Objective

• Develop strategies to overcome barriers to exclusive breastfeeding

American Academy of Pediatrics Breastfeeding Recommendations

• Exclusively for about the first 6 months of life
• Continuing for at least the first year of life**, with addition of complementary solids
• Thereafter, for as long as mutually desired by mother and child

AAP Policy Statement

• Human milk is the normative standard for infant feeding and nutrition
• Breastfeeding should be considered a public health issue and not a lifestyle choice
• Hospital routines to encourage and support the initiation and sustaining of exclusive breastfeeding should be based on the American Academy of Pediatrics-endorsed WHO/UNICEF “Ten Steps to Successful Breastfeeding”

AAP Policy Statement

• Delay routine procedures until after the first feeding
• Delay vitamin K until after the first feeding, but within 6 hours of birth
• Ensure 8-12 feedings at the breast every 24 hours
• Give no supplements (water, glucose water, infant formula or other fluids) to breastfeeding newborn infants unless medically indicated using standard evidence based guidelines for the management of hyperbilirubinemia and hypoglycemia

Disclosure Statement

• I have no relevant financial relationships with any manufacturer(s) or any commercial product(s) and/or provider of commercial services discussed in this activity.
• I have not and will not accept any compensation for this presentation other than that provided by Broward Health.
• I do not intent to discuss off label use of medications or devices.
• Photographs are either in the public domain or I have written consent to use for educational purposes.
AAP Policy Statement

- Avoid routine pacifier use until after 3-4 weeks of life


The Health Benefits of Breastfeeding are Substantial:

- Substantially higher rates of mortality among infants never breastfed compared to those exclusively breastfed in the first six months of life and receiving continued breastfeeding beyond.
- Otitis media occurs nearly twice as frequently among those not exclusively breastfed in the first six months.
- Many of the benefits of breastfeeding are experienced well beyond the period that breastfeeding is stopped.
- Children who were breastfed have lower risk of obesity, higher intelligence quotients, reduced malocclusion and less asthma.


The Health Benefits of Breastfeeding are Substantial:

- Breastfeeding mothers benefit from having breastfed, with lower rates of breast cancer, ovarian cancer, type II diabetes and postpartum depression.
- These multiple benefits of breastfeeding demonstrate the contribution and relevance of breastfeeding as a global public health issue, for low- and high-income populations alike.


Key Barriers to Breastfeeding

- Lack of knowledge
- Lactation problems
- Lack of family and social support
- Social and cultural norms
- Embarrassment
- Employment and child care
- Health services


Barriers to Exclusive Breastfeeding

Healthcare systems and providers

- Limited provider awareness, knowledge, skills and practices and limited self-awareness
- Excessive use of medical interventions during labor and delivery
- Insufficient attention to immediate skin-to-skin at birth and evidence-based breastfeeding support practices, such as safe co-sleeping
- Insufficient numbers of providers skilled in both clinical and social support for EBF


Social, economic and political factors

- Limited community, political, legislative and regulatory awareness of the public health impact and concomitant limited attention to action
- Misperceptions and fears due to lack of societal awareness and support
- Limited third party payment for sufficient support
- Rarity of public health programming in support of EBF outside of WIC, and limitations within WIC
- Lack of paid maternity leave/ brevity of any leave
- Workplace—Affordable Care Act, Business Case for Breastfeeding

Barriers to Exclusive Breastfeeding

Media and marketing
- Aggressive marketing of formula (samples, gifts, coupons) to mothers through hospitals and clinicians’ offices
- Public misperceptions secondary to aggressive marketing to the public
- Lack of media representation in television and cinema of exclusive breastfeeding as normative behavior

Former U.S. Surgeon General’s Call to Action to Support Breastfeeding

Regina A. Benjamin, MD, MBA

“I believe that we as a nation are beginning to see a shift in how we think and talk about breastfeeding.”

“Health care systems should ensure that maternity care practices provide education and counseling on breastfeeding. Hospitals should become more “baby-friendly,” by taking steps like those recommended by the UNICEF/WHO’s Baby-Friendly Hospital Initiative.”

The Surgeon General’s Call to Action to Support Breastfeeding

Everyone Can Help Make Breastfeeding Easier, Surgeon General Says in “Call to Action”

- Benjamin cites health benefits, offers steps for families, clinicians and employers

WASHINGTON, DC, Jan. 20, 2011 - Surgeon General Regina M. Benjamin today issued a “Call to Action to Support Breastfeeding,” outlining steps that can be taken to remove some of the obstacles faced by women who want to breastfeed their babies.

“Many barriers exist for mothers who want to breastfeed.” Dr. Benjamin said. “They shouldn’t have to go it alone. Whether you’re a clinician, a family member, a friend, or an employer, you can play an important part in helping mothers who want to breastfeed.”

While 75 percent of U.S. babies start out breastfeeding, the Centers for Disease Control and Prevention says, only 13 percent are exclusively breastfed at the end of six months. The rates are particularly low among African-American infants.

U.S. Surgeon General’s Call to Action to Support Breastfeeding

- Communities should expand and improve programs that provide mother-to-mother support and peer counseling
- Health care systems should ensure that maternity care practices provide education and counseling on breastfeeding. Hospitals should become more “baby-friendly,” by taking steps like those recommended by the UNICEF/WHO’s Baby-Friendly Hospital Initiative
- Clinicians should ensure that they are trained to properly care for breastfeeding mothers and babies. They should promote breastfeeding to their pregnant patients and make sure that mothers receive the best advice on how to breastfeed.
- Employers should work toward establishing paid maternity leave and high-quality lactation support programs. Employers should expand the use of programs that allow nursing mothers to have their babies close by so they can feed them during the day. They should also provide women with break time and private space to express breast milk.
- Families should give mothers the support and encouragement they need to breastfeed.

Healthy People 2020

Healthy People 2020 Objective

MCHH-21: Reduce the proportion of lactating low-income, non-Hispanic white mothers who do not receive state benefits for the first 6 months of life.

MCHH-24: Increase the proportion of infants who are exclusively breastfed at 6 months of age.

Healthy People Maternal, Infant, and Child Health 2020 Objectives:
Breastfeeding Report Card
US, 2014

- 19.4% of infants receive formula before 2 days of age
- 7.79% of births occur in Baby Friendly Hospitals
- State child care regulation support for onsite breastfeeding

Supplementation Rates in US

- Within 2 days of birth: 19%
- Within 3 months: 32%
- Within 6 months: 38%

Breastfeeding Report Card
2014

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HP 2020 Goals (%)

- Initiation: 81.9%
- 6 mo (any): 60.6%
- 12 mo (any): 51.4%
- 3 mo (excl): 46.2%
- 6 mo (excl): 25.5%

http://www.cdc.gov/breastfeeding/data/reportcard.htm
Supportive Hospital Practices

- **Skin-to-skin contact** – Doctors and midwives place newborns skin-to-skin with their mothers immediately after birth, with no bedding or clothing between them, allowing enough uninterrupted time (at least 30 minutes) for mother and baby to start breastfeeding well.

- **Teaching about breastfeeding** – Hospital staff teach mothers and babies how to breastfeed and to recognize and respond to important feeding cues.

- **Early and frequent breastfeeding** – Hospital staff help mothers and babies start breastfeeding as soon as possible after birth, with many opportunities to practice throughout the hospital stay. Pacifiers are saved for medical procedures.

- **Exclusive breastfeeding** – Hospital staff only disrupt breastfeeding with supplementary feedings in cases of rare medical complications.

- **Rooming-in** – Hospital staff encourage mothers and babies to room together and teach families the benefits of this kind of close contact, including better quality and quantity of sleep for both and more opportunities to practice breastfeeding.

- **Active follow-up after discharge** – Hospital staff schedule in-person breastfeeding follow-up visits for mothers and babies after they go home to check-up on breastfeeding, help resolve any feeding problems, and connect families to community breastfeeding resources.

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1. No advertising of breast milk substitutes to families
2. No free samples or supplies in the health care system.
3. No promotion of products through health care facilities, including no free or low-cost formula.
4. No contact between marketing personnel and mothers.
5. No gifts or personal samples to health workers.
6. No words or pictures idealizing artificial feeding, including pictures of infants, on the labels or product.
7. Information to health workers should be scientific and factual only.
8. All information on artificial feeding, including labels, should explain the benefits of breastfeeding and the costs and hazards associated with artificial feeding.
9. Unsuitable products should not be promoted for babies.
10. All products should be of high quality and take account of the climate and storage conditions of the country where they are used.

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Baby Friendly Hospital Initiative

- Boston Medical Center, the nation’s 22nd Baby-Friendly hospital
  - During the implementation of the BFHI, breastfeeding rates rose from 58 percent to 87 percent, including an increase among US-born African-American mothers from 34 percent to 74 percent in 1999.

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Does changing what we do in the hospital work—The BFHI Ten Steps?

- Kramer. *JAMA*, 2001;285:413-420
  - Intervention group more likely to be exclusively breastfed at 3 and 6 mos and still breastfeeding at 2 mos (Belarus)
- Braun. *AJPH*, 2003;93(8):1277-1279
  - Cohort study showed a larger effect in underserved populations (Brazil)
  - Higher duration rates (Switzerland)
  - 6 mos breastfeeding rate increased from 50-73% (Sweden)
  - 28% more likely to be exclusively b-f at 7 days of life (p<0.001) (Scotland)
  - Increased initiation and exclusivity

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**Figure 2:** Percent of US Births at Baby-Friendly Hospitals, 1994–2002

Is it necessary to document medical indications for supplementation?

- The Joint Commission does NOT require documentation of the medical indication for supplementing with formula. The infant will still be counted towards not exclusively breastfed.
- If supplementing with expressed or donor human milk the patient is still counted towards the exclusively breastfed.
- Baby-Friendly Hospitals are required to document medical reasons for supplementation, as well as route and type of supplement.

Infant Medical Indications for Supplementation

- Hypoglycemia unresponsive to frequent breastfeeding
- Significant dehydration, which does not respond to skilled assessment and proper management of breastfeeding
- Delayed lactogenesis II at greater than 120 hours of age
- Delayed bowel movements, with continued meconium stools on day 5
- Poor milk transfer, despite adequate milk supply
- Hyperbilirubinemia, with inadequate intake
- Serum bilirubin > 20-25 mg/dL
- Macronutrient deficiency

USBC Toolkit

USBC Toolkit Recommendations for Documentation

- Avoid using the word “bottle” as a synonym for formula. Specify expressed breast milk, formula, etc.
- Encourage provider orders that state “exclusive breastfeeding” or breastfeeding contraindicated due to _____.
- Document medical indications for supplementation
- Document the length of time spent skin-to-skin following delivery or an unsuccessful feed.

USBC Toolkit Recommendations for Documentation

- Mother has been taught and understands various aspects related to infant feeding, such as:
  - The health impact of breastfeeding to the mother and child
  - The importance of exclusivity
  - Information on milk supply, engorgement versus fullness, sore nipples, mastitis, pacifiers, and WIC

Breastfeeding Initiation “Babies are Born to Breastfeed”

- Skin-to-skin contact
  - Promotes physiologic stability
  - Provides thermal regulation
  - Glucose homeostasis
  - Decreased crying
  - Enhances feeding opportunities
  - Infant crawls to breast and self-attaches
  - Colonization with maternal flora

- Oxytocin release
  - Uterine contractions
  - Stimulates milk ejection reflex
  - Maternal attachment and feelings of love for newborn

Academy of Breastfeeding Medicine 2009 (ABM) Protocol 3

AAP Pediatrics 2012;129;e827-41
Academy of Breastfeeding Medicine (ABM) Protocols 5 & 7 (www.bfmed.org)
**Transition**

- Immediate post-partum care of 50 term healthy newborns during first 90 minutes
- Skin-to-skin intervention improves:
  - Axillary and skin temperature
  - Blood glucose levels
  - Infant crying
- “Keeping the baby skin-to-skin with the mother preserves energy and accelerates metabolic adaptation and may increase the well-being of the newborn”


**Effect of Delivery Room Practices on Early Breastfeeding**

- For infants who had continuous skin-to-skin contact in the delivery room
  - 63% establish successful suckling
- Of those separated for procedures,
  - only 21% established a successful suckling pattern (P<0.001)


**Impact on Breastfeeding Duration of Early Infant-Mother Contact**

- Those infants who had skin-to-skin contact and 15-20 minutes of suckling within the first hour after delivery were twice as likely to be breastfeeding at 3 months as those infants who had no contact with mother in the first hour


**Postpartum Management**

- Evaluation of breastfeeding by trained observer at least twice daily
- Staff to document
  - Infant positioning/latch
  - Milk transfer
  - Daily weights
  - Appearance of jaundice
  - Maternal problems—nipple pain, bleeding, engorgement


**Breastfeeding Assessment (LATCH)**

- **Observe** baby breastfeeding
  - Latch
  - Audible swallow
  - Type (nipple configuration)
  - Cry (painful latch)
  - Hold (position of baby at breast)

**Supplementation is NOT routinely indicated for:**

- Hypoglycemia
- Jaundice
- Baby sleeping too long
- Allow mother to sleep
- Inadequate infant weight gain
Risks of Formula Supplementation

- Interferes with establishment of maternal milk supply (delayed lactogenesis)
- Increases risk of maternal engorgement
- Alters neonatal bowel flora
- Exposes and sensitizes newborn to foreign protein
- Interferes with immune system development

In-Hospital Formula Use Increases Early Breastfeeding Cessation

- Cohort study; 210 infants exclusively breastfed vs. 183 that received in-hospital formula supplementation
- Reasons:
  - Perceived insufficient milk supply (18%)
  - Signs of inadequate intake (16%)
  - Poor latch of breastfeeding (14%)
- Among women intending to exclusively breastfeed, in-hospital formula supplementation was associated with a nearly 2-fold greater risk of not fully breastfeeding at days 30-60 and a nearly 3-fold risk of breastfeeding cessation by day 60


Why NOT to supplement

- The most significant predictor of duration was the receipt of supplemental feedings while in the hospital (P < .0001)
- Shorter duration of breastfeeding if used formula in the first month (2.79, CI 2.05-3.80)
- Six times more likely to be exclusively breastfeeding at 8 weeks if not supplemented with formula in the hospital (OR 6.3 Exclusive BF)
- Not receiving supplemental feedings remained significant for reaching feeding goals (Adj OR= 2.3, 95% CI 1.8, 3.1)

Formula Supplementation “Just one bottle”

- Decreased frequency or effectiveness of suckling
- Decreased amount of milk removed from breasts
- Delayed milk production or reduced milk supply
- Some infants have difficulty attaching to breast if formula given by bottle

How Much to Supplement, When Medically Necessary?

- 2-3 cc/kg/feed in first day
  - 5-10 ml/feeding
- 10-20 ml/feeding in second day

What to Supplement, When Medically Necessary?

- Expressed maternal milk
- Donor milk
- Protein hydrolysate formula
- Standard infant formula

Preserving Breastfeeding When Supplementation Occurs

- Skin–skin, rooming in, feeding cues, increased frequency
- Hand expression or pumping
- Lactation consult
- Having an endpoint or clear, communicated plan
- Limiting amount of supplement (3-10 ml/kg, ABM)
- Consider use of hydrolyzed formula (Flaherman et al, Pediatrics 2013)
- Alternate feeding method, avoiding artificial nipples, trying to supplement right at the breast with SNS or syringe (Howard study, BFHI, US Dept of Health and Human Resources, Flaherman study)

First-Day Newborn Weight Loss Predicts In-Hospital Weight Nadir for Breastfed Infants

- 1,049 term infants
- Mean in-hospital weight nadir was $6.0 \pm 2.6\%$
- Mean age of nadir: 38.7 ± 18.5 hrs
- 6.4% of infants lost ≥ 10% of birth weight in the hospital
- Infants losing ≥ 4.5% birth wt at < 24 hrs had a greater risk of in-hospital weight loss of ≥ 10% (AOR 3.57)
- 76.1% infants did not have a documented weight gain while in the hospital


Weight Loss

Mean weight loss in BFHI hospital:
- 4.9% (range 0%-9.9%), varied by feeding type:
  - Exclusive BF: 5.5%
  - Mainly formula: 2.7%
  - Exclusive formula: 1.2%

The NEWT study:
- Established curves for normal infant weight changes over first 2-3 days based on feeding method and type of delivery
- www.newbornweight.org team: Flaherman, Paul, Schaefer

Breastfeeding Policy

- Every maternity facility should have one
- Covers the "Ten Steps" and bans acceptance of free or low-cost formula, bottles, and nipples
- Eliminate formula discharge bags “Ban the Bags”

Mother’s Intention to Breastfeed

- 80% of women intend to breastfeed.
- 77% start breastfeeding.
- 16% exclusive breastfeeding at 6 mos.
- 60% of mothers do not breastfeed as long as they intend
  - problems with latch
  - problems with milk flow
  - poor weight gain
  - pain


Addressing Maternal Fatigue: A Challenge to In-Hospital Breastfeeding Promotion

- Nurses, physicians and midwives may offer formula as a means to increase maternal rest during the hospital stay.
  - Mothers unprepared for the discomfort and fatigue of postpartum recovery may welcome formula as a solution
  - Satisfaction ratings often based on interventions to improve maternal rest

Heinig: JHL 2010; 26(3):231-232
Addressing Maternal Fatigue: A Challenge to In-Hospital Breastfeeding Promotion

- Recommendations
  - Prepare women for the experience of post-partum fatigue through education during pregnancy
  - Teach side-lying position
  - Address mothers’ ability to soothe infants’ crying
  - Prolong hospital-enforced “rest periods” during the day and limit visitors
  - Delay intrusions by ancillary staff until late morning
  - Organize nursing activities to allow more maternal rest time
  - Provide web-based educational resources to mothers upon discharge

Patient Education (Antenatal)

- Benefits of breastfeeding/risks of infant formula
- Early initiation
- Importance of rooming-in
- Importance of feeding on demand
- Importance of exclusive breastfeeding
- How to assure enough breast milk
- Risks of artificial feeding and use of bottles and pacifiers

Opportunities to Promote Breastfeeding

Preconception

- Education in school systems
- Pediatric and adolescent visits
- Gynecologic visits
- Breast examinations

Opportunities to Promote Breastfeeding

Prenatal visits

- Provide appropriate literature, resources.
- Refer for prenatal and breastfeeding classes.
- Refer to pediatrician for prenatal visit.
- Avoid formula coupons or products.

Opportunities to Promote Breastfeeding

Early pregnancy

- Perform breast examination.
- Discuss normal anatomy and physiology.
- Assess previous surgeries, scars, biopsies.
- Talk about previous breastfeeding experiences.
- Provide positive support for benefits of breastfeeding.

Opportunities to Promote Breastfeeding

Peripartum/postpartum

- Provide supportive delivery environment.
- Facilitate early skin-to-skin contact.
- Place on mother’s abdomen and dry.
- Have trained professionals to assist mother if needed.
- Initiate breastfeeding within the first hour after delivery.
Advocacy: Patient Protection and Affordable Care Act

- **Break Time for Nursing Mothers:** Section 4207 of the Act amends the Fair Labor Standards Act, requiring employers to provide reasonable break time in a private, non-bathroom place for breastfeeding mothers to express breast milk during the workday, for one year after the child's birth.

- **Women's Preventive Services Required Health Plan Coverage Guidelines:** The Act requires health plans to cover preventive services for women with no cost sharing, including breastfeeding support, supplies, and counseling. Non-grandfathered plans and issuers are required to provide coverage without cost sharing consistent with these guidelines in the first plan/policy year that begins on or after August 1, 2012.

Follow-Up Visit

- Office or home visit within 2-3 days by a physician or a physician-supervised breastfeeding-trained licensed health care provider
- If discharged before 48 hours of age, follow-up by 2-4 days of age
- If discharged after 48 hours, follow-up by 4-5 days of age
- Routine preventive care visit by 2 weeks of age

Why Support Exclusive Breastfeeding?

- Every baby deserves the best health outcomes
- Every mother deserves to be supported in the health care arena and in the community
- Healthier families are in everyone’s best interest

Web Resources

- LactMed: Drugs and Lactation Database
- American Academy of Pediatrics Section on Breastfeeding
  [www.aap.org](http://www.aap.org)
- Academy of Breastfeeding Medicine Clinical Protocols
  [www.bfmed.org](http://www.bfmed.org)
- Breastfeeding Report Card:
  [http://www.cdc.gov/breastfeeding/data/reportcard.htm](http://www.cdc.gov/breastfeeding/data/reportcard.htm)
- Maternity Care Practices:
- Centers for Disease Control and Prevention
  [http://www.cdc.gov/breastfeeding](http://www.cdc.gov/breastfeeding)