

Slide 1



BREASTFEEDING BEST PRACTICES

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The slide features a vertical green bar on the left side with several green circles of varying sizes. The text is centered on the right side of the slide.

Slide 2

OVERVIEW

- Why breastfeeding?
- Best Practices to Support the Breastfeeding Dyad
- Influences affecting successful feeding

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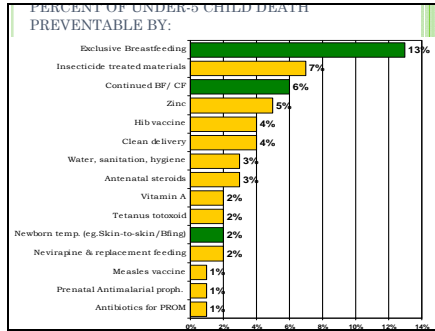
Slide 3

WHY BREASTFEEDING?



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Slide 4



Breastfed infants receive antibodies from mother’s milk, which protect against infection in the early postpartum period. Additionally, breastfeeding is considered to be the single most effective method of reducing death rates of children under five years of age, globally.

This slide demonstrates that 21% of under-five child deaths are preventable through optimal infant feeding. This includes 13% from EBF, 6% from continued Bfing with appropriate complementary feeding and 2% from skin-to-skin dyad care. The majority of money spent on preventing under-5 mortality pays for HIV anti-retrovirals (ARVs) and replacement feeding, which prevents only 2% of under-5 deaths.

Slide 5

BREASTFEEDING RECOMMENDATIONS

- The World Health Organization (WHO) recommends exclusive breastfeeding for the first six months of life at which time appropriate complementary foods should be introduced while breastfeeding continues for up to two years of age or beyond.
- American Academy of Pediatrics (AAP) recommends exclusive breastfeeding for the first six months of life and continued breastfeeding, along with appropriate complementary feeding, for at least 1 year

-Breastfeeding alone is sufficient and uniquely suited for the first six months of life

-While the US recommends BF to 1 year of life, this is not in conflict with the WHO recommendation

-There is remaining controversy between the AAP breastfeeding committee’s recommendations and the AAP nutrition committee’s recommendations, which are still EBF for 4-6 months

Slide 6

THE RATES

- In the United States, three out of every four women **WANT** to breastfeed.
- Data gathered from the CDC show that roughly 75% of postpartum mothers initiate breastfeeding.
- Only 33% of mothers exclusively breastfeeding their infants at 3 months and 13.5% at 6 months.

Slide 7

WHAT'S HAPPENING?

- Sixty percent (60%) of mothers who participated in the CDC Infant Feeding Practices Study II reported they were **unable to meet their breastfeeding goals**.
- There is a significant relationship between the numbers of *Ten Steps* in place at a birth facility and a mother's breastfeeding success.
- Some of the biggest "booby traps" that keep moms from achieving their personal breastfeeding goals are lack of healthcare support (by the system, doctors and nurses), public disapproval, and childcare and workplace discrimination.

Researchers have found that mothers experiencing none of the *Ten Steps to Successful Breastfeeding* during their maternity stay were eight times as likely to stop breastfeeding before 6 weeks as those mothers experiencing six steps.

Slide 8

FORMULA VS. HUMAN MILK



Living cells, Bioactive, Growth factors, Infection protection > Perfect nutrition

Image: comparison of cow's milk formula (left) to human milk (right).

EGF (Epidermal Growth Hormone – regulation of cell growth. Proliferation and differentiation) levels higher in preterm infants than at term – may play important role in maturing the gut Macrophages (innate and adaptive immune defenses) and neutrophils (white blood cells, first immune cells to infection sites) in milk are active in the infant gut


Growth factors: EGF, TGF alpha (transforming growth factor – stimulates neural cell proliferation, active in wound healing and oncogenesis)

Enzymes and cytokines modulate inflammation and oxidative stress

Hamosh, M. (2001). "Bioactive factors in human milk." *Pediatric Clinics of*

Slide 9

COMPOSITION OF HUMAN MILK



- Changes throughout lactation – across feedings and also as the child grows
- Particularly high in immunoglobulins and proteins during first several weeks postpartum
- Protein and fat content are usually higher at the end of a feeding, with 4-5 times as much fat and 1.5 times as much protein than at the beginning

Image: Comparison of foremilk (left) and hindmilk (right), changing from beginning of feeding to end (full breast to empty breast).

The formula you feed your baby on day one is the same formula you feed at first birthday. Surely, the newborn is different from the pre-toddler, and should be benefiting from constantly-evolving mothers' milk.

Slide 10

COMPOSITION OF HUMAN MILK

- Calories
- Protein
- Fat
- Carbohydrates
- Vitamins
- Minerals
- Lipase
- Amylase
- Nucleotides
- Epidermal growth factor
- Secretory IgA
- Secretory IgG
- Secretory IgD
- Secretory IGM
- Glycoproteins
- Macrophages
- Neutrophils
- B lymphocytes
- T lymphocytes
- Antiviral Factors
- Antiparasite Factors
- Anti-inflammatory Factors

Calories – Mothers' milk is an average of 18-24 kcal/oz at week two, and ~20-26 kcal/oz by month four. Formulas are manufactured at 20kcal/oz in an attempt to mimic the caloric content of human milk. Healthy infants compensate for whatever the caloric content of their mothers' milk is by adjusting length of feeding, consuming more volume.

Fat – source of fat-soluble vitamins and essential fatty acids (significant for myelin in brain development)

Carbohydrates – lactose provides 40-45 percent of the energy in human milk, enhances calcium absorption, essential for CNS development, and produces a steady release of glucose

Oligosaccharides protect the baby from pathogens by preventing them from binding to receptor sites in the gut – protect against UTI's and diarrhea

Vitamins- Most vitamins available in sufficient quantities in human milk
Vitamin D – supplementation recommended by AAP
Vitamin K – present in small amounts in human milk
Protection from Hemorrhagic disease

Minerals

Iron – levels in human milk are sufficient to meet the iron requirements of the exclusively breastfed full-term infant until six months of age
Fluoride – in communities with fluoridated drinking water, breastfed babies receive fluoride through their mother's milk

Lipase – enzyme in human milk, essential for the digestion of fat to be available for energy

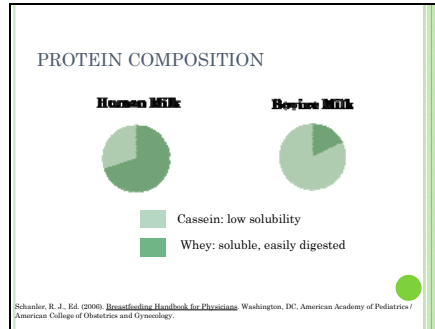
Amylase – enzyme important for carbohydrate digestion

Nucleotides – act as the host defense against bacteria, viruses, and parasites

Epidermal growth factor – promotes the growth and healing of gut mucosa

Human milk contains living cells that are required for infants to build mature immune systems. Without these cells, the only way to build the same immune system is to actually be infected by the germs, usually by becoming ill.

Slide 11



Protein – human milk protein digests easily and is well absorbed

Whey and Casein – ratio changes throughout lactation (90:10 in early milk, 60:40 in mature milk, and 50:50 in later lactation)

Lactoferrin – iron-binding protein in whey, inhibits the growth of iron-dependent bacteria in the gut

Lysozyme – whey protein that provides an antimicrobial factor against enterobacteriaceae and gram-positive bacteria

Long-Chain Polyunsaturated Fatty Acids – at least 160 different long-chain polyunsaturated FA found in human milk, and have been linked to optimal neural and visual development (DHA and ARA)

Slide 12

- RISKS OF ARTIFICIAL FEEDING
- Health risks of *not* breastfeeding (for child and mother)
 - Health risks of *not* receiving human milk
 - Dangers of soy formula
 - Risk of contamination
 - Burdens and cost of formula use

Slide 13

THE RISKS OF NOT BREASTFEEDING
Formula-feeding vs. breastfeeding: risk of adverse outcomes.

INFANT

Illness	Odds Ratio
Diarrhea	2.8
Otitis media	2.0
Pneumonia	3.6
SIDS	1.6
Asthma	1.4
Leukemia	1.2

Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries. AHRQ Evidence Report, April 2007.

Most studies summarized in AHRQ Meta-Analysis, available for free online.

- asthma (young children)
- obesity
- type 1 and 2 diabetes
- childhood leukemia
- sudden infant death syndrome (SIDS)
- necrotizing enterocolitis
- severe lower respiratory tract infections
- acute otitis media
- atopic dermatitis
- non-specific gastroenteritis

Slide 14

LONG-TERM EFFECTS OF NOT BREASTFEEDING: SYSTEMATIC REVIEWS AND META-ANALYSES. WHO, 2007

↑ Blood pressure	S: 1.21 (1.72,0.70) D: 0.49 (0.87,0.11)
↑ Cholesterol	0.18 (0.03,0.06)
↑ Overweight	OR 1.28 (1.19,1.39)
↑ Type II Diabetes	OR 1.58 (1.12,2.22)
↓ Intelligence Test Scores	Mean difference 4.9 points (2.97,6.92)

Available at no charge, online:
http://whqlibdoc.who.int/publications/2007/9789241595230_eng.pdf

Slide 15


- HAZARDS OF SOY FORMULA-FEEDING**
- Indications include (a) for infants with galactosemia and hereditary lactase deficiency (rare) and (b) in situations in which a vegetarian diet is preferred. (AAP Recommendation)
 - No advantage over cow's milk formula for:
 - Rehydration after gastroenteritis
 - Supplementation of breastfed infant
 - Preterm infants
 - Colic / fussiness
 - Prevention of allergy
 - Hypothesized risk of estrogen exposure
- Pediatrics 2008;121:1062-1068.

Soy formula is only recommended for infants with galactosemia or other cow's milk intolerances. It is incomplete nutrition, and carries additional burdens even beyond cow's milk formula.

Slide 16

DANGERS IN MANUFACTURING

- Powdered formula is not sterile
- *Enterobacter sakazakii* in formula associated with outbreaks of severe disease in infants, 40-80% mortality
- CDC series of 46 invasive cases
 - 92% powdered formula-fed
 - Bacteria isolated from powdered formula in 15 of 22 cases that were investigated
- WHO recommendation: warning labels stressing that powdered formula is non-sterile and requires proper handling



Brown AB, Braden CR. Invasive *Enterobacter sakazakii* disease in infants. Emerg Infect Dis [serial on the Internet]. 2006 Aug publication [cited 22/02/2009]. Available from <http://www.cdc.gov/eid/article12/08/12080307-12080307>

Powdered formula is NOT sterile, and may or may not be mixed with sterile water. The AAP recommends mixing powdered formula with boiled or distilled water. Furthermore, it cannot be mixed and re-used as mothers' milk can be expressed, refrigerated and/or frozen. Even mothers' milk fortified with powdered formula can only be kept at room temperature for 2 hours, whereas mothers' milk alone at room temperature is safe for ~8 hours.

Slide 17

BREASTFEEDING AS A WOMEN'S HEALTH ISSUE

- Contracts uterus and helps stop bleeding after birth
- Promotes maternal feelings of well-being, relaxation, and "mothering" (oxytocin – the love hormone)
- Facilitates faster return to "non-pregnancy" physical condition
- Delays return of fertility (EBF)
- Increases maternal empowerment
- Not BFing increases risk of breast and ovarian cancer
- Not BFing increases risk of osteoporosis
- Not BFing increases risk of Type II diabetes

Slide 18

**WORLD CANCER RESEARCH FUND (WCRF)
NOVEMBER, 2007**

- One of the selected recommendations to reduce rate of cancer in mothers and children:

"Mothers to breastfeed;
children to be breastfed."

NUTRITION, PHYSICAL ACTIVITY, AND THE PREVENTION OF CANCER: A GLOBAL PERSPECTIVE, P9.

Perhaps the first major cancer report that includes breastfeeding recommendations

Based on "convincing evidence that breastfeeding protects both the mother and child".

Slide 19

BREASTFEEDING AS AN ECONOMIC ISSUE

- USDA (2001) analysis - over \$3.6 billion would be saved if breastfeeding were increased from 64% in hospital and 29% at six months to 75% and 50% respectively
 - This analysis calculated cost savings from treating **only three** childhood illnesses: otitis media, gastroenteritis, and necrotizing enterocolitis (NEC)
- US taxpayers would save \$112 million in Medicaid costs and \$478 million in government subsidy costs if WIC infants were breastfed for as few as 3 months
- Cost of formula
 - On the low end, not breastfeeding will cost families over \$1,500 per year in formula alone (this is assuming generic brand and average daily intake of 35oz)
- Health care
 - infants who are not breastfed for a minimum of 6 months experience \$1,400+ more in health care costs compared to breastfed infants.

"Necrotizing enterocolitis (NEC) adds significantly to the cost of care for premature infants and to negative long-term and short-term outcomes for these infants. It is thus in the best interest of the health care system to prevent the occurrence of NEC through feeding protocols that foster NEC prevention (i.e., use of breast milk in the neonatal

intensive care unit). Banked donor milk has been shown to be as effective in preventing NEC as mother's milk. Three models of cost analysis are presented to show savings that could accrue to a health care system or individual family if banked donor milk were provided as first feedings when mother's milk is not available. The cost of using banked donor milk to feed premature infants is inconsequential when compared to the savings from NEC prevention."

Wight NE. Donor human milk for preterm infants. *J Perinatol.* 2001 Jun;21(4):249-54.

"As survival rates for preterm infants improve, more attention is being focused on improving the quality of survival through optimal nutritional management. The benefits of human milk for term infants are well recognized, with current research suggesting that human milk may especially benefit the preterm infant. Some mothers are unable or unwilling to provide breastmilk for their infants. Although not as well studied as mother's own milk, pasteurized donor human milk can provide many of the components and benefits of human milk while eliminating the risk of transmission of infectious agents. Pasteurization does affect some of the nutritional and immunologic components of human milk, but many immunoglobulins, enzymes, hormones, and growth factors are unchanged or minimally decreased. In California donor human milk costs approximately \$3.00 per ounce to purchase. A reduction in length of stay, necrotizing enterocolitis and sepsis may result in a relative saving of approximately \$11 to the NICU or healthcare plan for each \$1 spent for pasteurized donor milk."

The Economic Benefits of

Breastfeeding: A Review and Analysis by Jon Weimer. ERS Food Assistance and Nutrition Research Report No. 13. 20 pp, March 2001.

"A minimum of \$3.6 billion would be saved if breastfeeding were increased from current levels (64 percent in-hospital, 29 percent at 6 months) to those recommended by the U.S. Surgeon General (75 and 50 percent). This figure is likely an underestimation of the total savings because it represents cost savings from the treatment of only three childhood illnesses: otitis media, gastroenteritis, and necrotizing enterocolitis. This report reviews breastfeeding trends and previous studies that assessed the economic benefits of breastfeeding."

Health Care Costs of Formula-feeding in the First Year of Life by Thomas M. Ball, MD, MPH and Anne L. Wright, PhD, published in *Pediatrics* Vol. 103 No. 4 April 1999, pp. 870-876.

"In the first year of life, after adjusting for confounders, there were 2033 excess office visits, 212 excess days of hospitalization, and 609 excess prescriptions for these three illnesses per 1000 never-breastfed infants compared with 1000 infants exclusively breastfed for at least 3 months. These additional health care services cost the managed care health system between \$331 and \$475 per never-breastfed infant during the first year of life... In addition to having more illnesses, formula-fed infants cost the health care system money. Health care plans will likely realize substantial savings, as well as providing improved care, by supporting and promoting exclusive breastfeeding."

Cost Benefits of Breastfeeding (1997) by Karen M. Zeretzke, MEd, IBCLC

"Total Annual Cost of not

Breastfeeding: \$1.186 to \$1.301 Billion"

Study of the costs of not breastfeeding (1997) by Dr. Jan Riordan

"Breastfeeding, a valuable natural resource, promotes health, helps prevent infant and childhood disease, and saves health care costs. Additional national health care costs, incurred for treatment of four medical conditions in infants who were not breastfed were estimated. Infant diarrhea in non-breastfed infants costs \$291.3 million; respiratory syncytial virus, \$225 million; insulin-dependent diabetes mellitus, from \$9.6 to \$124.8 million; and otitis media, \$660 million. Thus, these four medical diagnoses alone create just over a billion dollars of extra health care costs each year."

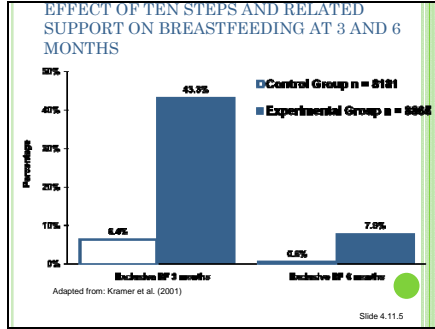
Kaiser Permanente's Study on Breastfeeding and Health (data from 1992-1993)

"Infants who were breastfed for a minimum of 6 months experienced \$1,435.00 less health care claims than formula fed infants."

Slide 20

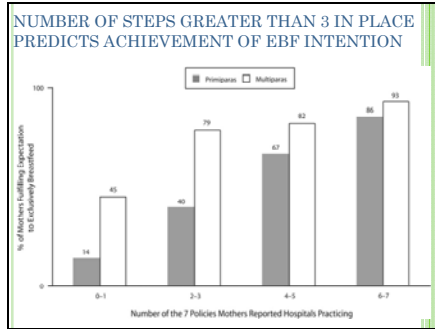


Slide 21



Mother-baby dyads exposed to all Ten Steps to Successful Breastfeeding In-Hospital were significantly more likely to continue exclusively breastfeeding through three and six months.

Slide 22



Note: The issues under study depend on Steps 1-3 being in place: policy, training, and informing women prenatally

Helped you get started breastfeeding when you and your baby were ready (BFHI 4)

Showed you how to position your baby to limit nipple soreness (BFHI 5)

Provided formula/ water to supplement (BFHI 6)

Gave you free formula samples or offers (part of 6 in practice)

Encouraged feeding “on demand” (BFHI 7 rooming in and 8)

Gave your baby a pacifier (BFHI 9)

Told you about community breastfeeding support resources for ongoing help (BFHI 10)

Slide 23

STEP ONE: HAVE A WRITTEN BREASTFEEDING POLICY THAT IS ROUTINELY COMMUNICATED TO ALL HEALTH CARE STAFF

Step One: Have a written breastfeeding policy that is routinely communicated to all health care staff

Slide 24

STEP TWO: TRAIN ALL HEALTHCARE STAFF IN SKILLS NECESSARY TO IMPLEMENT BREASTFEEDING POLICY

With training of all clinicians:

- Initiation rose from 84% to 93%.
- Mean duration rose from 3.7 +/- 3.7 to 5.6 +/- 4.3 months.
- Breastfeeding in the delivery room rose from 3% to 37%.
- Patient satisfaction with breastfeeding guidance in the hospital rose from 43% to 79%.

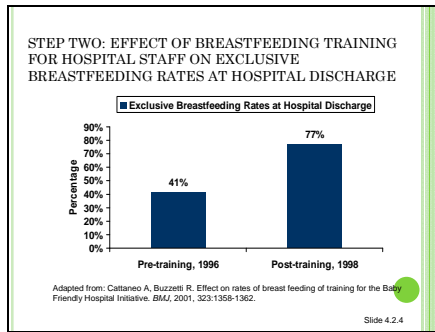
All: (p = 0.0001).

Shresth E et al. The effect of training nursery staff in breastfeeding guidance on the duration of breastfeeding in healthy term infants. *Breastfeed Med*. 2008;1(4):247-52.

Step Two: Train all healthcare staff in skills necessary to implement this policy

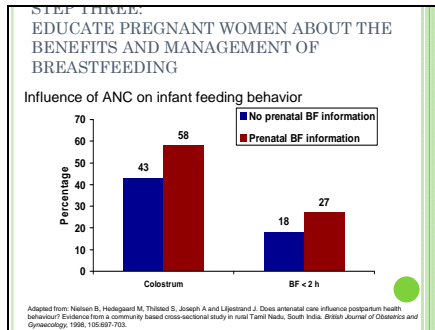
Helping staff understand the rationale and scientific basis behind the policy will increase acceptance by the medical and nursing staff

Slide 25



When hospital staff are trained on the importance of and implementation strategies for The Ten Steps, exclusive breastfeeding rates among their patient population rise dramatically. Not that there is a dose response relationship, meaning that more training leads to greater increases, following an s-shaped curve from 8-22, then leveling off until major specialization.

Slide 26




Step Three: Inform all pregnant women about the benefits and management of breastfeeding

Encourage pregnant women to attend a prenatal breastfeeding class

Support labor and delivery practices that encourage early breastfeeding
Provide labor support – doula
Babies are more alert and responsive after an unmedicated birth and more likely to breastfeed within 1-2 hours after birth

Slide 27

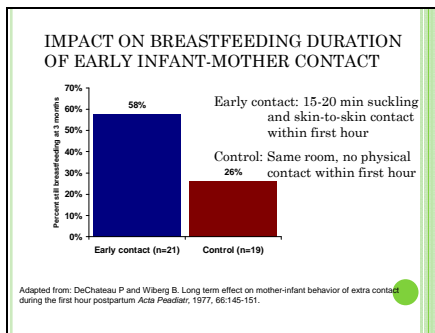
INITIATE BREASTFEEDING WITH ONE HOUR



- Why? alertness, imprinting, proper latch, colostrum, temperature, *calm* baby, ready to be assisted
- Baby knows how: baby-led initiation
- ~90% of non-sedated babies will self-initiate breastfeeding with minimal support within about 1 hour. (Wideman, Righard)
- Early skin-to-skin contact provides both improved initiation and duration, but also life-saving thermal regulation (Christenson 1992, 1995, Perez-Escamilla 1994).
- Analgesia and surgery can disrupt the initiation activities
- Olfaction may play a role (Baldman)
- Improved survival rates at the population level (Edmonds)

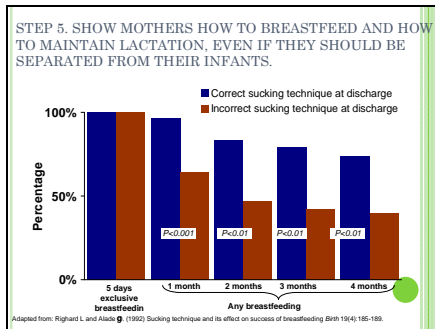
Step Four: Help mothers initiate breastfeeding within one hour
 Duration of breastfeeding is higher for mothers who breastfeed immediately after birth
 Increased oxytocin secretion from suckling contracts the uterus more quickly and controls bleeding
 Delaying the first bath until after the first breastfeeding allows the vernix to soak into baby's skin

Slide 28



Twice as many infants who were StS and suckling in first hour were still breastfeeding at 3 months as compared to those who had no contact in first hour.

Slide 29



Suckling technique at d/c is proxy for whether guidance was offered by HC professional.

Slide 30

STEP SIX: GIVE NEWBORN INFANTS NO FOOD OR DRINK OTHER THAN BREASTMILK, UNLESS MEDICALLY INDICATED

- Supply and demand: milk removal stimulates milk production
- The amount of breast milk removed at each feed determines the rate of milk production in the next few hours.
- Milk removal must be continued during separation to maintain supply.
- Suck/nipple confusion
- Pre-lactal feeds (supplementation before lactation is firmly established) of any sort can impact on initiation and continuation (Hesselt et al 1985, Schlander 1993)
- Supplements after discharge decreases duration (Martinez et al 1989, Perra Escamilla)
- Supplement use increases illness and HIV-transmission via breastfeeding
- Supplement use increases fertility in first six months post-partum (Perra et al 1979, 1992)

Step Six: Give newborn infants no food or drink other than breastmilk, unless medically indicated

Infants given supplements are at increased risk for early termination of breastfeeding

Glucose water and formula for breastfeeding babies should be discouraged

Encourage breastfeeding in response to feeding cues and feedings no longer than three hours apart

Rare contraindications to breastfeeding

Slide 31

STEP SEVEN: PRACTICE ROOMING IN – ALLOW MOTHERS AND INFANTS TO REMAIN TOGETHER 24 HOURS A DAY

- #1 associated variable with breastfeeding success (duration and exclusivity), costs, infection, etc.
- Increased milk production (Mapota et al 1988, Yamachi 1990)
- Rooming in increases night feeding, leading to greater milk supply, increased comfort with infant care, maternal self-efficacy and BF duration and exclusivity. (McKenna)
- Mothers and babies sleep better when they can smell each other.

Step Seven: Practice rooming in – allow mothers and infants to remain together 24 hours a day

Family-centered maternity care that is a standard practice or option in most hospitals

Keeping the baby with mom in the room increases the mother's self-confidence in handling her baby

Allows for bonding and quick relief of fussiness and hunger and incorporates the baby into the family unit quickly

Newborns who self-regulate their care by remaining with their mothers cry less than those whose care is controlled externally by hospital staff

Slide 32

STEP EIGHT: ENCOURAGE BREASTFEEDING ON DEMAND.

- Whenever the baby or mother wants, with no restrictions on the length or frequency of feeds.
- Newer terms: On cue, Baby-led, Responsive Feeding
- Greater meconium removal,
- Less wt.loss, milk letdown est., less jaundice
- Frequency and length of suckling are associated with total intake
- Feeding by cue and encouragement to night feed are associated with higher frequency of feeds (Illingworth, Labbok, others).

Step Eight: Encourage breastfeeding on demand.

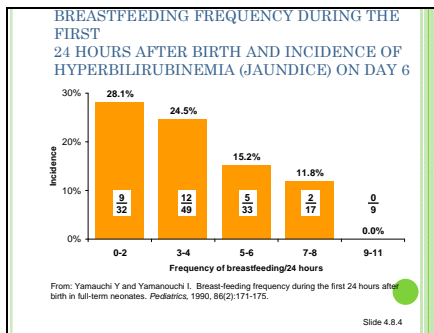
Meaning -mother responds to her baby’s feeding cues.

“Responsive feeding” encourages bonding and helps avoid milk stasis (breast fullness caused by baby not breastfeeding often enough and/or not removing milk when breastfeeding)

Crying is a later hunger cue: crying compromises and disorganizes a baby’s suck

Frequent feedings day and night encourage early milk production and decrease uncomfortable breast fullness

Slide 33



There is a dose response relationship between breastfeedings and jaundice wherein more breastfeedings per 24-hour period are directly associated with lower rates of jaundice.

Slide 34

STEP NINE: GIVE NO ARTIFICIAL TEATS OR PACIFIERS TO BREASTFEEDING INFANTS.

- Studies are mixed on pacifier / artificial nipple use.
- Not clear if use is causative or an outcome of poor feeding
- More important in the preterm situation and where suck is less than optimal
- Pacifier and bottle use associated with dental problems. (Labbok, Drasin, others)
- Bottle and pacifier use associated with ear infection, independent of breastfeeding status.
- AAP Guidelines

Step Nine: Give no artificial teats or pacifiers to breastfeeding infants. May lead to nipple confusion

If supplementation is medically indicated, mothers can use a method other than a bottle and nipple to feed her baby

Nipple shields: can interfere with milk production, however, it can be an effective short-term tool

Slide 35

BREASTFEEDING SUPPORT GROUPS AND REFER MOTHERS TO THEM ON DISCHARGE FROM THE HOSPITAL OR CLINIC

Community Support Can Include:

- Early postnatal or clinic checkup
- Home visits
- Telephone calls
- Community services
- Outpatient breastfeeding clinic
- Peer counselling programmes
- Mother support groups
- Help set up new groups
- Establish working relationships with those already in existence
- Family support system
- Social and Religious community support

Step 10: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic

When mothers receive early contact/telephone follow-up from knowledgeable caregivers, the duration of breastfeeding significantly increases

Help mothers connect with local breastfeeding support groups, WIC, and the warm line

Slide 36

OUR HOSPITALS NEED HELP



Like the rest of the country, <99% of NC babies are born in hospitals because we believe that it is the safest place to birth a baby, and to care for it in its early hours of life. This is unsettling as the CDC's Maternity Practices in Infant Nutrition and Care (mPINC) showed that North Carolina hospitals are barely providing "passing maternity care," with a score of only 61/100. A D- is not acceptable for the mothers and babies of our state, and is likely a significant cause of the poor breastfeeding rates Miriam spoke about. Thus, the primary objective of the Breastfeeding-Friendly Hospital Project is to improve maternity practices, with the purpose of increasing breastfeeding rates, and the ultimate goal of improving maternal and child health in our state, and (through replication of efforts) beyond.


We will accomplish our goals through facilitating positive and sustainable improvements in hospitals and mobilizing community demand for breastfeeding-friendliness (in healthcare systems and beyond).

The hospital is our primary intervention site because <99% of babies are born in-hospital, and it is the context in

Slide 37

BREASTFEEDING-FRIENDLY
HEALTHCARE PROGRAM,
CONTINUED: ACTIVITIES

- Evaluation (Baseline, mid-process and follow up)
- Sensitization
- Training (MD and Hospital Staff)
- Technical Assistance
- Process Evaluation
- Progress Assessment
- Social Marketing / Mainstreaming
- Demand Creation / Community Involvement



which a tremendous amount of early infant care decisions are executed. We know that many women enter hospitals with stated intentions to breastfeed, but leave formula-feeding. We also know that we have thousands of incredibly dedicated, well-intentioned healthcare professionals in our state. The Ten Steps to Successful Breastfeeding is an evidence-based model for program improvement which maximizes existing talent and structures to ensure that moms who choose to breastfeed are supported to succeed. It is NOT about forcing mothers who do NOT want to breastfeed to do so. And, it is not about forcing doctors and nurses to do the impossible.

The preliminary baseline assessment is complete, and the project team is now busy holding sensitization and intervention planning meetings at the initial expansion sites.

Some of the most important findings include:

Simple self-assessment is not adequate for “breastfeeding-friendly” award, as most hospitals had significant differences between self reports and e-surveys and key informant interviews. To this end, we hope the NC DPH will consider offering on-site, collaborative review – possibly by other hospitals as is done in Holland.

Nearly all hospital personnel have incredibly positive intentions for serving their patients. However, there is a strong fear of “pushing” breastfeeding or “guilting women into breastfeeding.” One approach to improving this may be to demonstrate the high rates of women who intend to breastfeed, and the much lower rates of women who leave maternity care


having achieved their goals.
Supplementation persists as the major barrier to breastfeeding-friendliness on all levels from nursing staff to administration. Whether we are talking about supplementing a baby with formula during the night shift or accepting free hospital discharge bags from infant formula companies, breastfeeding couplets are experiencing the influence of a culture of supplementation.
Clinical staff are very interested in receiving additional training on breastfeeding support.
People are confused about who is responsible for breastfeeding, and whether it is an optional lifestyle and/or a vital health behavior.

Working together, CBI, partner hospitals and community partners have learned a lot at every step of the way. We are always open to sharing our lessons learned, and learning from those of you with experience / thoughts on these issues.
Comprehensive reports include gleanings from:
Baby-Friendly USA Self-Appraisal Tools
CDC mPINC Survey / Summary Report
CGBI E-Survey
Key Informant Interviews

Slide 38

SO WHY GO FOR ALL TEN STEPS?

- Besides wanting to implement best practices, implementing and adhering to all Ten Steps is helpful with:
 - Joint Commission
 - ANCC Magnet Recognition Program
 - Increase Patient Satisfaction
 - Reduce Costs of Readmission
 - PhRMA / Ethical Considerations



April 2010. Joint Commission Perinatal Core Measure on Exclusive Breastmilk Feeding goes into effect.

Baby-Friendly Certification Process qualifies as “innovation” for Magnet Status, and demonstrates experience with Continuous Quality Improvement (CQI) processes.

Patient Satisfaction and Return is higher in Baby-Friendly Hospitals.


Readmission becomes less common as exclusive breastfeeding becomes more common, and EBF becomes more common as adherence to the Ten Steps increases. Readmission is associated with preventable costs to families, healthcare systems and tax payers.

PhRMA Code Compliance extends beyond “big pharma” to “big formula.”

Can students think of any other reasons?

Slide 39

BARRIERS AND FACILITATORS TO SUCCESSFUL FEEDING



ACTIVITY: Divide into two groups. One group lists barriers to EBF/BF. The other lists facilitators to EBF/BF. Then, scroll through slides, asking if each barrier / facilitator was listed by group, and discuss participants’ experiences as time allows. For factors not listed by group, discuss whether this is something they’ve seen, and why it might impact breastfeeding.

Slide 40

OBSTACLES TO SUCCESSFUL BREASTFEEDING

- Disruptive hospital policies
- Lack of broad social support (opposition)
- Media portrayal of bottle-feeding as norm
- Insufficient prenatal breastfeeding education
- Insufficient provider knowledge/education
- Maternal employment
- Commercial promotion of formula

There are numerous obstacles to support of breastfeeding...

These obstacles result in conflicting messages which confuse the patient.

Today, we are going to look at some ways that the provider, obstetrician and pediatrician may begin to break down some of the barriers.

Slide 41

FACILITATORS TO SUCCESSFUL BREASTFEEDING

- Supportive healthcare setting
 - Skin-to-skin
 - Rooming-in
- Maternal confidence
- Patient and family intention
- Positive attitudes, beliefs, feelings
- Breastfeeding/health knowledge
- Having prenatal care
- Birthing/breastfeeding classes
- Social support – mother-to-mother support

Slide 42

MOTHER'S CONFIDENCE

- Maternal confidence is a significant predictor of the duration and level of breastfeeding
- Correlation between low parental confidence and high perception of milk insufficiency
- Mothers' self esteem increases with a positive breastfeeding experience

Maternal confidence is a significant predictor of breastfeeding success. Positive feedback helps the mother recognize that she is doing well and validates her decision to breastfeed.

Slide 43

PATIENT AND FAMILY INTENTION

- Maternal achievement of breastfeeding intention is positively associated with:
 - Positive breastfeeding attitudes
 - Having family, peer, and partner support for breastfeeding
 - Having attended a breastfeeding class
 - Having received prenatal counseling
 - Greater years of education
 - Pregnancy intendedness

Slide 44

OPPOSITION TO BREASTFEEDING

- o Mothers often receive questions and comments that prompt them to explain and defend their decision to breastfeed
- o From strangers, friends, employer, physician, other relatives, and baby's father

Opposition to breastfeeding often manifests as subtle undermining
Mothers receive questions/comments like:

How **long** do you plan to nurse?

Are you **still** breastfeeding?

Isn't he getting a little **old** to nurse?

He seems hungry all the time; **maybe** your milk isn't rich enough, or maybe you don't have enough milk.

How long are you going to do **that**?

Work: Mother may need to discuss with an employer "The Business Case for Breastfeeding"

BF and cost savings to the company (less time off with a sick baby, increased work productivity, decreased staff turnover)

Fathers' feeding preference tends to be significant

Concerns that father may have:

BF will make the baby spoiled and too dependent

Bf interferes with sex life

Jealous over time baby spends with mom

Health and well-being of mom and baby

Feels left out of the feedings

Tips to help mom teach dad about breastfeeding

Slide 45

OPPOSITION FROM HEALTHCARE TEAM

- o Women value and trust their providers' opinions and judgments about their family's healthcare
- o Sometimes well-meaning providers may not realize that their remarks can undermine a mother's confidence
- o Mothers less likely to cease breastfeeding by 12 weeks if report provider encouragement

Empower mothers to feel confident in their decisions to breastfeed, and to expect / demand support from their healthcare team. They can choose to educate their provider with research findings, they can shop for other providers, etc.

Mothers **less likely to cease breastfeeding by 12 weeks if report provider encouragement**
(Taveras et al., 2003)

More likely to cease by 12 weeks if have providers who:

Recommend formula for insufficient weight gain (OR: 3.2; 95% CI: 1.04, 9.7)

Consider their feeding advice “unimportant” (OR: 2.2; 95% CI: 1.2–3.9) (Taveras et al., 2004)

Perceived neutral attitude has negative effect on breastfeeding beyond 6 weeks

Stronger among mothers who intend short duration (<2 months) (DiGirolamo et al., 2003)

Mothers’ Healthcare Information Sources

Prenatal

Obstetrician: 23%

Postpartum

Obstetrician: 27%

Pediatrician: 33%

Nurses 87%

(Izatt, 1997)

Slide 46

PROVIDER ENCOURAGEMENT AND BREASTFEEDING INITIATION

- Women who were encouraged to breastfeed were four times more likely to initiate breastfeeding than those that were not encouraged.
- Percent of women who changed from bottle to breast after prenatal counseling
 - 38% if counseled
 - 8.5% if not

In 2001 Lu et al surveyed 2017 women with children under three and received 1229 responses. They were asked to recall if their physicians and or nurses had encouraged them or discouraged them from breastfeeding. They found that women who were encouraged to breastfeed were four times more likely to initiate than those who did not receive encouragement

Similarly, Kistin looked at 159 low income women and found that when counseling was offered prenatally, 38% of women changed from bottle to breast.

Slide 47

PROVIDER COUNSELING AND BREASTFEEDING AT SIX WEEKS

- Perception of physician recommendation
 - 38% - physician recommends breastfeeding
 - 62% - physician had no preference
- Breastfeeding at six weeks
 - 70% who thought physician favored breast
 - 54% who thought physician had no preference
 - 9% who thought physician favored formula

So why does it matter what we know or do?

DiGirolomo looked at the mothers perception of the attitude of their physicians. They found that 38% of the mothers perceived that their physician recommended breastfeeding as the ideal feeding method. 62% perceived that their physician had no preference.

Those that thought their physician preferred breastfeeding had higher rates of breastfeeding at six weeks

Therefore, even perceived neutrality can adversely impact breastfeeding initiation and duration.

Uninformed or misinformed physicians can give incorrect advice to families and thereby have a deleterious effect on their breastfeeding success.

Slide 48

CULTURAL INFLUENCES

- United States cultural belief that bottle-feeding is the norm
- Messages that permeate the US media do nothing to support breastfeeding
- Paradigm shift in the way we talk about breastfeeding
 - "benefits of breastfeeding" vs "hazards of not breastfeeding"

In the US, there is a perception that bottle-feeding is the norm. There is a general feeling of being uncomfortable with the topic or embarrassed/disgusted at seeing a baby breastfeed. It is common, however, to see babies with bottles and pacifiers.

Discuss own normative cultural thoughts and then think about others. Discuss cultural norms seen in-practice, and support one another in identifying affirmative strategies that work to facilitate maternal and child health and happiness (preferably through breastfeeding!).

Think about the way that you talk about breastfeeding:

Do you refer to the "benefits of breastfeeding?"

What about the "risks of not


breastfeeding?”

Which one reflects our current cultural norm?

Slide 49

CULTURAL NORMS

- Help mothers with the challenge of going against the societal norm and breastfeeding
 - It is important to understand the barriers that may exist regarding infant feeding choices
 - In a primarily bottle-feeding culture, women might react to breastfeeding with discomfort
 - Cultural belief of breasts as sexual objects, in part due to advertisements, TV, and movies







It is important to understand the barriers that may exist regarding infant feeding choices

Discuss cultural norms seen in-practice, and support one another in identifying affirmative strategies that work to facilitate maternal and child health and happiness (preferably through breastfeeding!).

Slide 50

EMPOWER WOMEN



- Empower women
 - as both mothers and workers in their career choices
 - to make choices and to be accountable for their mistakes
 - to take control over their health needs



Slide 51

WHAT IS CULTURAL COMPETENCE?

- Cultural competence has been defined as: “The level of knowledge-based skills required to provide effective clinical care to patients from a particular ethnic or racial group.”
- What factors are important to consider?



Cultural competence can be a huge facilitator for breastfeeding.

Self-assessment: Care is enhanced when each care provider identifies and strives to remain conscious of his or her own cultural values and biases.

Exploring a client’s viewpoint is key in arriving at mutually acceptable care plans.

Cultural beliefs and practices such as avoiding feeding babies colostrum have an impact on breastfeeding.

Respectful questions can be asked so the lactation consultant can begin to determine if a mother’s cultural traditions are helpful, harmless, or harmful to the breastfeeding relationship.

Establish an environment of trust and respect.

Inquire about and practice sensitivity to differing customs regarding eye contact, body language, and touching the mother and the baby.

Seek to understand the unique perspective of each woman.

One suggestion: “If I tell you something and your mother has told you something different, please let me know and we’ll see how we can work together.”

Make provisions for an interpreter, if necessary.

Include partners and family members as much as possible, given mother’s level of comfort.

Know that women who have familial or financial problems might require special attention and extra counseling sessions.

Truly competent care makes no assumptions about the experience, practices, or viewpoints of others.

Learn your city’s demographics and characteristics to assist you in framing your interactions with families and

enhancing your sensitivity to clients'
cultural beliefs


Respect cultural differences in foods,
clothes, language, values, beliefs, and
practices

Avoid making assumptions about teen
mothers' motivations and goals

Slide 52

MOTHER SUPPORT

- Mothers who have a strong support system for breastfeeding have better outcomes
- Encourage parents to network formally and informally with other parents
- Help mothers link with a breastfeeding support group
- Help parents sort through messages they receive from the media




Step 10 of the Ten Steps: Mother-to-mother support facilitates successful breastfeed.

Slide 53

SENSITIVITY TO THE LEARNING PROCESS

- It takes two to breastfeed!
- Help mothers recognize infant signals to strengthen attachment and bonding
- Mothers will become increasingly more confident with each successive feeding as she is able to anticipate her baby's response and to feed effectively
- In addition, when a mother responds to her baby's cues, the baby is learning to anticipate that his needs for food and comfort will be met




Breastfeeding is a learning process for both mothers and babies: Mothers will become increasingly more confident with each successive feeding.

Slide 54

HEALTHCARE SETTING


- We want the healthcare setting to be a strong facilitator of breastfeeding.
- Ten Steps to Successful Breastfeeding!



The healthcare setting can either be a barrier or a facilitator. By working towards following the Ten Steps and becoming baby-friendly, your healthcare setting can become a strong facilitator of breastfeeding.

Slide 55

QUESTIONS?



Slide 56

