

BREAST FEEDING INITIATIVES AT WOMEN AND BABIES HOSPITAL

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“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.”

Regina A. Benjamin, MD, MBA, US Surgeon General

INTRODUCTION

For the last 3 years a dedicated group of physicians, professional staff, representatives from local organizations, and parents have been meeting on a monthly basis to make Women and Babies Hospital a better place for women to achieve their goal of breastfeeding their newborn.* I have had the honor of leading that group, and in this article will explain this endeavor and how the Ten Steps to Successful Breastfeeding improves not only the care of mothers and their babies, but also the health of our communities and our world.

HEALTHY PEOPLE GOALS FOR BREASTFEEDING

For 30 years, the U.S. Department of Health & Human Services has been developing and updating

science-based national objectives for improving the health of all Americans over the decade that follows issuance of its recommendations. The most recent updates, known as the Healthy People 2020 goals for breastfeeding, not only set a goal of increasing the number of breastfed babies during the upcoming decade, but also include three additional goals that promote longer *duration* of breastfeeding.

These three goals are:

- 1) development of programs to support worksite lactation;
- 2) reduction of early supplementation with formula;
- 3) development of facilities that support breastfeeding.

Benchmarks are established to monitor these programs for progress over time. Meeting these benchmarks will:

- Encourage collaborations across sectors;
- Guide individuals toward making informed health decisions;
- Promote measurement of the impact of prevention activities.

Table 1 provides a comparison of the goals in 2010 and 2020.¹

Table 1. A comparison of the Healthy People goals for breastfeeding issued by the US Dept. of Health and Human Services for 2010 and 2020.

Goal	Healthy People 2010	Healthy People 2020
Ever breastfed (initiated)	75%	81.9%
At 6 months	50%	60.6%
At 12 months	25%	34.1%
Exclusive at 3 months	40% (added in 2006)	46.2% (added in 2006)
Exclusive at 6 months	17% (added in 2006)	25.5% (added in 2006)
Increase the proportion of employers that have worksite lactation support programs	----	38% (2009 baseline 25%)
Reduce the proportion of breastfed newborns who receive formula supplementation within the first 2 days of life	----	14.2% (2006 baseline 24.2%)
Increase the proportion of live births that occur in facilities that provide recommended care for lactating mothers and their babies	----	8.1% (2007 baseline 2.9%)

NOTE

* Discussed more fully later in this article, the Baby-Friendly Hospital Initiative (BFHI) is a global program launched by WHO and UNICEF in 1991 to encourage and recognize hospitals and birthing centers that offer an optimal level of care for infant feeding and mother/baby bonding.

The establishment of these three additional goals is exciting because of their possible effects on policy not only in hospitals but in work places in and outside the government. For example, the Joint Commission has included “exclusive breast milk feeding” in its most recent 5 measures of Perinatal care.¹ This percentage will be measured along with rates of facilities’ elective deliveries, cesarean sections, antenatal steroids use, and health care-associated bloodstream infections in newborns. This is very impressive company for breastfeeding.

ADVANTAGES OF BREASTFEEDING

The benefit of breastfeeding for both mothers and their children is undeniable. Breast milk supplies the most complete nutrition possible for infants, who thrive because they face fewer childhood illnesses overall, and a reduced risk of SIDS. Mothers benefit from breastfeeding their babies because they have a lower risk of breast and ovarian cancer, anemia, and osteoporosis. In addition, exclusive breastfeeding is a natural contraceptive method that prevents ovulation and thus spaces pregnancies, which leads to healthier subsequent pregnancies.

In the current challenging economy, it’s particularly notable that the family also benefits financially from the cost saving of breastfeeding. Besides the direct savings from free breast milk, young parents with new and growing families also enjoy substantial financial benefits because they need less time off from work to care for sick children, and have lower costs for health care.

When babies are breastfed, society also reaps multiple benefits: the money saved by these families is likely to be spent in ways that stimulate the local economy; there is less absenteeism from work and greater productivity; and the improvement in health of mother and baby throughout their lives translates into lower health care costs and a reduced financial burden on third party payers and government-funded medical programs. Lastly, the environmental benefit of breastfeeding is substantial. Since breast milk is pre-packaged and uses none of the tin, paper, plastic, or energy needed to produce, package, and transport artificial baby formulas, each breastfed baby reduces pollution and garbage.

HEALTHCARE PROVIDERS INFLUENCE BREASTFEEDING

As healthcare professionals we can improve the start of our new mothers and babies lives together and make breastfeeding a success for them. Many factors

influence a woman’s decision about how to feed her newborn. Most women make this decision even before they become pregnant. In one study of urban women, breastfeeding was more likely if the mother was married, more educated, a non-smoker, had more prenatal care, had a mother who breastfed, and if the father of the baby was educated and employed.² It is highly beneficial for physicians to encourage positive attitudes about breastfeeding and to combat bias from society and advertising by reviewing the benefits of breastfeeding early in pregnancy and providing anticipatory guidance in the course of routine gynecologic care of non-pregnant women. During routine examinations preconception, a woman’s individual concerns or questions about breastfeeding can be addressed. When the woman becomes pregnant, this discussion should be repeated and her decision should be documented in the medical record. These steps can be invaluable especially when combined with referral to prenatal and breastfeeding classes.

Once a pregnant woman is in the hospital, the policies or standard practices of care may either encourage or impede a successful breastfeeding experience. For example, barriers to breastfeeding success could include: separation of the mother from the baby after cesarean section, for various procedures, or to improve the mother’s sleep at night; nutritional supplementation with formula or glucose; routine use of pacifiers; and many other policies and procedures that are so routine in hospitals they often go unnoticed by the medical providers. Fortunately, such policies have come under scrutiny for their negative impact on breastfeeding and overall care of the mother and baby.

THE BABY-FRIENDLY HOSPITAL INITIATIVE (BFHI)

BFHI is a global initiative of the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) established in 1991 to ensure that all birthing hospitals and centers become “centers of breastfeeding support.” It recognizes birthing facilities that successfully implement the *Ten Steps to Successful Breastfeeding and the International Code of Marketing of Breast-milk Substitutes*. In 1997 Baby-Friendly USA, Inc. was founded as a non-profit organization to be the national authority for BFHI in the United States.

BFHI is experiencing tremendous growth in the U.S. as more birthing facilities commit to becoming Baby-Friendly. Currently 153 U.S. hospitals and birthing centers in 34 states hold the Baby-Friendly

designation.³ Every hospital that attains the Baby-Friendly designation moves the U.S. closer to reaching the goal of Healthy People 2020 of having 8.1% of live births occur in facilities that provide the care for lactating mothers and their babies that Baby Friendly USA recommends. Studies of the influence of BFHI on national breastfeeding rates have clearly shown a correlation between an increase in the number of BFHI designated hospitals, and an increase in the rates at which breastfeeding is initiated and used exclusively. Furthermore, these improvements persist regardless of demographic factors that are traditionally linked with low breastfeeding rates.⁴ The percentage of U.S. births occurring in Baby-Friendly designated facilities has improved from 2.9% in 2007 to 6.7% now. Still, the only Baby Friendly designated facility in the state of Pennsylvania is Reading's Birth and Women's Center, which received its designation in 1997.

THE TEN STEPS TO SUCCESSFUL BREASTFEEDING

The Ten Steps to Successful Breastfeeding⁵ were developed by a team of global experts and consist of evidence-based practices that have been shown to increase the rate of initial breastfeeding and its duration. Baby-Friendly hospitals and birthing facilities must adhere to these Ten Steps to receive and retain Baby-Friendly designation.

The Ten Steps to Successful Breastfeeding are:

1. Have a written breastfeeding policy that is routinely communicated to all health care 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 how to maintain lactation, even if they are separated from their infants.
6. Give newborn infants no food or drink other than breast-milk, unless medically indicated.
7. Practice "rooming in"—allow mothers and infants to remain together 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 to them on discharge from the hospital or clinic.

The Ten Steps are endorsed and promoted by the major maternal and child health authorities in the United States, including: American Academy of Family Physicians, American Academy of Nurses, American Academy of Pediatrics, American College of Nurse-Midwives, Academy of Breastfeeding Medicine, Academy of Nutrition and Dietetics, Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), Center for Disease Control and Prevention (CDC), National WIC Association, U.S. Breastfeeding Committee (USBC), U.S. Preventive Task Force, U.S. Surgeon General.

Baby Friendly Designation creates success for those mothers who desire to breastfeed their newborns, creates positive changes in the facility as a whole, and—despite common misperceptions—also benefits those mothers who choose to feed their newborns artificial baby formula.

Mothers who give birth at Baby-Friendly hospitals and birthing centers are more likely to initiate breastfeeding and do so exclusively. They are also more likely to continue to be breastfeeding at six months and one year of age, perhaps due in part to the support they receive and the good habits they develop during the critical first days of breastfeeding at Baby-Friendly facilities. International studies have shown that compliance with the Ten Steps to Successful Breastfeeding, is associated with increased rates of breastfeeding. In the United States, new mothers exposed to at least six of the Ten Steps were thirteen times more likely to continue breastfeeding at six weeks postpartum when compared to mothers who lacked such exposure.⁶ Also the dramatic disparity in breastfeeding rates among different racial, ethnic, and socio-cultural groups decreases as the Ten Steps are implemented in U.S. hospitals.⁷

Let's explore some of the Ten Steps to learn more about the scientific evidence behind their inclusion, how they impact the delivery of medical care, and how as medical providers we can positively impact these changes.

1-2. Have a written breastfeeding policy that is routinely communicated to all health care staff. Train all health care staff in skills necessary to implement this policy.

Because the process of attaining Baby-Friendly designation demands that facilities reexamine and modify longstanding and sometimes outdated policies and procedures, the process strengthens the healthcare organization by enhancing leadership skills, increasing staff competence, and improving patient satisfaction. Templates are available

for Breastfeeding policies through the Academy of Breastfeeding Medicine and other organizations which may help facilitate the process. The impact of the Ten Steps was studied by the Oregon Public Health Division and reported in *Breastfeeding Medicine* in 2008. A 65-question institutional survey assessing compliance with the Ten Steps of the BFHI was performed and breastfeeding rates at 2 days and 2 weeks were documented at each of Oregon's 57 birthing hospitals. The institutional-level outcomes were similar to those of other studies which demonstrated that increased implementation of the Ten Steps is associated with increased breastfeeding initiation and duration. Not surprisingly, it also showed that hospitals with comprehensive breastfeeding policies are more likely to have better breastfeeding support services and outcomes.⁸

In our present society, no one can question that advertising is effective, and promotion of artificial baby formula versus breastfeeding is no exception. For this reason to become Baby Friendly it is mandatory that the institution not receive free formula and other supplies or promotional materials from pharmaceutical companies. In doing so, they would also stop contract-mandated distribution of commercial hospital discharge packs with supplies of artificial baby formula. This practice must be clearly stated in the written policy communicated to staff. A 2008 Cochrane review of the effect of commercial discharge packs on breastfeeding included 9 RCTs involving 3,730 women from North America. This meta-analysis showed that—compared with controls—commercial discharge packs (either with or without formula samples) reduced exclusive breastfeeding at all points in time. These “gifts” from the pharmaceutical companies also have been shown to reduce the time to introduction of solid foods.⁹

It is critical that medical providers are involved in committees to develop the breastfeeding or infant feeding policies and are open to training in the necessary skills, which may require CME or other updates. Also, everyone in the hospital to whom the mother and her family are exposed must uniformly support the importance of breastfeeding, whether this involves teaching its basic skills, managing problems, or being willing to give assistance in any form such as extra food for the mother from food service in the middle of the night, to preventing supplementation by offering reassurance at 2am that baby is “getting enough.” All this starts with a written policy and a plan for teaching.

4. Help mothers initiate breastfeeding within one hour of birth.

Early skin-to-skin contact (SSC) at birth involves placing the naked newborn with head covered with a dry cap prone across its mother's bare chest and covering them with a warm blanket after the initial blanket or towel used for drying is removed. A Cochrane review of the effects of early skin-to-skin contact on breastfeeding,¹⁰ which included over 34 RCTs with 2,177 participants (mother-infant dyads), found a significantly positive effect of early SSC on breastfeeding at 1-4 months after birth. SSC increased duration of breastfeeding in seven trials with a total of 324 participants by a mean of 42.55 days, but the results did not quite meet statistical significance ($P = 0.06$). Late pre-term infants had better cardio-respiratory stability with early SCC in one trial. Blood glucose 75-90 minutes following the birth was significantly higher in SCC infants in 2 trials of 94 infants.¹⁰

It has long been recognized that the longer that initiation of BF is delayed, the more likely it is that supplementation will occur. A 1991 study of 726 women who delivered their first child in one of three metropolitan hospitals in Washington, DC found that 37% of breastfed infants were supplemented. A strong predictor of formula use was the time between birth and initiation of the first breastfeeding.¹¹

Changing the flow of care in the delivery room so that early breast feeding can be accomplished requires that the rule of the day is flexibility. Some procedures (such as weighing of the newborn) can't be done on the mother's abdomen and may be delayed, but measuring and administration of medications can still be done with baby skin-to-skin. A benefit in my experience of SSC is that babies managed in this way do not have factitious or iatrogenic fevers from being in a warmer too long, since mom's body temperature is usually 98.6! The attending medical providers must support having the first breastfeeding before weighing, based on their understanding that the initial feeding is rarely more than a few drops of colostrum and adds negligible weight.

6. Give newborn infants no food or drink other than breast-milk, unless medically indicated.

There are very few medical reasons a woman is unable to breastfeed. When this occurs she should be supported and counseled on how to safely prepare, store, and feed an iron fortified artificial baby formula to her baby in a loving, comforting manner. If

a mother chooses to feed an artificial baby formula, informed consent should be obtained as for any other choice a parent makes that is not recommended by a physician—such as not immunizing her child. The reasoning behind her choice should be explored and her questions and concerns should be addressed. In order to give true informed consent however, the risks of not breastfeeding to her, her child, the environment, and society should be discussed, including the increased risks to her baby of infections including otitis media, UTI, diarrhea and pneumonia, childhood diabetes, childhood cancer such as leukemia, and obesity. After informed consent is completed, teaching and support should be offered as noted above.

Medical contraindications to breastfeeding include:

- a. Babies with Galactosemia and other inborn errors of metabolism
- b. Mother with HIV infection
- c. Mother with Human T-lymphotrophic virus type I or II
- d. Mother with Active Substance abuse and/or alcohol abuse
- e. Mother with Active, untreated tuberculosis
- f. Mothers taking certain medications, i.e., prescribed cancer chemotherapy, radioactive isotopes, antimetabolites, antiretroviral medications and other medications where the risk of morbidity outweighs the benefits of breast milk. (The Drugs and Lactation Database (LactMed) is a peer-reviewed and fully referenced database of drugs to which breastfeeding mothers may be exposed. It is useful for physicians in determining the risk vs. benefit of certain medications in terms of medication in breast milk in certain situations. Among the data included are maternal and infant levels of drugs, possible effects on breastfed infants and on lactation, and alternate drugs to consider.)¹²
- g. Mothers undergoing radiation therapy
- h. Mother with Active, untreated varicella
- i. Mother with active herpes simplex virus with breast lesions
- j. Mother admitted to Intensive Care Unit (ICU) post-partum
- k. Adoption or foster home placement of newborn
- l. Mother with previous breast surgery, i.e., bilateral mastectomy, bilateral breast reduction or

augmentation where the mother is unable to produce breast milk

7. Practice “rooming in”~allow mothers and infants to remain together 24 hours a day.

It has been shown that rooming-in increases the number of feedings per 24 hours and decreases the chance of supplementation occurring.¹³ Rooming-in has been shown in a systematic review to be an important factor affecting rate, duration, and exclusivity of breastfeeding.¹⁴ A Swedish study showed that mothers who left their babies in the nursery at night were more likely to perceive that the staff believed their babies *should* be in the nursery, and that these mothers were more compliant with the hospital’s routine.¹⁵ Other studies have shown that rooming in does not decrease the mother’s quantity of sleep; in fact rooming-in mothers slept about an hour longer.¹⁶

As a medical provider in a hospital where rooming-in has been the standard of care for more than a year, the biggest change I have noticed since its implementation has been the increase in teaching being done by nursing personnel. Often, when I start to discuss many of the pre-discharge “tips” or provide some of the anticipatory guidance that I used to offer before rooming-in was instituted, parents now tell me “my nurse already told me that.” (I would like to see a study done on this aspect of rooming-in.) Rooming-in is a major policy change for any maternity hospital, and it has a great deal of positive impact beyond just breastfeeding, as I have noted. Patient safety issues, especially in the first 24 hours after cesarean section when a mom may have limited mobility or be taking pain medication, also need to be addressed. Encouraging mothers to have a support person during the first 24 hours allows the baby to room-in safely, an arrangement that supports breastfeeding. We need to recognize as myth the recommendation to “send the baby to the nursery so you can get some rest.” The evidence shows both patients and the maternity staff need education to change their knowledge and attitude. To prepare to implement this change, clinicians must provide education and positive information.

9. Give no pacifiers or artificial nipples to breastfeeding infants.

In 1995 a longitudinal study in Pediatrics showed that babies who used pacifiers at 1 month of age had a relative risk of terminating breastfeeding between 1

and 6 months of age of 3.84 compared to nonusers.¹⁷ More recently, a systematic review including RCTs by O'Connor et al. found no detrimental effects, but the study acknowledged that their use may be a marker of breastfeeding difficulties.¹⁸ The American Academy of Pediatrics, in its support of the Ten Steps, recognized the possible risks of pacifier use to breastfeeding success, but acknowledged their utility in certain situations: while initiating sleep to help prevent SIDS; during painful procedures for analgesia; for comfort and calming of babies undergoing withdrawal; and as part of a structured program for enhancing oral motor function. The AAP's final resolution was to recommend delaying pacifier use until 3-4 weeks of age (until breastfeeding is established) for SIDS prevention in the healthy term newborn, and prior to that age only for medical indications as noted above.¹⁹

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

A 2011 study by Brand et al. in *The Journal of Perinatal Education* assessed factors related to discontinuing breastfeeding within two weeks of discharge from the hospital, and found that mothers usually gave one of 3 major reasons: "milk did not come in," "baby preferred the bottle," or "sore breasts or nipple." The researchers felt that these mothers who discontinued breastfeeding early could have been supported through education (women that thought "milk did not come in" could have been educated that colostrum was present from before birth and perfect nutrition for their baby) and early problem

management (women experiencing nipple pain or sore breast likely had problems with poor latch amenable to correction).²⁰ This Step emphasizes the need to support the breastfeeding mother once she leaves the hospital. Many women stop breastfeeding in the first few weeks after discharge, some before their first well child visit. The AAP recommends a follow up visit on the third to fifth day postpartum or within 48-72 hours of discharge, at which time the newborn should be assessed for jaundice, adequate hydration, and age-appropriate elimination patterns. At discharge, it is critical to supply the mother with a packet that includes local resources and a breastfeeding support line for the lactation services.

What other care is unique to the breastfeeding newborn? Vitamin D should also be prescribed prior to or early after discharge as recommended by the AAP to prevent rickets. Medical providers should encourage parents of infants who are either exclusively breastfed or consuming less than 1 liter of artificial baby formula per day to give their infants an oral Vitamin D supplement to meet the current (2008) AAP recommendation of 400 IU of Vitamin D daily.

CONCLUSION

Improving the chance that women will learn about breastfeeding; will decide to breastfeed their newborn; and will succeed at breastfeeding their newborn and child up to 1 year of age, will improve the health of the children of the US. Healthcare providers play a critical role individually and as part of a health system in assisting women to achieve these goals.

REFERENCES

1. Healthy People 2020 website accessed 1/21/2013 (<http://www.healthypeople.gov/2020/default.aspx>)
2. Noble L, Hand I, Haynes D, McVeigh T, Kim M, Yoon JJ. Factors influencing initiation of breast-feeding among urban women. *Am J Perinatol*. 2003 Nov;20(8):477-83.
3. Baby-Friendly USA. <http://www.babyfriendlyusa.org/>. website accessed 1/21/2013.
4. Merewood, A, Mehta, LB, Chamberlain, BL, Phillip, BL, and H Bauchner. 2005. Breastfeeding rates in US Baby-Friendly hospitals: Results of a national survey. *Pediatrics*. 116(3): 628 - 634.
5. The Ten Steps to Successful Breastfeeding, Protecting, Promoting and Supporting Breast-feeding: The Special Role of Maternity Services. Geneva: WHO, 1989.
6. DiGirolamo, AM, Grummer-Strawn, LM, and SB Fein. 2008. Effect of maternity-care practices on breastfeeding. *Pediatrics*. 122 (Suppl 2): S43-S49
7. Murray EK, Ricketts S, and Dellaport J. 2007. Hospital Practices that Increase Breastfeeding Duration: Results from a Population-Based Study. *Birth*. 34(3):202-211.
8. Rosenberg KD, Stull JD, Adler MR, Kasehagen LJ, Crivelli-Kovach A. Impact of hospital policies on breastfeeding outcomes. *Breastfeed Med*. 2008. 3(2):110-116.
9. Donnelly AA, Snowden HM, Renfrew MJ, Woolridge M. Commercial hospital discharge packs for breastfeeding women. *Cochrane Database of Systematic Reviews* 2000, Issue 2. Art. No: CD002075. DOI: 10.1002/14651858.CD002075.pub2.
10. Moore ER, Anderson GC, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews* 2012, Issue 5. Art. No.: CD003519. DOI: 10.1002/14651858.CD003519.pub3.
11. Kurinij N, Shinono P. Early Formula Supplementation of Breast-Feeding. *Pediatrics*. 1991. 88(4) 745-751.
12. [http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT \(LACTMED\)](http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT (LACTMED))
13. Yoshitada Y, Itsuro Y. The relationship between rooming-in/ not rooming-in and breastfeeding variables. *Acta Paediatr Scand*. 1990 79:1017-1022.
14. Waldenstrom U, Swenson A. Rooming-in at night in the postpartum ward. *Midwifery*. 1991. 7:82-89.
15. Svensson K, Matthiesen A-S, Widstrom A-M. Night rooming-in: Who Decides? An example of Staff Influence on Mother's attitude. *Birth*. 2005. 32(2): 99-106.
16. Keefe MR. The Impact of infant rooming-in on maternal sleep at night. *J Obstet Gynecol Neonatal Nurs*. 1988. 17:122-126.
17. Barros, FC and Victora, CG. 1995. Use of pacifiers is associated with decreased breast-feeding duration. *Pediatrics*. 95 (4): 497-500.
18. O'Connor NR, Tanabe KO, Siadaty MS, Hauck FR. Pacifiers and breastfeeding: a systematic review. *Arch Pediatr Adolesc Med*. 2009;163(4):378-382
19. Breastfeeding and the Use of Human Milk. Policy Statement of AAP. *Pediatrics* Vol. 129 No. 3 March 1, 2012. pp. e827 -e841.
20. Brand E, Kothari C, Stark M. Factors related to breastfeeding discontinuation between hospital discharge and 2 weeks postpartum. *The Journal of Perinatal Education*. 20(1): 36-44.

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