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REVIEW

Baby-Friendly: snappy slogan or standard of care?

B L Philipp, A Radford

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Breastfeeding offers significant protection against illness for the infant and numerous health benefits for the mother, including a decreased risk of breast cancer. In 1991, UNICEF and WHO launched the Baby-Friendly Hospital Initiative with the aim of increasing rates of breastfeeding. "Baby-Friendly" is a designation a maternity site can receive by demonstrating to external assessors compliance with the Ten Steps to Successful Breastfeeding. The Ten Steps are a series of best practice standards describing a pattern of care where commonly found practices harmful to breastfeeding are replaced with evidence based practices proven to increase breastfeeding outcome. Currently, approximately 19 250 hospitals worldwide have achieved Baby-Friendly status, less than 500 of which are found in industrialised nations. The Baby-Friendly initiative has increased breastfeeding rates, reduced complications, and improved mothers' health care experiences.

The difference in Oldham was the hospital trust's far-sighted decision in 1994 to implement the best practice standards necessary for accreditation as Baby-Friendly by UNICEF and the World Health Organization. Scotland's achievement is due to the adoption of breastfeeding strategies by the country's health boards, with Baby-Friendly accreditation as a central component: more than half of Scottish babies are now born in Baby-Friendly hospitals, compared with just 8.6% in England.²

A similar picture is emerging in the USA. Boston Medical Center (BMC) is an academic teaching hospital, serving primarily minority, poor, and immigrant families living in inner city Boston, MA. In 1997, a group of clinicians concerned about BMC's low breastfeeding rates launched a breastfeeding initiative, which culminated in December 1999 when BMC became the 22nd Baby-Friendly hospital in the USA. Prior to implementation of Baby-Friendly policies, breastfeeding rates at BMC were unimpressive. Leaders of the breastfeeding initiative were aware that impoverished and African American women traditionally had low breastfeeding rates. However, they were more concerned that non-supportive hospital policies and lack of support from health care staff were creating barriers to breastfeeding. They wondered if the problem "was us, not them". One thing they knew for certain was that every woman wants the best for her baby. Their mission became to create an institution which promotes and supports breastfeeding and see if greater numbers of women would breastfeed, irrelevant of their social status or racial group.

For three challenging years they tore up antiquated policies, said "no thank you" to free formula, and educated one and all about breastfeeding. They believed in their vision, moved forward with baby steps, and refused to take no for an answer.^{3 4} With the Baby-Friendly Initiative Ten Steps to Successful Breastfeeding in place, breastfeeding initiation rates at BMC rose from 58% (1995) to 87% (1999); exclusive breastfeeding rates increased from 6% to 34% and initiation rates among US born black women rose from 34% to 74%.⁵ The clinicians learned that if an inner city hospital with few resources and a complex patient population can gain Baby-Friendly accreditation, so can others. In August 2002, BMC's success at raising breastfeeding rates among low income families was recognised with a Best Practice Initiative by the US Department of Health and Human Services.

There is a small, quiet revolution going on. An important indicator of good health appears to be rising faster in areas of social deprivation. This may not be unique, but it is certainly unusual. Breastfeeding, which has long been associated with the higher socioeconomic groups in industrialised countries, is now growing rapidly in some of the most socially deprived areas of the UK and USA.

The Royal Oldham Hospital, for example, serves a deprived area to the north east of Manchester in the UK; nearly 30% of its clientele are non-English speakers. In 1994, the town demonstrated the low breastfeeding uptake common to most deprived areas: just 29% of mothers breastfed their babies at birth, and almost all switched to formula in the first 4 weeks. However, 5 years later, breastfeeding initiation had risen to 55% and has since continued to grow steadily, reaching 64% in 2005, while 40% of babies are now still being breastfed at 4 weeks (Val Finigan, Infant Feeding Coordinator, Royal Oldham Hospital, personal correspondence, 27 June 2005).

This dramatic improvement was achieved against a background of unchanging national breastfeeding rates. Data from the quinquennial national infant feeding surveys show no significant increases in English or UK breastfeeding rates since 1980. An exception to this pattern can be found in Scotland, which was the only part of the UK to record a significant increase in breastfeeding duration rates in 2000, with rising prevalence found at all ages up to 9 months.¹

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Abbreviations: AAP, American Academy of Pediatrics; BFHI, Baby-Friendly Hospital Initiative; BMC, Boston Medical Center

BREASTFEEDING GOALS

The health advantages to babies being breastfed, or more accurately the risks of being formula fed, are now well established. Infants who are wholly or partially formula fed have five times the risk of developing gastrointestinal illness in the first year of life compared with those exclusively breastfed for 13 weeks or more⁶ and almost twice the risk of developing respiratory illness during the first 7 years of life compared with those exclusively breastfed for 15 weeks or more.⁷ According to the 2005 policy statement of the American Academy of Pediatrics (AAP), breastfeeding also offers significant protection against bacterial meningitis, bacteraemia, necrotising enterocolitis, otitis media, urinary tract infection, diabetes, and obesity. Among the numerous maternal health benefits is a decreased risk of breast cancer.⁸

Treating these illnesses has an enormous impact on budgets. An estimated \$3.6 billion per year would be saved in US health care costs if the Healthy People 2010 breastfeeding goals were reached, just from the savings which would be made in the treatment of otitis media, gastroenteritis, and necrotising enterocolitis.⁹ Similarly, it was estimated in 1995 that formula feeding costs the NHS in England and Wales £35 million per year in treating gastroenteritis.¹⁰ Taking inflation into account, this means that a 1% increase in breastfeeding among babies at 13 weeks would save over £650 000 per year in treating this illness alone.

It is not surprising therefore to find that health care providers are being set targets for increasing the incidence and prevalence of breastfeeding in their populations. The AAP, recognising breast milk as the "optimal form of nutrition for all infants", 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 of age.⁸ US government Healthy People 2010 breastfeeding goals include 75% of mothers initiating breastfeeding, 50% breastfeeding at 6 months of age, and 25% continuing to breastfeed at 1 year of life.¹¹ In 2000, the US Surgeon General identified breastfeeding as a national health priority and released the strategic *HHS Blueprint for Action on Breastfeeding*.¹²

In Scotland, the target since 1994 has been that the proportion of mothers still breastfeeding their babies at 6 weeks of life should rise from 36% to 50% by 2005.¹³ Three years ago, NHS trusts in England were set the task of increasing their breastfeeding uptake by 2% per year between 2003 and 2006.¹⁴ The actions to be taken by the government, primary care trusts, local authorities, and others in support of this target were detailed last year with the publication of both the *National Service Framework for Children, Young People and Maternity Services* and the Public Health White Paper *Choosing Health*. Northern Ireland and Wales also have breastfeeding strategies with increased breastfeeding rates as their aim.

ACHIEVING THE GOALS

While these targets appear relatively modest, they must be viewed in context. The proportion of babies breastfed at birth in England and Wales has risen only slightly between 1980 (67%) and 2000 (71%) and even this increase disappears when the confounding variables of maternal age and education are taken into account.

Most mothers want to breastfeed, and three quarters of UK mothers who stop breastfeeding before 6 months say they wanted to continue for longer.¹ The reasons given by the great majority for ending breastfeeding early relate to problems such as pain during breastfeeding and insufficient milk, which are commonly caused by poor breastfeeding technique and which would be avoided or solved if mothers received better support from their health professionals.

The Baby-Friendly approach is to support and encourage health care providers to change the way they work with breastfeeding mothers and babies, thereby equipping both staff and mothers with skills to avoid common problems and knowledge of how to deal with them if they do arise. The Queen Mother Hospital in Glasgow, for example, achieved dramatic reductions in the incidence of these problems as it worked to adopt and maintain the Baby-Friendly standards. In 1997, 17.4% of babies were classified as reluctant feeders and 37% of mothers reported sore nipples. At Baby-Friendly accreditation 2 years later, 8.6% of babies were reluctant feeders and sore nipples were found in just 10.8% of mothers. By the time of the hospital's re-accreditation in 2004, both figures were below 3%. Over the same period, the proportion of mothers giving up breastfeeding in the first 10 days fell from 1 in 4 to 1 in 20 (Linda Wolfson, Infant Feeding Coordinator, Queen Mother Hospital, Glasgow, personal correspondence, 24 June 2005).

The *National Service Framework for Children, Young People and Maternity Services* recommends that NHS trusts adopt a series of practices and policies, including providing breastfeeding education for staff, delivering effective care for mothers, and making the changes necessary for accreditation as Baby-Friendly.¹⁵ Similarly, a systematic review from the National Institute for Health and Clinical Excellence¹⁶ concludes that a national policy of Baby-Friendly implementation appears a well-grounded approach for increasing breastfeeding duration.

THE BABY-FRIENDLY HOSPITAL INITIATIVE

By the mid-1980s it became clear that to reverse declining worldwide breastfeeding rates, maternity site policies and systems would need to change to meet the physiological lactation needs of mothers and babies. In 1991, following the recommendations of several publications and strategic meetings focused on the issue of successful breastfeeding initiation, UNICEF and WHO launched the Baby-Friendly Hospital Initiative (BFHI). "Baby-Friendly" is a designation a maternity site can receive by demonstrating to external assessors compliance with the Ten Steps to Successful Breastfeeding. The Ten Steps are a series of best practice standards describing a pattern of care where commonly found practices harmful to breastfeeding are replaced with evidence based practices proven to increase breastfeeding outcome (table 1).¹⁷

Table 1 The Ten Steps to Successful Breastfeeding

1. Have a written breastfeeding policy that is routinely communicated to all health care staff
2. Train all health care staff in the skills necessary to implement this policy
3. Inform all pregnant women about the benefits and management of breastfeeding
4. Help mothers initiate breastfeeding soon after birth
5. Show mothers how to breastfeed and how to maintain lactation 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 and allow mothers and infants to stay together 24 hours a day
8. Encourage breastfeeding on demand
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants
10. Foster the establishment of breastfeeding support groups and refer others to them on discharge from the hospital or clinic

The facility must pass each step at a $\geq 80\%$ level. Included in step 6 is the requirement that a Baby-Friendly hospital or birth centre must pay the fair market price for all formula and infant feeding supplies that it uses and cannot accept free or heavily discounted formula and supplies.

Currently, approximately 19 250 hospitals worldwide have achieved Baby-Friendly status. Four countries have more than 1000 Baby-Friendly sites: China (6312), India (1250), Nigeria (1036), and the Philippines (1047). In seven countries, 100% of facilities have been designated as Baby-Friendly: Comoros Islands, Eritrea, Iraq, the Maldives, Namibia, Oman, and Sweden.^{17 18}

The most dramatic advances in implementing the BFHI have occurred in developing countries; the course in industrialised nations has been slower. Today, fewer than 500 of the world's 19 250 Baby-Friendly hospitals are found in industrialised nations. As of April 2005, 46 US birth facilities (out of about 4000) have received and continue to maintain the Baby-Friendly award. A national survey of US Baby-Friendly hospitals identified three main barriers to meeting the Ten Steps and becoming Baby-Friendly: (1) paying for formula, (2) clinician education, and (3) rooming-in.¹⁹ Over the last decade, substantial progress has been made in Scotland. As of March 2005, 12 out of 34 Scottish hospitals have received the Baby-Friendly award and 53% of all births in Scotland occur in one of these designated facilities. In comparison, 9% of English births occur in a Baby-Friendly hospital (25 awards out of 239 hospitals), 34% of births in Northern Ireland (three awards out of 11 hospitals), and 34% of births in Wales (five of 22).

ACHIEVING BABY-FRIENDLY STATUS: THE TEN STEPS TO SUCCESSFUL BREASTFEEDING

The first three steps (see table 1) constitute the foundations of good breastfeeding care. Staff education is the central component of the Baby-Friendly program and only with well-trained staff can the necessary practice changes be made. Health professionals who have contact with breastfeeding women need the knowledge and skills to support them to breastfeed successfully. The majority of health professionals in the UK have had little formal education in breastfeeding and commonly lack the practical skills needed to help a mother make enough milk for her baby and feed effectively and without pain.²⁰ A breastfeeding policy should set out the measurable aims and standards to be achieved and will establish a framework to support and guide staff as they change their practice and provide Baby-Friendly care to mothers. The right of mothers to full information about their care, and support in their chosen feeding method, is integral to the Baby-Friendly approach. For informed choice to function effectively, all pregnant women should receive clear information on the health benefits of breastfeeding and practices which are beneficial to success.

Steps 4 to 9 describe the pillars of good practice necessary for optimum support of breastfeeding mothers. The principles of informed choice are followed, whereby mothers are given accurate information in a timely manner and then supported in their decisions (even if these are not in line with the Ten Steps).

The routine in a Baby-Friendly hospital is for mothers to be given their babies to hold in skin-to-skin contact immediately after birth (or as soon as mother and baby are able). This takes advantage of the alert period in a baby's first hours of life and facilitates a successful first breastfeed. Babies who are put to the breast soon after birth establish breastfeeding faster and breastfeed for a longer duration. Early suckling also significantly increases the concentration of plasma and probably brain oxytocin ("the love hormone") in the mother, contributing to maternal/infant bonding.²¹⁻²³

Fundamental to successful breastfeeding is ensuring that mothers know how to hold and attach their babies to the breast, since this is crucial for a good milk supply and pain free feeding. Putting babies to the breast when they indicate they are hungry, and feeding for as long and as often as they want – feeding on demand – is also essential for milk

production. Rooming-in permits and encourages breastfeeding on demand. Infants should be breastfed when they demonstrate feeding cues which include hand to mouth activity, smacking lips, rooting, eye movements in light sleep, and movement of extremities. Crying is a late indicator of hunger. A mother cannot respond to a feeding cue if her baby is in a nursery or parked in a cot by the nurses' station. Rooming-in and other Baby-Friendly hospital policies have been shown to increase breastfeeding initiation and duration²⁴ and enhance maternal-infant bonding.^{25 26}

All breastfeeding mothers should also be taught how to express their milk by hand, a skill which will help to alleviate or avoid common complications such as engorgement. Expressing is also of particular importance for newborn infants separated from their mothers for reasons such as prematurity or illness. Breast milk remains the food of choice for these babies. Therefore, health care staff should provide support and guidance that will assist mothers in establishing and maintaining lactation, and expressing their milk while separated. A mother with an infant in the NICU should be advised and supported to express her milk at least six, and preferably eight or more, times in 24 h including at night. She should also be encouraged to stay with her infant and hold him/her in skin-to-skin contact as much as possible.

According to the AAP, exclusive breastfeeding, which is recommended for the first 6 months of life, is defined as "an infant's consumption of human milk with no supplementation of any type (no water, no juice, no nonhuman milk, and no foods) except for vitamins, minerals, and medications. Exclusive breastfeeding has been shown to provide improved protection against many diseases and to increase the likelihood of continued breastfeeding for at least the first year of life".⁸ Mothers should therefore be encouraged to not give their babies food or drink other than breast milk during their first 6 months and hospital staff should ensure that formula supplements are only given where there is a true clinical need. To avoid any risk of confusion in the baby, necessary supplements should be fed by alternative methods appropriate to the baby's condition, such as cup, spoon or syringe, rather than by bottle teat. Similarly, pacifiers can adversely affect breastfeeding in healthy term newborns since time spent sucking on a pacifier is time not spent sucking at mother's breast, and the lack of stimulation can delay the arrival of the full milk supply.²⁷⁻²⁹

There is no promotion for, or sampling of, infant formula or other breast milk substitutes in a Baby-Friendly hospital which must pay the fair market price for all formula and infant feeding supplies. Distribution of products provided free of charge by commercial interests, such as baby bags made by infant formula manufacturers (regardless of whether they contain formula samples), has been shown to undermine breastfeeding success.³⁰⁻³⁴ UK legislation prohibits formula sampling and free supplies and some other promotion is also illegal, but these issues continue to present a major obstacle to Baby-Friendly implementation in the USA and many other countries.

Good practice is capped off by step 10, which requires that mothers be given information about the support they can access in their communities, such as continuing help with breastfeeding from the health services or mother-to-mother support from voluntary groups. This contact will help maintain mothers' confidence, avoid or solve problems which arise, and increase the duration of breastfeeding.

EVIDENCE FOR THE EFFECTIVENESS OF THE BFHI

The evidence for the importance of the BFHI as a crucial element of a successful breastfeeding campaign is strong, showing significant increases in breastfeeding rates and decreases in ill health.

In a landmark study, Kramer and colleagues investigated the effect of the BFHI on breastfeeding rates and infant morbidity. Hospitals in the Republic of Belarus were paired and then randomly assigned to an intervention group (to follow Baby-Friendly policies) or a control group (practicing standard of care). Data were obtained from 31 hospitals and 17 046 mother/infant pairs at 1, 2, 3, 6, 9, and 12 months. At the 12 month outcome point, information was available from 97% of the participants.

At 3 months, 73% of women who gave birth in the intervention hospitals were giving some breast milk compared with 60% of women who gave birth in control hospitals (OR 0.52; 95% CI 0.4 to 0.69). At 6 months, the rates were 50% versus 36% (OR 0.52; CI 0.39 to 0.71). At 12 months, the rates were 20% versus 11% (OR 0.47; CI 0.32 to 0.69). Women from intervention hospitals were seven times more likely to be exclusively breastfeeding at 3 months and 12 times more likely to be exclusively breastfeeding at 6 months. Rates of gastrointestinal disease and atopic eczema were lower among babies from intervention sites compared with babies from control sites.³⁵

The Belarus data are particularly compelling due to the randomised nature of the trial, something which is not normally ethically possible for breastfeeding studies. Similar increases in breastfeeding rates have nevertheless been reported in other countries. An observational study combining routinely collected breastfeeding data on approximately 460 000 babies born in Scotland between 1995 and 2002 with information collected on progress towards implementation of the BFHI, found that babies born in a Baby-Friendly hospital were 28% more likely to be exclusively breastfed at 7 days of life compared to those born in non-accredited settings ($p < 0.001$). Over the study period, breastfeeding rates also increased significantly faster in hospitals with Baby-Friendly status (11.39% *v* 7.97%).³⁶ In Germany, data collected from 1487 mothers and 177 maternity hospitals found that babies were more likely to be fully breastfed at 4 and 6 months if their mothers gave birth in the hospitals which had made greatest progress towards full implementation of the Baby-Friendly standards.³⁷

In Boston, MA, with the Ten Steps in place, breastfeeding initiation rates rose from 58% in 1995 to 87% in 1999 ($p < 0.001$) and exclusive breastfeeding rates (defined as infants receiving no formula) improved from 6% (1995) to 34% (1999) ($p < 0.001$). In addition, initiation rates at the Boston Medical Center hospital remained elevated: 82% (2000) and 87% (2001).³⁸ In China, 2 years following the implementation of the Ten Steps, exclusive breastfeeding rates doubled in rural areas and improved from 10% to 47% in urban areas. In Cuba, exclusive breastfeeding rates increased from 25% to 72% between 1990 and 1996.^{39, 40}

Researchers from Brazil conducted a before-and-after observational study prospectively following two cohorts of babies. A total of 187 babies born in 1994 were compared with 250 babies born in 1999, 2 years after implementation of the Ten Steps. Both cohorts were followed for 6 months postpartum. The study found a significant increase in breastfeeding and exclusive breastfeeding rates after BFHI implementation. The median duration of exclusive breastfeeding was 2 months for children born after the BFHI and 1 month for those born before the BFHI. The effect of the BFHI was greater among underprivileged children.⁴¹

Another study compared the rate of infant abandonment at a maternity hospital in St. Petersburg, Russia 6 years before (1987–1992) and 6 years after (1993–1998) the hospital changed its practices in accordance with the BFHI. The mean infant abandonment rate decreased from 50 to 28 per 10 000 births ($p = 0.01$).²⁵ A study from Costa Rica also reported a decrease in the infant abandonment rate after the BFHI was put in place.⁴²

CONCLUSION

The scientific evidence is well established: breastfeeding offers significant benefits for infants, mothers, families, and societies. We have moved beyond the question, “should women breastfeed?”. The current question is, “how do we ensure successful breastfeeding initiation and duration?”. A major part of the answer is the Baby-Friendly Hospital Initiative. Baby-Friendly is indeed a snappy slogan but, as it is proven to increase breastfeeding rates, reduce complications, and improve mothers’ health care experiences, it is also a standard of care which health care facilities in all countries should strive to attain.

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