of breastfeeding while smoking
Predictors of Breastfeeding:
Data from Northeast Tennessee

Beth Bailey, PhD
Associate Professor
Department of Family Medicine
East Tennessee State University