# Physicians and Breastfeeding Promotion in the United States: A Call for Action

ABBREVIATIONS. AAP, American Academy of Pediatrics; BFHI, Baby-Friendly Hospital Initiative; WIC, Women, Infants, and Children Supplemental Nutrition Program; WHO, World Health Organization; UNICEF, United Nations International Children's Emergency Fund.

Based on the compelling "health, nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits"[1] of breastfeeding, the American Academy of Pediatrics (AAP) recommends exclusive breastfeeding for approximately the first 6 months of life, continuing to a year or beyond with the addition of complementary foods at about 6 months. But as we enter the new millennium, US breastfeeding rates remain well below national goals[2,3] and physician knowledge about breastfeeding is lacking.[4,5] This commentary reviews current national breastfeeding goals and their historical context, discusses one hospital's success at raising breastfeeding rates through the Baby-Friendly Hospital Initiative (BFHI), and offers suggestions to help pediatricians influence and improve the breastfeeding situation in our nation.

## NATIONAL BREASTFEEDING GOALS AND WHERE WE STAND

National breastfeeding goals, established by the US government within the Healthy People 2000 program in 1978 and restated in 1989, were to: "increase to at least 75% the proportion of mothers who exclusively or partially breastfeed their babies in the early postpartum period and to at least 50% the proportion who continue to breastfeed until their babies are 5 to 6 months old."[6] These objectives are repeated in Healthy People 2010 with the addition of a new goal of a 25% breastfeeding rate at 1 year.[3]

In October 2000, the US Surgeon General released the *Health and Human Services Blueprint for Action on Breastfeeding*, "a comprehensive breastfeeding policy for the nation," which identifies breastfeeding as the "ideal method of feeding and nurturing infants" and a national health priority. It calls for improvement in national breastfeeding rates by "education, training, awareness, support and research" as well as the need to address the "alarmingly low breastfeeding rates among African American women."[7]

In the United States in 1998, 64% of mothers initiated breastfeeding in-hospital, 29% reported feeding any human milk to their infants at 6 months, and 16% were breastfeeding at 1 year.[7] These rates are less for infants born to minority women. Only 45% of black women initiated breastfeeding; at 6 months, the breastfeeding rate was 31% for white women compared with 19% for black women, and 28% for Hispanic women and at 1 year, 17%, 9%, and 19%, respectively.[7] The 6-month non-WIC (Women, Infants, and Children's Supplemental Nutrition Program) participant breastfeeding rate was 29.2% compared with the WIC participant rate of 12.7%.[2] Although a rise in national breastfeeding rates has occurred since the nadir of the 1950s and 1960s, the 1995 rates remain low when compared with other developed countries. Sweden, for example, has a >98% initiation rate and a 6-month breastfeeding rate of 80%.

Obtaining national breastfeeding data has been problematic. The data cited above were collected by Ross Laboratories, a US-based formula company, as part of marketing studies to best direct the company's sales efforts.[8] Arguably, these data represent a "best case scenario" and may lead to exaggerated conclusions about national initiation and duration rates. For example, the data identify a "breastfeeding baby" as any newborn who has received a "sip" or more of human milk before hospital discharge. In our experience, "sippers" rarely become successful breastfeeders.

It is surprising, given the proven medical benefits of breastfeeding, that no other organization or government agency has undertaken a regular or formal assessment of breastfeeding rates. This may change as the Centers for Disease Control and Prevention recently held a conference to begin the process for regular data collection of breastfeeding rates in the United States.

## PHYSICIAN KNOWLEDGE

Several studies have found that pediatricians lack knowledge and training on breastfeeding topics. Schanler recently reported a survey of 1137 active fellows of the AAP: only 65% recommended exclusive breastfeeding for the first month after birth; only 37% recommended breastfeeding for 1 year; the majority had not attended a presentation on breastfeeding management in the previous 3 years; and 72% were unfamiliar with the BFHI. The study concluded, "Pediatricians have significant educational needs in the area of breastfeeding management."[5] In another study, Freed[4] surveyed residents and practicing pediatricians about their training and found residency training was not adequately preparing pediatricians for their role in breastfeeding support and promotion.

## INTERNATIONAL EFFORTS TO PROMOTE BREASTFEEDING

In the 1970s, worldwide concern about marketing tactics of formula companies led to an international boycott of Nestle products and also focused public attention on breastfeeding. Also in response, the World Health Organization (WHO) and the United Nations International Children's Emergency Fund (UNICEF) organized an international meeting on infant and young child nutrition. In attendance were a variety of groups: government representatives; scientific experts; representatives of infant food indus-

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**TABLE 1.** Summary of The International Code of Marketing of Breast Milk Substitutes

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 of the 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 a high quality and take account of the climate and storage conditions of the country where they are used.

try; and nongovernmental organizations.[9,10] They recommended the development of an international code to control inappropriate marketing practices of infant formula and other products used as breast milk substitutes. On May 21, 1981, the World Health Assembly voted to adopt the International Code of Marketing of Breastmilk Substitutes (the Code) (Table 1). Prime Minister Indira Ghandi of India addressed the assembly on the issue. The vote was 118–1 in favor of adopting the Code. The sole "no" vote was cast by the United States on an order from the Reagan Administration that overrode the objections of the Department of State and the Department of Health and Human Services. The official US government statement was that the Code infringed on free speech and restrained trade. In response to the no vote, 2 officials of the Agency for International Development, Dr Stephen Joseph and Eugene Babb, resigned. Dr Joseph commented, "The vote was unconscionable. Misuse of infant formula is directly detrimental to the health of children in the third world and contributes to deaths there."[11] In the weeks that followed, the White House received thousands of letters in protest. The US House of Representatives condemned the Administration's position by a vote of 301–100, and, by a vote of 89–2, the Senate expressed its concern. Congressional hearings were held, chaired by Senator Edward Kennedy. The hearings investigated whether US-based formula companies had inappropriately influenced the Reagan administration vote. Interestingly, the opinions of prominent pediatric organizations on the Code were divided. The Ambulatory Pediatric Association supported adoption of the Code[12] while the Committee on Nutrition of the American Academy of Pediatrics supported the no vote citing a lack of "substantial, sound, and scientific data" to back up the claims made that the advertising policies of formula companies resulted in decreased breastfeeding and increased infant mortality.[13–16]

In 1994, President Clinton reversed the US vote on the Code when he signed a follow-up amendment that included an endorsement of the original Code. The lobbying for this action was powerful and included a task force of breastfeeding proponents (US Committee for UNICEF, La Leche League, American Public Health Association), high-profile individuals (President Jimmy Carter, Dr Benjamin Spock, C. Everett Koop, Ralph Nader) and hundreds of health workers, parents, and activists.[9] Unfortunately, it has proved to be a token reversal at best. As of 1997, 16 countries have achieved "full compliance" with the Code by adopting laws aimed at enforcing all or nearly all of its provisions.[16] Many countries have taken "some action," for example, Israel, Norway, and Spain have officially prohibited formula donations to hospitals. Nine countries have taken "no action:" the United States, Central African Republic, Chad, Croatia, Estonia, Kazakstan, Republic of Moldova, Romania, and Somalia.[16]

Another significant event in lactation history occurred in 1990 in Spedale degli Innocenti, Florence, Italy, at a meeting co-sponsored by the US Agency for International Development and the Swedish International Developmental Authority. The outcome of the meeting was the production and adoption of the Innocenti Declaration, which subsequently received UNICEF and WHO support. The Innocenti Declaration sought to protect, promote, and support breastfeeding through 4 goals identified for all governments to achieve by 1995: 1) appoint a national breastfeeding coordinator and establish a national breastfeeding committee; 2) ensure that hospitals and birthing centers fully practice the Ten Steps to Successful Breastfeeding; 3) take action to support the International Code of Marketing of Breastmilk Substitutes; and 4) enact and enforce imaginative legislation protecting the breastfeeding rights of working women.[8]

In 1991, in response to the Innocenti Declaration, the Convention on the Rights of the Child and the Declaration of the World Summit for Children, the BFHI was launched jointly by UNICEF and the WHO. "Baby-Friendly" is a designation a hospital or birthing site can receive if it demonstrates compliance with the standards and guidelines summarized as the "Ten Steps to Successful Breastfeeding" (Table 2). The Ten Steps include a supportive hospital

**TABLE 2.** Ten Steps to Successful Breastfeeding

1. Have a written breastfeeding policy that is routinely communicated to all health care providers.
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 1 hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation, even if they should be 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 artificial teats or pacifiers to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

* The hospital or birthing site must pay fair market price for all formula and infant feeding supplies that it uses and can not accept free or heavily discounted formula and supplies.

breastfeeding policy, breastfeeding training for staff, initiation of breastfeeding within 1 hour of birth, rooming-in, avoidance of pacifiers, and a hospital environment that supports breastfeeding. In addition, the hospital must refuse to accept free formula and must pay fair market prices for all breast milk substitutes.

The history of the BFHI in the United States includes controversy and changes. In other countries, cooperation between UNICEF and governmental agencies led to a clear organizational structure and criteria for accreditation. UNICEF approached top US governmental officials about the possibility of implementing the BFHI in this country. It was determined, unlike other countries, that implementation would be by a nongovernmental agency. The Healthy Mother, Healthy Baby Coalition was awarded the contract and, in 1993, established an Expert Work Group to study the feasibility of the BFHI in the United States.[17] Their final recommendations, released late in 1994, to revise the steps, change the name, have hospitals assess themselves and not prohibit the availability and promotion of infant formulas in hospitals and birth centers were controversial.[18] The report was criticized by 5 members of the Group in a 12-page minority opinion and 7 organizations, including the AAP, did not endorse the Work Group's final report. At least 1 physician questioned the influence formula manufacturers may have had on the Work Group's recommendations.[19,20] Subsequently, Dr Audrey Naylor and Wellstart International, involved in the original development of the international BFHI concept, were asked to develop the US on-site evaluation tool and external assessment criteria. It was decided to use the original international BFHI Ten Step guidelines except for changes made in Step 4 to recommend initiation of breastfeeding within 1 hour of life, instead of the international guideline of "within one-half hour of life."

In 1997, the responsibility for Baby-Friendly USA was assumed by a group led by Dr Karin Cadwell using the original UNICEF guidelines (Baby Friendly USA, 8 Jan Sebastian Way, Suite 13, Sandwich, MA 02563. Telephone: (508) 888-8044). To date, >16 000 sites worldwide have received the Baby-Friendly award; as of June 2000, 25 sites were are located in the United States. A major obstacle to the Baby-Friendly initiative in the United States has been the reliance on free formula and other formula company products and gifts that are accepted by many hospitals. When compliance with the Ten Steps is achieved, the results are dramatic. The first Baby-Friendly Hospital in the United States, Evergreen Hospital in Kirkland, Washington, has a breastfeeding initiation rate of >90% (Jeanne Schneider, personal communication, Breastfeeding Center, Evergreen Hospital Medical Center, Kirkland, WA, Summer 2000).

### CREATING A BABY-FRIENDLY HOSPITAL: THE BOSTON MEDICAL CENTER EXPERIENCE

Our facility, Boston Medical Center (created by the merger of Boston City Hospital and University Hospital in 1995), cares for urban minority and low-income families. The hospital provides interpreters for >100 languages. There are approximately 1700 births at Boston Medical Center per year of which 53% of the women are black (mostly African American or Haitian), 23% are Hispanic, 14% are white, and 10% are of other races. There is a 15-bed, Level 3 neonatal intensive care unit. Residency programs exist in many departments including pediatrics, obstetrics/gynecology and family practice. Using the Ten Steps guidelines and standards as a framework, efforts to promote and support breastfeeding began 3 years ago led by a hospital-wide, multidisciplinary task force. The obstacles were familiar and numerous: a formula culture, an antiquated breastfeeding policy, spotty and outdated staff knowledge, free formula products, the abundant use of pacifiers and supplements, and lack of breastfeeding support services. The Baby-Friendly Task Force worked diligently to educate hospital staff and families about the benefits of breastfeeding. All levels of staff were targeted for training in a program called Reach and Teach, from the chief executive officer to interpreters, unit secretaries, housekeepers, and telephone operators. To address the issue of paying for infant formula, surveys were performed to collect data about formula usage in various areas of the hospital. From these data we estimated that the hospital was receiving approximately $20 000 per year in free formula and related formula company products (such as sugar water, nipples and Volu Feeds). These data were presented to the hospital's senior management team who agreed to pay for all formula and formula products used at the hospital. In addition, we removed all formula company advertisements, put up numerous framed breastfeeding images, and created a Boston Medical Center Baby Bag to replace the previously distributed discharge bag we had accepted for free from a formula company. The new baby bag contains helpful items for families that promote breastfeeding and positive parenting, and does not allow advertisers an opportunity to solicit our families. We are proud of our 4 breastfeeding/expressing rooms that are used by staff (including housestaff from all disciplines) and patients. We are also proud of our peer counselors who offer support and share their breastfeeding experiences with families in a mutual language. Breastfeeding topics are presented at grand rounds, monthly resident conferences, and nurse training sessions. In short, the culture has changed from bottles to breasts, from formula to human milk.

Breastfeeding initiation rates for healthy newborns have increased from 57% in 1995 to 78% in 1998. In 1999, the diet of 62% of the infants admitted to the neonatal intensive care unit included human milk. In December 1999, Boston Medical Center became the first hospital in the Commonwealth of Massachusetts and the 22nd site in the nation to receive Baby-Friendly designation. We serve as proof that the Ten Steps work and, as in our case, may serve as the catalyst for bigger changes. Our maternity service has been renamed "The Boston Medical Center Birth

Place," symbolically representing a new service and spirit that promotes breastfeeding, doulas, infant massage, parenting groups, kangaroo care, and a Family Resource Center that offers aid to families dealing with issues associated with poverty. The type of care we offer has changed and the quality has improved. Referring colleagues from neighborhood health centers repeatedly comment on the increasing number of breastfeeding mothers they are seeing, and our next step is to provide support at the community level.

## SUGGESTIONS

Often, when breastfeeding obstacles are discussed, a "you did it" mentality can be heard. The pediatrician blames the obstetrician. The obstetrician blames the labor and delivery nurse. The labor and delivery nurse responds that the mother didn't want her baby placed skin-to-skin shortly after birth. (If this is true we are the only living beings in the world who don't naturally ache to see, touch, smell, and caress our newborns immediately after delivery.) Short-staffing is blamed for creating the anxiety that comes when 2 patients suddenly become the responsibility of 1 nurse. The maternity service nurse is blamed when she comments, "I could never do that, I don't have enough time and, besides, the mother needs her sleep." The physical set-up of the hospital is blamed for forcing examinations of newborns to occur away from their parents. Hospital policies and state regulations are blamed for everything. Formula companies are blamed for offering families and health professionals free products that ultimately discourage breastfeeding. Finally, we all worry that breastfeeding advocacy may make new parents feel guilty at a particularly vulnerable and sensitive time. Meanwhile, mothers and fathers look to the health care community for our wisdom and advice.

It is time for pediatricians to acknowledge what our lactation consultant colleagues have been saying for years: that *we* are a major part of our national breastfeeding blues. The finger-pointing, the blame, and the buck stops with us. When asked how Sweden achieves such high breastfeeding rates, Dr Lennart Righard, a Swedish pediatrician, replied, "It started when the pediatricians got together and decided not to accept free formula or formula products for the first 4 months of a baby's life" (personal communication, Fall 1999). In the spirit of the Ten Steps to Successful Breastfeeding, we offer Ten Action Steps for Pediatricians to Encourage, Support, and Promote Breastfeeding:

1. *Educate:* Read the 1997 AAP statement on breastfeeding,[1] circulate it, and cite it to colleagues and parents.
2. *Educate:* Use continuing medical education time to attend breastfeeding courses to improve old skills or learn new skills. Encourage national groups like the AAP to hold annual workshops or continuing medical education programs on breastfeeding topics.
3. *Educate:* Pediatricians involved in medical school and residency training programs should ensure a breastfeeding curriculum for students and residents.
4. *Take a Stance on Ethics:* Be aware of the influence of the formula industry in the pediatric community. Refuse free promotional products such as lunches, trips, tickets to sporting events, pens, stethoscope tags, bags, and calendars offered in the workplace and at national meetings.
5. *Support the Code:* Free formula samples have been shown to shorten the duration of breastfeeding.[21–23] Refuse to discharge any baby under your care with formula products or gifts from formula companies.
6. *Support the Code:* Place the issue of free formula on the agenda for discussion by any departments involved in infant/mother care and place the issue before hospital senior management and ethics committees.
7. *Unite:* Join groups that are actively promoting breastfeeding such as the Academy of Breastfeeding Medicine (contact the Academy at Box 81323, San Diego, CA 92138. Telephone (toll-free): 1-877-836-9947 and the new AAP Provisional Section on Breastfeeding.
8. *Be political:* Notify your elected officials of your views on matters pertaining to breastfeeding support, protection, and promotion.
9. *Advocate:* Tell an employer on behalf of your patient (via a letter, prescription, or telephone call) when one of your patients wishes to breastfeed on her return to work that she will need time and a private place to express milk. Breastfeeding will reduce the company's costs for health care through reduced absenteeism and improved retention of employees.
10. *Inform:* Enlighten insurance companies about the benefits of breast milk and the resulting monetary savings.[24] Complain when insurance companies deny breast pumps for all babies. Inform hospital administrators that the BFHI is a welcome addition for the community and an effective marketing strategy to attract more patients.

Many issues that affect children's lives are beyond our immediate control: poverty, health insurance, a safe environment, and quality education for all. However, pediatricians are in an influential position when a new baby arrives. Words and actions from a trusted pediatrician will endorse, support and encourage breastfeeding. To date, the breastfeeding torch has been carried by a handful of dedicated individuals: a few physicians, other committed health professionals, and vocal lay groups. Without their gallant efforts, the breastfeeding flame might be all but extinguished. In light of the AAP endorsement and the overwhelming, research-based evidence in favor of breastfeeding, we believe the time has come for physicians, particularly pediatricians, to rekindle the fire and lead, not trail, the lactation movement as it heads into the 21st century. It is our turn to grasp the breastfeeding torch and light the

way for the families for whom we are privileged to care.

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# Predicting the Future for Term Infants Experiencing an Acute Neonatal Encephalopathy: Electroencephalogram, Magnetic Resonance Imaging, or Crystal Ball?

ABBREVIATIONS. EEG, electroencephalogram; MRI, magnetic resonance imaging; HIE, hypoxemic-ischemic encephalopathy; ECMO, extracorporeal membrane oxygenation; CP, cerebral palsy.

In this month's issue, the article entitled "Combined Use of Electroencephalogram and Magnetic Resonance Imaging in Full-Term Neonates With Acute Encephalopathy" by Biagioni et al[1] appears. This report describes the authors' extensive clinical experience evaluating infants presenting at (and shortly before) birth with the ominous quartet of fetal heart rate abnormalities, low Apgar scores, the need for resuscitation at birth, and acute neurologic abnormalities during the first 24 hours of life. The purpose of this study was to investigate the relationship between electroencephalogram (EEG) abnormalities and brain lesions seen on magnetic resonance imaging (MRI), and to determine their prognostic value in neonates with hypoxemic-ischemic encephalopathy (HIE). The authors state that HIE is the most common cause of permanent brain injury in the full-term newborn infant.

Many previous studies both published, and cited by these authors have suggested that neurologic and developmental outcomes can indeed be predicted in term neonates presenting with acute neonatal encephalopathy. These authors investigate here such predictions using either an early EEG obtained before the third day of life, or an MRI scan obtained later, after the first week and before the first month of life. They differentiate 2-year developmental outcomes as either normal, mildly, moderately, or severely abnormal (or died).

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