CDC National Survey of
maternity Care Practices in Infant Nutrition and Care (mPINC):

Using State Reports to
Inform, Influence, and Monitor Change

Katherine Shealy, MPH, IBCLC, RLC
Deborah Dee, PhD, MPH
Division of Nutrition, Physical Activity and Obesity
National Center for Chronic Disease Prevention and Health Promotion
Centers for Disease Control and Prevention
Atlanta, GA

State Breastfeeding Coalitions Teleconference
August 11, 2009
I. CDC mPINC Survey background (brief review)
   a. Rationale
   b. Survey development and implementation
   c. Survey findings

II. State mPINC Reports
   a. Framing/Audience
   b. Structure
   c. Contents
   d. Priority Areas

III. Utilizing the State mPINC Report
   a. Statewide collaborations
   b. Collaboration across facilities
   c. Facility Quality Improvement efforts
   d. Research opportunities

IV. Future plans
   a. Preparing for the 2009 mPINC Survey

Review:
Maternity practices influence breastfeeding

- Providing discharge packs with infant formula samples increases likelihood of formula supplementation by 39% (Oregon PRAMS data; Rosenberg et al., 2008)

- Number of supportive maternity practices mothers experience predicts risk of breastfeeding cessation (DiGirolamo et al., 2008)

- Supportive maternity practices associated with continued breastfeeding at 8 weeks (Murray et al., 2007)
What is the point of assessment and monitoring?

- Monitor progress
  - Target problematic practices
- Provide data for advocacy for change
- Enable performance benchmarking
- Improve maternity care practices
- Establish these practices as standard aspects of perinatal care
- **Improve health outcomes for mothers and their babies**
**mPINC Survey Concepts**

Practices and policies related to the WHO/UNICEF *Ten Steps to Successful Breastfeeding*

Labor and birthing practices such as:
- Induction & augmentation
- Mode of delivery

Postpartum care practices such as:
- Infant location for routine procedures

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**mPINC Methodology**

- Biennial national census of facilities routinely providing maternity services
- Single key informant
- Assesses ‘usual practice’ among healthy, term newborns
- 52 survey questions, 36 used in 7 care dimensions
- Higher scores for more supportive practices
  - Care dimension subscores: average of points for each question in the dimension
  - Composite quality scores: average of care dimension subscores
State mPINC reports provide each state with a targeted, concise, prioritized, action-oriented summary of their data.

Planned audience for each state includes:

- Breastfeeding Coalitions
- Perinatal Associations
- CDC Funded Obesity Programs
- Health Departments
- WIC Agencies
- Medicaid Programs
- Insurance Commissions
- AAP Chapters
- ACOG Chapters
- ANA Chapters
- AWHONN Chapters
- ILCA Affiliates
- Hospital Associations

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Changes in Maternity Care Practices Improve Breastfeeding Rates
Breastfeeding provides optimal nutrition for infants and is associated with decreased risks for infant and maternal morbidity and mortality. Maternal depression and social deprivation are strong predictors of breastfeeding failure. A systematic review of interventions found that increasing levels of support were associated with increased breastfeeding rates. Several strategies are effective including those that focus on preparing mothers to breastfeed, creating a supportive environment for breastfeeding, and increasing community-level support to make breastfeeding the norm. More information can be found at www.cdc.gov/breastfeeding

Maternity Practices in Infant Nutrition and Care in State

1. What is this & who did it?
2. Why change maternity care?
3. What's going well?
4. What's not?
5. Who cares about breastfeeding?

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Maternity Practices in Infant Nutrition and Care in State

This report describes specific opportunities to improve mother-baby care at hospitals and birth centers in State in order to more successfully meet national quality of care standards for perinatal care.

In 2007, CDC administered the first national Maternity Practices in Infant Nutrition and Care ("mPINC") survey. All hospitals and birth centers in the U.S. that provide maternity care were invited to participate.

Visit [www.cdc.gov/mpincc](http://www.cdc.gov/mpincc) for more information about the survey.

Changes in Maternity Care Practices Improve Breastfeeding Rates

Breastfeeding provides optimal nutrition for infants and is associated with decreased risk for infant and maternal morbidity and mortality. Maternity practices in hospitals and birth centers can influence breastfeeding behaviors during a period critical to successful establishment of lactation. The literature, including a Cochrane review found that institutional changes in maternity care practices to make them more supportive of breastfeeding increased initiation and duration of breastfeeding.

Breastfeeding is a National Priority

Breastfeeding protects mothers’ and infants’ health. Healthy People 2020 includes breastfeeding as a national priority and is recommended by a number of health professional organizations. Establishing evidence-based, breastfeeding-supportive maternity practices as standards of care in US hospitals and birth centers will help meet Healthy People 2020 breastfeeding objectives and will help improve maternal and child health nationwide.

Strengths in Breastfeeding Support at State Facilities

| Documentation of Mothers’ Feeding Decisions | Standard documentation of infant feeding decisions is important to adequately support maternal choice. |
| Prenatal Breastfeeding Instruction | Prenatal education about breastfeeding is important because it provides mothers with a better understanding of the benefits and requirements of breastfeeding, resulting in improved breastfeeding rates. |

Needed Improvements in State Facilities

- Appropriate Use of Breastfeeding Supplements
- Adequate Assessment of Staff Competency
- Protection of Patients from Formula Marketing
- Inclusion of Model Breastfeeding Policy Elements

Slide 11

Slide 12
### mPINC Results

#### Some positive policy elements are already widespread in most facilities.

**92.5% of facilities include breastfeeding education as a routine element of their prenatal classes.**

**98.5% of facilities consistently ask about and record mothers’ infant feeding decisions.**
Almost 2/3 of facilities unnecessarily separate mothers and infants within the first 30 minutes of life.

Are mother and baby usually skin-to-skin while staff are completing routine newborn procedures?

- Yes: 38%
- No: 62%

NB: Routine newborn procedures include Apgar, foot printing, ID banding, etc.

The most effective discharge care is also the rarest.

- Return clinic visit: 31.2%
- Home visit: 21.4%
- Telephone call: 54.9%
- Center support group: 40.9%
- Referral to support group: 54.7%
- LC referral: 71.3%
- WIC referral: 90.9%
- Outpatient clinic referral: 27.0%
- Phone # given: 93.8%
- List of resources: 79.3%
- Bleeding assessment sheet: 51.5%

Percent of facilities reporting each practice
Staff breastfeeding training and competency assessment is inadequate, especially for new staff.

- New staff receive <18 hours of breastfeeding training: 94.4%
- Existing staff receive <5 hours of breastfeeding training: 75.6%
- Few/some staff received any breastfeeding education in last year: 40.7%
- Staff competencies assessed less than annually: 56.5%

The CDC mPINC Survey

1. Who did this?
4&5. How does my state measure up?
6. What else did CDC find?

Evidence-based maternity care supports evidence-based decision making and increases the chance that mothers will achieve breastfeeding goals.

Improvement is Needed in Maternity Care Practices and Policies in States

State surveys provide information on whether current policies and practices promote evidence-based improvements in maternity care. States should consider the following:

- Establish state requirements for hospital policies and evaluate their impact on breastfeeding rates.
- Implement evidence-based guidelines to support breastfeeding.
- Include breastfeeding support in performance measures.
- Develop and monitor state measures of breastfeeding success.
- Develop and implement breastfeeding education and training programs for new and existing staff.
- Promote breastfeeding peer support programs.
- Establish breastfeeding peer support programs.
- Develop and implement state-level policies and practices to support breastfeeding.

CDC findings:

- New staff receive <18 hours of breastfeeding training.
- Existing staff receive <5 hours of breastfeeding training.
- Few/some staff received any breastfeeding education in last year.
- Staff competencies assessed less than annually.

The CDC mPINC survey is a voluntary, on-line survey that provides the opportunity for people to provide feedback.
6. What else did CDC find?

<table>
<thead>
<tr>
<th>mPINC Dimension of Care</th>
<th>Ideal Responses to mPINC Survey Question</th>
<th>Percent of Facilities with Ideal Responses</th>
<th>State Subtotal Scores (out of 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor and Delivery Care</td>
<td>Initial skin-to-skin contact in 1st h (improvement)</td>
<td>36</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Initial skin-to-skin contact in 2nd h (improvement)</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Initial breastfeeding opportunity in 1st h (enforcement)</td>
<td>66</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>Initial breastfeeding opportunity in 2nd h (enforcement)</td>
<td>26</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Routine procedures are performed skin-to-skin</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Feeding of Breastfed Infants</td>
<td>Initial feeding is breast milk (improvement)</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Supplemental feeding to breastfed infants are rare</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Water and glucose water are not used</td>
<td>27</td>
<td>25</td>
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<tr>
<td>Breastfeeding Practices</td>
<td>Infant feeding decision documented</td>
<td>39</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Staff provide breastfeeding advice &amp; instructions</td>
<td>91</td>
<td>82</td>
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<tr>
<td></td>
<td>Parents are taught breastfeeding care</td>
<td>79</td>
<td>20</td>
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<tr>
<td></td>
<td>Patients are taught not to limit sucking time</td>
<td>33</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Staff directly observe &amp; assist breastfeeding</td>
<td>14</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Standard feeding assessment tool is used</td>
<td>63</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Pallbearers are rarely provided to breastfeeding infants</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Contact Between Mother and Infant</td>
<td>Mother-infant pairs room-in at night</td>
<td>42</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Most mother-infant pairs are not separated during the hospital stay</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Neonates in infants are brought to mothers at night for feeding</td>
<td>56</td>
<td>26</td>
</tr>
<tr>
<td>Facility Characteristics</td>
<td>Staff provide appropriate discharge planning (materials &amp; other home-based support)</td>
<td>54</td>
<td>40</td>
</tr>
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<td></td>
<td>Discharge packet containing product marketing infant formula samples are not given to breastfeeding infants</td>
<td>15</td>
<td>14</td>
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<td></td>
<td>New staff receive breastfeeding education</td>
<td>7</td>
<td>34</td>
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<tr>
<td></td>
<td>Current staff receive breastfeeding education</td>
<td>24</td>
<td>23</td>
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<tr>
<td></td>
<td>Most staff received breastfeeding education in the past year</td>
<td>36</td>
<td>26</td>
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<td></td>
<td>Assessment of staff competency in breastfeeding management &amp; support (e.g., best practices)</td>
<td>46</td>
<td>30</td>
</tr>
<tr>
<td>Staff Training</td>
<td>Total staff reach breastfeeding policy &amp; procedures for all breastfeeding infants</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Facility provides breastfeeding support to employees</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Facility does not receive infant formula free of charge</td>
<td>1</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Breastfeeding is included in prenatal patient education</td>
<td>94</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Facility has a designated staff member responsible for coordination of lactation care</td>
<td>79</td>
<td>41</td>
</tr>
</tbody>
</table>

Improvement is Needed in Maternity Care Practices and Policies in State

Many opportunities exist in State to protect, promote, and support breastfeeding mothers and infants. To take action on this critical need, consider the following:

☑ Examine state regulations for maternity facilities and evaluate their evidence base; revise if necessary.
☑ Sponsor a state summit or key decision-making staff at maternity facilities to highlight the importance of evidence-based practices for breastfeeding.
☑ Pay for hospital staff across State to participate in 18-hour training courses in breastfeeding.

7. What can we do?

☑ Establish links among maternity facilities and community breastfeeding support networks in State.
☑ Identify and implement programs within hospital settings—choose one widespread practice and adjust it to be evidence-based and supportive of breastfeeding.
☑ Integrate maternity care into related Quality Improvement efforts including:
  ● Consistent delivery of optimal care
  ● Improving patient flow
  ● Improving patient experience & loyalty
  ● Engaging physicians in a shared quality agenda
  ● Increasing staff efficiency
  ● Optimizing hospital-to-home transitions
☑ Develop a plan to ensure adherence to the Joint Commission’s recently revised (July 2009) Perinatal Care Core Measure Set to include exclusive breastfeeding at discharge in hospital data collection starting with April 1, 2010, discharges.
Central location for mPINC information: www.cdc.gov/mpinc

Methodology

General and Detailed Results Tables

Downloadable files
- Survey instruments (hospital and birth center versions)
- Sample Benchmark Report
- Information sheets on:
  - Maternity care practices and breastfeeding
  - General mPINC information
  - mPINC dimensions of care
  - Benchmark Reports

State Example: Massachusetts

Roger Edwards, ScD
Bouvé College of Health Sciences
Northeastern University
ro.edwards@neu.edu
The project was designed to ensure a safe and healthy beginning for all newborns by testing measures, strategies, and tools based on the key aspects of the revised AAP hyperbilirubinemia guideline, including:

1) the assessment of a newborn’s risk for severe hyperbilirubinemia,
2) support for breastfeeding mothers, and
3) coordination of care between the newborn nursery and primary care practice—the newborn’s medical home.

As a result of this project, these tested tools are now available for widespread use. (http://www.aap.org/qualityimprovement/quiin/SHB.html)
Many hands make light work...

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- Jennifer Cohen
- Mary Kay Dugan
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- Anne Merewood
- Carol Melcher
- Barbara Philipp
- Molly Pessl
- Amy Spangler
- Cindy Turner-Maffei
- Christopher Wade

Thank you!

Katherine Shealy  kshealy@cdc.gov
Deborah Dee       ddee@cdc.gov
Roger Edwards      ro.edwards@neu.edu

www.cdc.gov/breastfeeding
www.cdc.gov/mpinc
Questions?