The Role of Pediatrician in the Baby-Friendly Hospital Initiative

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Disclosure

• I have no relevant financial relationships with the manufacturer(s) of any commercial product(s) and/or provider of commercial services discussed in this CME activity.

• I do not intend to discuss an unapproved/investigative use of a commercial product/device in my presentation.
Objectives

• Understand that breastfeeding matters
• Identify the evidence that physicians need education and describe how to become educated
• Explain why physicians are necessary in implementation of the BFHI
• Describe promising strategies
“By failing to prepare, you are preparing to fail.”

Benjamin Franklin
Importance of Breastfeeding
“Dose Dependent”
Infant Outcomes

Obesity  
- Excl. BF vs. None  
  - 34%

Type 1 Diabetes Mellitus  
- BF > 3 months  
  - 30%

Type 2 Diabetes Mellitus  
- any BF vs. None  
  - 40%

Cancer:
- 1. ALL  
  - BF > 6 months  
  - 20%
- 2. AML  
  - BF > 6 months  
  - 15%

Sudden Infant Death Syndrome  
- any BF vs. None  
  - 36%

S. Ip, et al.  
AHRQ Review  
2007
Breastfeeding Leads to Self-Regulation

- Exclusive breastfeeding (at breast) 27%
- Expressed breast milk in bottle 47%
- Combination breastfeeding (Formula feeding, Breast/bottle) 56%
- All formula in a bottle 68%

How often does your infant empty the bottle/cup after 7 months of age?

Breastfeeding Protective Factors for Mothers

1. **Type 2 Diabetes Mellitus** for each year of breastfeeding for women 12%

2. **Pre-menopausal Breast Cancer** for each year of breastfeeding 28%

3. **Ovarian Cancer** for any vs. no breastfeeding and dose response 21%

4. **Post-partum Depression** for short breastfeeding vs. no breastfeeding

Who can Breastfeed?

Almost All!
Physicians Need Education
Historical Perspective

Graph data from the Mother’s Survey, Ross Products Division of Abbott
Knowledge and Attitudes

• Sometimes it is what we don’t say or are “too vague” in saying

• Sometimes it’s not what we say... but what we do
  – give out formula company literature and portray bottle feeding as the norm in the office setting
  – Recommend formula supplementation when it is not indicated
Why Physicians matter?

• Encouragement from health care providers is associated with *breastfeeding initiation*
  

• ...and *continuation*
  
Influence of Pediatricians on Weaning

<table>
<thead>
<tr>
<th>Recommending Action</th>
<th>AOR</th>
<th>CI</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommend formula supplementation if infant is not gaining enough weight</td>
<td>3.2</td>
<td>(1.04–9.7)</td>
<td>.04</td>
</tr>
<tr>
<td>Advice to mothers...</td>
<td>2.2</td>
<td>(1.2–3.9)</td>
<td>.01</td>
</tr>
<tr>
<td>Does not recommend exclusive breastfeeding during the first month of life</td>
<td>2.1</td>
<td>(0.95–4.7)</td>
<td>.07</td>
</tr>
</tbody>
</table>

Why Physicians Matter?

Development of a Residency Curriculum through the AAP

• AAP Breastfeeding Promotion in Physician Office Practices (BPPOP) III-funded by MCHB:
  – Residency Curriculum

• Included three major sections:
  – Advocacy
  – Clinical Management
  – Delivering Culturally Competent Breastfeeding Care

Pilot tested June 2006- June 2007
7 test sites; 7 comparison sites
With additional funding from the CDC
Traditional vs. Competency-based Education

Competency-based Education

• **Health System needs**
  – Need to improve physician knowledge, skills and attitudes to support exclusive breastfeeding

• **Competencies**
  – Skills in taking history, doing assessments and counseling

• **Outcomes**
  – Increased Exclusive Breastfeeding

• **Assessment of Outcomes**
  – measure rates

• **Assessment of Competencies**
  – Tools
  – Direct observation, OSCE

• **Develop curriculum**
AAP Breastfeeding Curriculum

• Intended for a multispecialty audience
  – Pediatrics
  – Ob/GYN
  – Family Medicine

• Flexible for 1-year implementation

• Organized by ACGME Core Competencies
  – Patient Care, Medical Knowledge, Practice-based Learning and Improvement, Interpersonal and Communication Skills, Professionalism, Systems-based Practice

• Evaluation Tools designed to facilitate residency program director review and tracking of residents’ progress
Impact of Curriculum on Residents

### TABLE 3
Improvements in Knowledge, Confidence, and PPs among Residents Exposed Versus Not Exposed to Curriculum

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
<th>OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>n</td>
<td>n Not Improved</td>
<td></td>
</tr>
<tr>
<td>Knowledge</td>
<td>154</td>
<td>129</td>
<td>25</td>
<td>2.767</td>
</tr>
<tr>
<td>Confidence</td>
<td>152</td>
<td>115</td>
<td>37</td>
<td>2.411</td>
</tr>
<tr>
<td>PPs</td>
<td>152</td>
<td>111</td>
<td>41</td>
<td>1.166</td>
</tr>
<tr>
<td>PPs, excluding cultural questions</td>
<td>152</td>
<td>106</td>
<td>46</td>
<td>2.171</td>
</tr>
</tbody>
</table>

CI indicates confidence interval.
### Implementing Curriculum Raises Rates of Breastfeeding

<table>
<thead>
<tr>
<th>Type of Feeding</th>
<th>Before, n (%)</th>
<th>After, n (%)</th>
<th>Change, %</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breastfeeding rates in infants at study initiation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before and after implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention sites</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>504</td>
<td>493</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>78 (15.5)</td>
<td>114 (23.1)</td>
<td>7.5</td>
<td>.002</td>
</tr>
<tr>
<td>Overall breastfeeding</td>
<td>383 (76.0)</td>
<td>398 (80.7)</td>
<td>4.7</td>
<td>.071</td>
</tr>
<tr>
<td><strong>Control sites</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>701</td>
<td>701</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>193 (27.5)</td>
<td>214 (30.5)</td>
<td>3.0</td>
<td>.239</td>
</tr>
<tr>
<td>Overall breastfeeding</td>
<td>454 (64.8)</td>
<td>467 (66.6)</td>
<td>1.8</td>
<td>.500</td>
</tr>
<tr>
<td><strong>Breastfeeding rates 6 mo before and after implementation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before and after implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Intervention sites</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>300</td>
<td>300</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>7 (2.3)</td>
<td>27 (9.0)</td>
<td>6.7</td>
<td>.001</td>
</tr>
<tr>
<td>Overall breastfeeding</td>
<td>76 (25.3)</td>
<td>86 (28.7)</td>
<td>3.4</td>
<td>.291</td>
</tr>
<tr>
<td><strong>Control sites</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>499</td>
<td>550</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>58 (11.6)</td>
<td>34 (6.2)</td>
<td>-5.4</td>
<td>.002</td>
</tr>
<tr>
<td>Overall breastfeeding</td>
<td>134 (26.9)</td>
<td>139 (25.3)</td>
<td>-1.6</td>
<td>.574</td>
</tr>
</tbody>
</table>
What Did We Teach?

• Advocacy
  – Protection of breastfeeding, BFHI, the Code
  – Promotion of breastfeeding using specialized counseling strategies
  – Motivational interviewing

• Basic Skills
  – Anatomy
  – Physiology
  – Case management
  – Solving common problems
Ways to Get Education

• Learn: Attend a workshops on breastfeeding management: AAP, NCE, ABM, LLL Physicians’ Seminar; Use the physicians’ handbook (AAP/ACOG/AAFP)
• See one do one teach one
• Eliminate...formula company’s influence
• Lunch and learns
• Decorate...use breastfeeding posters with images of multiple cultures
Learn

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™
Improve Knowledge

Self directed learning:

• Wellstart Modules on line Level 1

• [www.Breastfeedingbasics.org](http://www.Breastfeedingbasics.org)

• AAP Residency Curriculum: Knowledge

• Stanford resources: [http://newborns.stanford.edu/Breastfeeding/](http://newborns.stanford.edu/Breastfeeding/)

• University of Virginia (MOC approved)

• Breastfeeding answer book
See one... do one... teach one

Photo courtesy of Jane Morton, MD
What Can You Do in an Academic Medical Center?

- Conduct faculty development
- Teach residents to improve the care of breastfeeding
- Spread to the medical students
- Participate in skills fairs
- Use flip charts in prenatal clinic
Skills Fairs-One Day

- Stations
  - Assess breastfeeding dyad
  - Maintain milk supply
  - Use of pumps, shields, other tools
  - Solve common problems

- Interdisciplinary

- Volunteers from LLLI
AAP Breastfeeding Policy
Recommendations:

Clinicians and staff should:

• Support exclusive breastfeeding for 6 months
• Recommend human milk for ALL infants, unless medically contraindicated
• Provide continued support for 1 year and beyond
• Provide parents with complete and current information on the benefits and techniques of breastfeeding

Before you begin –

- Conduct a needs assessment
- Pediatrician can be the team leader.

- What is currently available for breastfeeding learning opportunities?
- What do pediatricians know about breastfeeding, and are they able to provide evidence based care?
- How well do pediatricians promote, manage, and support breastfeeding? (survey mothers, nurses, residents, and faculty, about their experiences.)
- Are staff at the hospital able to breastfeed or express breast milk at work?
- What are the areas needing special attention?
mPINC Scores CT Compared to US

18% of facilities adhere to guidelines for supplementation

21% provide mother-infant care
4% do exams in the moms room

21% of facilities provide discharge support

Source: CDC mPINC 2009
Risk of Breastfeeding Cessation before 6 weeks by Number of Steps in Place

Source: DiGirolamo et al. 2008
Hospital Practices and The Effect on Breastfeeding at 8 Weeks

Source: NJ PRAMS data 2010
What can you do to help Implement the BFHI?

• **Step 1**: Know your policy and where it is located
• **Step 2**: Get educated and develop skills
• **Step 4**: Support immediate skin to skin for 1 hour and continuous thereafter
• **Step 5**: Show mothers how to breastfeed and help them maintain breastfeeding if the baby needs to be separated (within 3-6 hours); educated formula feeding mother individually
What can you do to help Implement the BFHI?

• **Step 6**: Only order (recommend) formula if it is medically necessary

• **Step 7**: Keep babies together rooming-in, do your exams in the mother/infant room (request needed supplies)

• **Step 8**: Support cue-based feeding (no time limits on feed or intervals)
“Neonatal Observation Unit”

The best nursery is empty
What can you do to help implement the BFHI?

• **Step 9**: Don’t provide pacifiers and recommend against their use until breastfeeding is established

• **Step 10**: Schedule follow-up visit within 2 days
Best Care Least Often

Percent of facilities providing care in NJ

Source: CDC mPINC 2009
Newborn Hospital Follow Up

• Periodic Survey data (AAP survey of Fellows)- 38% of pediatricians do F/U within 5 days of life (<48 hours after discharge)

• NJ PRAMS indicate that this varies according to insurance status

Newborn Follow-up

Figure 1: Pediatric visit in first week after discharge, No NICU

Source: NJ PRAMS 2010
Requirements of BFHI

• Staff (ALL need some training)
  • “Nursing staff with primary responsibility for helping mothers initiate breastfeeding should have, at minimum…”
    – 20 hours
    – 5 hours of clinical mentoring

• Physicians and APRN’s
  – 3 hours
  – May be grand rounds
  – Covers at least 8 of 10 steps
  – But physicians need to know same content as nurses!!
Understand - Positioning

- Watch how the mother positions the baby for feeding and look
  - Maternal Comfort
  - How the infant is positioned
  - Infant brought to the breast, not the breast to the infant
  - *Avoid* pushing on the back of the infant’s head
Facilitate – Latch-on

• Watch how the baby is latched to the breast and look:

• Infant-led self-attachment
  – Use of the C-hold to make a sandwich for the baby to latch on
  – Acknowledgement of the rooting reflex
    • Middle of infant’s lip stroked with nipple
    • Infant opens his mouth wide
    • Mother quickly draws the infant to her breast
    • Infant takes in an adequate amount of the breast, not just nipple
Anatomy of Breast, Baby's Mouth, Latch and Suckling
Identify – Milk Transfer

• Watch the baby as she sucks and swallows and milk is transferred. Look and listen for:
  – Audible swallowing
  – Sucking that begins with rapid bursts to stimulate milk let-down
  – A rhythm of sucking, swallowing, and pauses following establishment of milk flow
    • Becomes slower and more rhythmic
    • Approximately 1 suckle/swallow per second
Prevention, Prevention, Prevention

• Prevention is the most effective way to deal with the management of low milk supply (real or perceived), sore nipples, and poor weight gain
• Understanding and being able to explain to mothers how normal breastfeeding is established is the key to prevention
• Protect mother’s milk supply!
• All mothers taught to hand express (use video)
Lactogenesis is the transition in the mammary gland from pregnancy to lactation

Lactogenesis I and II

Lactogenesis II: the onset of copious milk secretion associated with parturition
Myo-epithelial Cells Surround Lactating Alveolus for MER

- Oxytocin causes milk to be ejected into the duct system ("let down")

Photo Credit: M. Neville
Appreciate Normal Weight Loss Patterns

- Average infant weight loss: 4.9%  
  (range 0.00%-9.9%)

- Weight loss >7%  
  –20% (23/118)

- Weight loss >8%  
  –7% (8/118)

- Weight loss >10%  
  –0 infants

Grossman X, Feldman-Winter L, Merewood A.  
Over-feeding in early life

• Exclusive breastfeeding:
  • 15-30cc day 1
  • 30-150cc day 2

• Exclusive formula feeding:
  • 60-90 cc every 2 to 3 hours each day; approx 24 ounces (720cc)
Results by Feeding

Infant weight loss nadir was significantly associated with feeding category (p=0.00)

Days after birth when weight loss nadir reached

58.5% reached weight loss nadir by 2 days after birth

On-Site Assessment

• Quantitative and Qualitative
• Interviews with:
  – CEO
  – Senior nursing administrator
  – Purchasing agent
  – Nurse manager, Prenatal Service
  – Unit manager, Maternity & NICU/SCU
  – Training coordinator
  – Baby-Friendly project coordination team
Assessment
Interviews, cont.

• Randomly selected key informants:
  – 5+ physicians with privileges on maternity
  – 10+ nursing staff (day and evening shifts)
  – 10+ prenatal woman >32 wks gest
  – 10+ mothers of vaginal delivery
  – 5+ mothers of cesarean delivery
  – 5+ mothers of babies in NICU/SCU
Assessment Activities

Random observations are made throughout the survey of:

- staff competency with breastfeeding teaching
- birth practices
- location of babies on the unit
- mothers’ feeding competency
- visible messages about infant feeding
Conclusions

• Pediatricians are necessary for the BFHI
• Interdisciplinary care model works
• Need physician champions
• Make education fun an innovative, case-based, clinically relevant
• Mock Site Visits, analogous to simulated Joint Commissions inspections
“Well done is better than well said.” – Benjamin Franklin