Increasing Breastfeeding Across Settings: The Current State

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Disclosures

- I have no conflicts of interest to disclose
Increasing Breastfeeding

- Current state
  - Overview
  - Hospitals
  - Primary care providers/clinical offices
  - Worksites
Overview

- Why is breastfeeding important?
- Does it matter in medically advanced countries?
- If there are benefits of breastfeeding are there risks of other feeding?
Evidence Report/Technology Assessment:

- Based on rigorous analysis of scientific literature
- used to develop quality measures, guidelines, educational materials, research agendas
<table>
<thead>
<tr>
<th>Condition</th>
<th>% less if BF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otitis media</td>
<td>50%</td>
</tr>
<tr>
<td>Gastroenteritis</td>
<td>64%</td>
</tr>
<tr>
<td>Necrotizing enterocolitis</td>
<td>82%</td>
</tr>
<tr>
<td>Lower respiratory tract infections</td>
<td>72%</td>
</tr>
<tr>
<td>Atopic dermatitis/eczema</td>
<td>42%</td>
</tr>
<tr>
<td>Asthma – no family hx, family hx</td>
<td>27%, 40%</td>
</tr>
<tr>
<td>Obesity</td>
<td>24%</td>
</tr>
<tr>
<td>Type 1 diabetes</td>
<td>27%</td>
</tr>
<tr>
<td>Type 2 diabetes</td>
<td>39%</td>
</tr>
<tr>
<td>Childhood Leukemia – ALL, AML</td>
<td>19%, 15%</td>
</tr>
<tr>
<td>Sudden Infant Death Syndrome</td>
<td>36%</td>
</tr>
</tbody>
</table>
### AHRQ: Positive Maternal Outcomes

<table>
<thead>
<tr>
<th>Condition</th>
<th>% less in BF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breast Cancer-per year of lactation</td>
<td>28%</td>
</tr>
<tr>
<td>Ovarian Cancer</td>
<td>21%</td>
</tr>
<tr>
<td>Type 2 Diabetes-per year of lactation</td>
<td>12%</td>
</tr>
<tr>
<td>Postpartum Depression</td>
<td>association</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>equivocal</td>
</tr>
<tr>
<td>Postpartum weight loss</td>
<td>equivocal</td>
</tr>
</tbody>
</table>
Cognitive Development

- **AHRQ (evidence through 2006):** equivocal

- **12,000 infants UK Millennium Cohort Study (2012):** Improved cognitive development in breastfeeding (BF) term and preterm at 5 years

- **7,000 infants Britain and 600 Brazil (2011):** BF associated with increased IQ at age 4

- **1,312 infants Boston (2013):** 0.8 increase verbal IQ at age 7 per month exclusively BF; 0.35 per month any BF

- **Promotion of BF Intervention Trial (PROBIT), 2008:**
  - Followed 13,889 infants at 6.5 years
  - BF + 5.9 full-scale IQ, significantly higher teacher
Brain MRI of BF vs. formula fed children:

- Increased development in white matter regions of the brain associated with planning, social and emotional functioning, language
- Better performance on motor and visual acuity tests

*Neuroimage, 2013*
Statistical image showing regions of significant VF M difference between children breastfed for prolonged durations (greater than 15 months) and children breastfed for less than 12 months
Additional Child Health Benefits

• Decreased rates of:
  • Celiac disease
  • Inflammatory bowel disease
  • Hypertension
  • Hypercholesterolemia
Additional Maternal Health Benefits

- Decreased postpartum bleeding
- More rapid uterine involution
- Decreased menstrual blood loss
- Increased child spacing

Photo © Amy Kotler, MD, FAAP
Maternal Cardiovascular Disease

Data from the Women’s Health Initiative:
- Postmenopausal women who breastfed were less likely to develop:
  - Hypertension
  - Diabetes
  - Hyperlipidemia
  - Cardiovascular disease

- Longer duration of lactation associated with lower risk after adjusting for sociodemographic, lifestyle variables, family hx and BMI

Obstetrics and Gynecology, 2009
Economic Benefits

- Suboptimal breastfeeding associated with:
  - annual pediatric costs of $14.2 billion
  - $18.3 billion in preventable maternal health costs annually
The debate is over about the importance of breastfeeding for health outcomes for women and children in the United States. There is no debate. The real questions are: How do we support women and families in breastfeeding and exclusive breastfeeding? How are we currently supporting it, and how are we currently sabotaging it?“

• David Meyers, MD, FAAFP, Agency for Healthcare Research & Quality
• First Annual Summit on Breastfeeding, June 11, 2009
As evidence continues to accumulate, breastfeeding has become recognized as an important public health priority.

“Low rates of breastfeeding are a public health problem of national significance.”

- Surgeon General’s Call to Action to Support Breastfeeding
What are the current recommendations?
American Academy of Pediatrics

- Breastfeed for one year or longer
- Exclusive breastfeeding for 6 months
- Add solid food at about 6 months

AAP, 2012
Support AAP recommendation of breastfeeding for 1 year or longer, exclusive for 6 months

Providers should have the knowledge to promote, protect and support breastfeeding

No rules on weaning
How are we doing?
Update on Trends
Breastfeeding in the U.S.

- HHS 2020 goal for any BF:
  - 82% initiation
  - 60% at 6 months
  - 34% at 1 year
Breastfeeding in the U.S.

- HHS 2020 goal for exclusive BF:
  - 46% at 3 months
  - 25% at 6 months
More Women Are Breastfeeding and for Longer Periods

- From 2000–2008, the percentage of women who initiated breastfeeding went up to 75.2%.
- Infants that were breastfed at 6 and 12 months increased among all racial/ethnic groups.
- While 74.6% of infants born in 2008 began breastfeeding, only 23.4% met the recommended duration of 12 months. This indicates women may need more support to continue breastfeeding.
NYS BF rates

- 43% of NYS infants were exclusively BF while in the hospital
- Breastfeeding rates decrease post-hospital discharge and over time
Disparities persist by race/ethnicity, socioeconomic characteristics and geography.

- Low-income women less likely to BF than middle- and upper-income women.
- Women living in the southeastern US less likely to BF.
- Women living in rural areas less likely to BF.
Disparities

- BF rates for black infants are about 50% lower than for white infants
- Initiation gap has decreased from 35% to about 18%
- AA women work earlier after birth, likely to work in non-supportive settings.
- Black mothers may need more, targeted support to start and continue breastfeeding.
Quality Gap

- The majority of new mothers initiate BF, but few BF exclusively or for recommended duration
- What can be done to improve the “quality gap” between exclusive and any breastfeeding?
- What can be done to address disparities?
U.S. Surgeon General’s Call to Action 2011

- 20 action steps to improve breastfeeding in U.S.
  - Families
  - Communities
  - Media
  - Health Care
  - Employment
  - Research and Surveillance
  - Public Health Infrastructure
NYS Prevention Agenda: AIM

- Increase breastfeeding exclusivity for the first 6 months of life, and continued BF duration for the first 12 months of life.
- Make breastfeeding the norm rather than the “alternative.”
Paradigm Shift

- Norm for most mothers and infants rather than “best” or “special” → change in hospital, office, employment routines
- Important health decision rather than a lifestyle choice → families need accurate information
- Important public health priority → requires action in many areas
ACTION 1:
Recruit hospitals to participate in quality improvement efforts to increase BF exclusivity at discharge
Hospital Experience

- Majority of US/NYS women plan to breastfeed
- Most do not achieve their own goals
- The hospital experience influences breastfeeding intention, establishment, duration
1 in 3 mothers stop breastfeeding without hospital support.

www.cdc.gov/vitalsigns
The Ten Steps to Successful Breastfeeding

- Developed by WHO and UNICEF in 1991 to protect, promote and support breastfeeding in maternity hospitals
- Evidence based practice management and quality improvement
- Baby-Friendly Hospital Initiative – certification process
- Four in NYS; 150 in U.S.; 15,000 worldwide
The Ten Steps to Successful Breastfeeding, 1-5

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff
2. Train all health care staff in skills necessary to implement this policy
3. Inform all pregnant women about the benefits and management of breastfeeding
4. Help mothers initiate breastfeeding within one hour of birth
5. Show mothers how to breastfeed and maintain lactation if separated from their infants
The Ten Steps to Successful Breastfeeding, 6-10

6. Give infants no food or drink other than breast milk unless medically indicated
7. Practice rooming-in 24 hours a day
8. Encourage breastfeeding on demand
9. Give no pacifiers or artificial nipples to breastfeeding infants
10. Foster the establishment of breastfeeding support groups and refer mothers after hospital discharge
Evolutionary Biology and Neuroscience

- All mammals have a set sequence at birth.
- Newborn mammals follow inborn instincts in response to physical cues to engage in feeding behaviors necessary for survival.
- Newborn elicits caregiving behavior in mother.
- Mother provides warmth, protection, nutrition.
- Newborn *initiates* feeding.
- Newborn *maintains* feeding.
Skin to Skin Contact – Infant Effects

- Infants self-attach and nurse more effectively
- Increased milk production and infant weight gain
- Improved cardio-respiratory stability and oxygen saturation in late preterms
- Higher blood glucose at 75-90 minutes
- Better thermoregulation
- Less crying in skin-to-skin care
Skin to Skin Contact – Maternal Effects

- Oxytocin release:
  - Decreases maternal cortisol → lower stress
  - Increases social responsiveness, parenting behavior
  - Increases sense of mastery and confidence
- Breast skin temperature rises
- Less engorgement day 3
- Less post-op pain in mothers following Cesarean birth
- Strong preference for SSC in future births
Outcomes: Breastfeeding Rates/Duration

- Successful breastfeeding more likely with SSC than swaddling
- Higher BF effectiveness scores with SSC
- Increased BF duration by average 64 days
- More SSC dyads BF exclusively 3 to 6 months
Infant suckles at the breast

Stimulation of nerve endings in mother’s nipple/areola sends signal to mother’s hypothalamus/pituitary

Pituitary releases prolactin and oxytocin

Hormones travel via bloodstream to mammary gland to stimulate milk production and milk ejection reflex (let-down).
Throughout human history, neonatal survival depended on close continuous maternal contact.

Routine mother-infant separation after birth is unique to 20th century.

Early separation is stressful for mothers and infants → might result in persistent harmful effects.

Skin-to-skin contact improves BF rates:
- Infants 8x more likely to BF if SSC > 50 min.
- Exclusive BF 2x more likely if SSC > 60 min.
Perception of Insufficient Milk Supply

- Very common
- Common cause for early weaning
- Only about 2-3% of women will not produce adequate amounts of milk for their babies
- Hospital practices/wrong advice often cause insufficient milk supply
Common Causes of Insufficient Milk Supply

Anything that limits the infant’s ability to extract milk **effectively** and **frequently**:

- Separation of mother and infant
- Formula supplementation
- Scheduled intervals between feedings
- Poor latch
- Early use of pacifiers
- Prematurity
Supplementation with Formula

Percent of U.S. breastfed children who are supplemented with infant formula, by birth year

NYS: 38% supplemented by day 2; 56% by 3 months
NYC: 44% supplemented by day 2; 62% by 3 months
Medical Indications for Supplementation

- Very low birth weight, some premature infants
- Hypoglycemia not responsive to breastfeeding
- Severe maternal illness
- Inborn errors of metabolism
- Acute dehydration or excessive weight loss not responsive to routine breastfeeding
- Maternal medication use incompatible with breastfeeding
- Supplement with mother’s expressed milk (best), donor human milk or formula (requires a doctor’s order)
Rationale for Exclusive Breastfeeding

- Risks of supplementing with formula:
  - Decreased feeding at breast → less milk is produced
  - Artificial nipples and pacifiers may interfere with infant’s ability to suckle effectively and cause pain in mother

- Artificial milk interferes with immune system priming and gut colonization
Gut-associated Lymphoid Tissue

• Requires bacterial colonization after birth for optimal function
• Distinguishes innocuous antigens from pathogens
• Induction of T-cell activation
• Development of immunologic tolerance
• Oligosaccharides in human milk stimulate probiotics which stimulate infant’s immune system
The Joint Commission
Perinatal Care Core Measure on Exclusive Breast Milk Feeding

• The Joint commission defines exclusive breast milk feeding as:
  • a newborn receiving only breast milk and no other liquids or solids except for vitamins, minerals, or medicines
  • includes expressed mother’s milk as well as donor human milk, both of which may be fed to the infant by means other than suckling at the breast
  • Monitor in hospitals with > 1,100 annual births

http://www.jointcommission.org/perinatal_care/
Actions to promote BF in NY Hospitals

- **NYS BF QI in Hospitals Learning Collaborative (NYSBQIH):** improve maternity care practices and increase the percentage of infants exclusively BF during their hospital stay by implementing changes based on the 10 steps.

- **NYC BF Hospital Collaborative (NYCBHC):** implement system changes to increase rates of BF initiation, exclusivity and duration and to assist 10 hospitals to achieve BFHI designation.
Actions to promote BF in NY Hospitals

- **Great Beginnings NY:** reinforces compliance w/ NY’s Perinatal Services Regulations and the *Breastfeeding Mothers’ Bill of Rights* by limiting formula supplementation of BF infants, elimination of formula marketing in hospitals, and linking mothers to community supports.

- **Latch-On NYC:** support mothers who choose to BF by limiting formula supplementation of BF infants, limiting access to formula by staff, elimination of formula marketing in hospitals and tracking data on the number of bottles of formula distributed.
20th Century
21st Century
NYS Prevention Agenda: Primary Care

ACTION 2:
Encourage and recruit Pediatric, Obstetric and other primary care providers and clinical offices to become

*NYS Breastfeeding Friendly Practices*
Primary Care Providers

- The U. S. Preventive Services Task Force (USPSTF):
  - Promotion and support of BF should be provided throughout the encounters women have with HCP during prenatal, postpartum, and pediatric care.
  - Most effective when integrated into systems of care that include clinician training, policy development, and support from senior leaders.
Primary Care Providers

- Women consider advice from clinicians to be very important
- Clinicians often underestimate their influence on breastfeeding
Barriers – Primary Care

- Families lack means to identify or obtain skilled support
- Providers face barriers to reimbursement for lactation care
- Clinicians often report insufficient knowledge, confidence, competence
- Communication between clinicians across health care settings is limited
Medical and Nursing Education

- Breastfeeding education is becoming integrated into medical school and residency curricula
Professional Education
Action Steps

1. Make available and coordinate grand rounds or in-service presentations on breastfeeding.
2. Distribute clinical protocols developed by experts, such as the ABM, to local doctors.
3. Expand the reach of professional development by providing training.
4. Identify and promote access to evidence-based online training.
Create
A Breastfeeding-Friendly Practice

Your influence greatly impacts a mother’s decision to breastfeed. Your role is vital in helping mothers realize the benefits of breastfeeding. Below are a few tips to create a breastfeeding-friendly practice.

**Staff Education:**
- Train your staff to be competent in lactation management.
- Build staff confidence through regular updates.
- Involve your staff in creating a breastfeeding-friendly environment.
- Ensure staff gives consistent breastfeeding messages.

**Patient Education:**
- Talk to mothers about the importance of breastfeeding.
- Provide up-to-date resources.
- Display and share educational materials that are free of commercial (infant formula) influence.
- Refer women to breastfeeding classes, Lactation Consultants (IBCLC) and provide follow-up.
- Include the mother’s support person in breastfeeding education.
- Discuss the Breastfeeding Mothers’ Bill of Rights.

Breastfeeding... For my baby. For me.
Listen to Your Patients:
- Encourage mothers to talk about breastfeeding. Start by asking open-ended questions.
- Affirm her feelings and provide the appropriate information.
- Be supportive at each visit.

Reinforce Your Message:
- Prominently display breastfeeding information and promotional materials.
- Remove coupons, samples and resources provided by formula companies.
- Ensure staff uses positive language that supports breastfeeding.

References:
http://www.bfmed.org/resources/protocols.aspx
The Academy of Breastfeeding Medicine Protocols #14, #19

http://www.aap.org/breastfeeding
The American Academy of Pediatrics, Breastfeeding Initiatives - How to Have a Breastfeeding Friendly Practice
The Breastfeeding Friendly Doctor’s Office - AAP

- Encourage women/staff to breastfeed in the office.
- Display pictures of breastfeeding infants.
- Avoid distributing infant formula or coupons.
Breastfeeding support can often be quite time-intensive initially but pays off in a healthier patient population. It is in your insurers’ best interests that you provide these services, and be reimbursed appropriately.

1. Commonly used ICD-9CM codes
2. Options for billing the three to five day visit
3. Billing for extra time spent at well baby visits
4. Use of time based coding
5. Billing for consults
6. Billing for care provided for the mother
7. Billing for allied health professional services

AAP, 2010
NYS Medicaid

- Effective April 1, 2013, a separate Medicaid payment will be available for separate and distinct breastfeeding services provided by professionals who are certified as IBCLCs credentialed by the IBLCE
  - Physicians
  - Nurse Practitioners (NPs)
  - Midwives (MWs)
  - Physician Assistants (PAs)
  - Registered Nurses (RNs)
ACA Women's Preventive Health Services

- Health Resources and Services Administration (HRSA) 2011, breastfeeding benefits for non grandfathered health insurance plans include:
  - **Coverage for breastfeeding education**: pre- and postnatal counseling by a trained provider in conjunction with each child. The benefits are available at no cost share to consumers.
  - **Breastfeeding supplies benefits**: requires health insurance plans to cover the cost of breast pump rental and purchase at low or no cost to consumers.
NYS Breastfeeding Friendly Practices

Opportunity to reach vulnerable populations and to address barriers

• Help families obtain BF support
• Improve providers’ knowledge, confidence, practice
• Enhance communication across settings
ACTION 3: Use the *Business Case for Breastfeeding* to encourage employers to implement breastfeeding friendly policies.
Employment

- Most mothers of infants younger than 12 months work outside the home, 70% FT
- Employment is associated with lower breastfeeding initiation and shorter duration rates
Employment

Higher breastfeeding initiation and duration:

- longer maternity leave
- part time work
- workplace breastfeeding support programs
Paid Maternity Leave

- Most effective strategy
- U.S. is 1 of 4 countries (among 173) without paid maternity leave
- Each week of maternity leave is associated with longer BF duration
- Most U.S. women combine short term disability, sick leave, vacation, unpaid family leave
The *Family and Medical Leave Act 1993*

- Provides up to 12 weeks of unpaid, job-protected leave
- Not feasible for many low- and middle-income families
- 47% of private sector employees are eligible
- 4% used FMLA, 50% took <10 days off
Paid Maternity Leave

- Few mothers can afford to take unpaid time off
- 14% management professionals, 5% service workers have some paid maternity leave benefit
- Necessary to reduce the differential effect of employment on breastfeeding among disadvantaged racial, ethnic and economic groups
The *Family and Medical Insurance Leave (FAMILY) Act*, 2014

- would establish a national paid family and medical leave insurance program
- would be funded by small contributions by employers and employees
The Business Case for Breastfeeding: Steps for Creating a Breastfeeding Friendly Worksite

- Developed by the Health Resources and Service Administration (HRSA)
- Resources for business and human resource managers, employees

Program includes:
- Flexible schedules and breaks
- Clean, private place to express milk or BF
- Education, support
Making It Work: Returning to Work Toolkit

- To empower women in hourly wage positions
- Five individual toolkits:
  - For Moms
  - For Family Members
  - For Employers
  - The Law
  - Other Materials
The Nursing Mothers in the Workplace Accommodation Law (NYS)

- requires employers to provide uncompensated breaks for women to express milk or nurse their children for up to three years.
- requires employers to make ‘reasonable efforts’ to provide a room or other location where the employee can express milk privately.
- bars employers from discriminating against an employee exercising this right.

(Labor Law, Article 7, Section 206-c, as enacted by A.B. 1060, L. 2007, effective August 15, 2007)
Break Time for Nursing Mothers Under the Fair Labor Standards Act

- The Affordable Care Act requires employers to provide nursing employers with:
  - Reasonable break time to express milk for up to one year
  - A clean place, other than a bathroom to express milk
  - Effective March 23, 2010
Using The Business Case for Breastfeeding

Opportunity to reach vulnerable populations and to address barriers

• Help mothers plan return to work and obtain breastfeeding support
• Help employers develop and improve lactation support programs
• Enhance understanding of and compliance with current laws