Protection, promotion, and support of breastfeeding in facilities providing maternity and newborn services: the revised Baby-friendly Hospital Initiative
2017

Protection, promotion, and support of breastfeeding in facilities providing maternity and newborn services: the revised Baby-friendly Hospital Initiative 2017

Contents

About this document

This document contains the operational guidance for implementing the Baby-friendly Hospital Initiative (BFHI) in facilities providing maternity and newborn services,[1] as well as guidance for coordination and management of the BFHI at national (or subnational where applicable) level. As such, the intended audience of this document includes health-facility managers at different levels (facility directors, medical directors, chiefs of maternity and neonatal wards) and national managers of maternal and child health programmes in general, and of breastfeeding- and BFHI-related programmes in particular.

1. Introduction

1.1. Breastfeeding matters

Breastfeeding is the biological norm for all mammals, including humans. Breastfeeding is critical for achieving global goals on nutrition, health and survival, economic growth and environmental sustainability. The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend that breastfeeding is initiated in the first hour after birth, continued exclusively for the first 6 months of life and continued, with safe and adequate complementary foods, up to 2 years or beyond *(1)*.

Immediate skin-to-skin contact and initiation of breastfeeding within the first hour after birth are important for the establishment of breastfeeding, and for neonatal and child survival and development. The risk of dying in the first 28 days of life is 41% higher for newborns who initiated breastfeeding 2–23 h after birth, and 79% higher for those who initiated 1 day or longer after birth, compared to newborns who were put to the breast within an hour of birth. The protective benefit of early initiation extends until the age of 6 months *(2)*.

Exclusive breastfeeding for 6 months provides the nutrients and energy needed for growth and development. Beyond 6 months, breastfeeding continues to provide energy and high-quality nutrients that help prevent hunger, undernutrition and obesity *(3)*. Breastfeeding ensures food security for infants *(3b)*.

Inadequate breastfeeding practices significantly impair the health, development and survival of infants, children and mothers. Improving these practices could save over 820 000 lives a year *(4)*. Nearly half of diarrhoea episodes and one third of respiratory infections would be prevented with improved breastfeeding. Longer breastfeeding is associated with a 13% reduction in the likelihood of overweight and/or prevalence of obesity and a 35% reduction in the incidence of type 2 diabetes. An estimated 20 000 maternal deaths from breast cancer could be prevented each year by improving breastfeeding *(4)*.

[1] Throughout this document, the term "maternity facilities" will be used to denote facilities that provide maternity and newborn services.

Recent analyses have documented that increasing rates of breastfeeding could add US$ 300 billion to the global economy annually, by helping to foster smarter, more productive workers and leaders *(4)*. In Brazil, adults who had been breastfed for at least 12 months earned incomes 33% higher than those who had been breastfed for shorter durations *(4)*. Breastfeeding mothers are absent from work less often than mothers who use formula feeding, owing to a lower frequency and severity of infant illness *(5)*. Expenditure on health care is significantly lower for children who are breastfed *(6, 7)*.

Breastfeeding is a non-polluting, non-resource-intensive, sustainable and natural source of nutrition and sustenance. Breast-milk substitutes add to greenhouse gas emissions at every step of production, transport, preparation and use. They also generate waste, which requires disposal. Greenhouse gases include methane, nitrous oxide and carbon dioxide; a recent report estimated the carbon dioxide emissions resulting from manufacture of formula in Asia at 2.9 million tons *(8)*.

In humanitarian settings, the life-saving potential of breastfeeding is even more crucial *(1)*. International guidance recommends that all activities to protect, promote and support breastfeeding need to be increased in humanitarian situations, to maintain or improve breastfeeding practices *(9)*.

1.2. The Baby-friendly Hospital Initiative: an overview

The first few hours and days of a newborn's life are a critical window for establishing lactation and mothers need support to breastfeed successfully. Although breastfeeding is the biological norm, health professionals may perform inappropriate procedures that interfere with the onset of breastfeeding, such as separation of the mother and baby; delayed initiation of breastfeeding, provision of pre-lacteal feeds; and unnecessary supplementation. These procedures significantly increase the risk of breastfeeding problems that lead to early cessation. Mothers need to receive evidence-based advice and counselling about breastfeeding and must be protected from commercial interests that discourage breastfeeding.

In 1989, WHO and UNICEF published the Ten Steps to Successful Breastfeeding, within a package of policies and procedures that facilities providing maternity and newborn services should implement to support breastfeeding *(10)*. The *Innocenti Declaration on the protection, promotion and support of breastfeeding*, adopted in Florence in 1990 *(11)*, called for all governments to ensure that every facility providing maternity and newborn services fully practises all 10 of the Ten steps to Successful Breastfeeding. In 1991, WHO and UNICEF launched the Baby-friendly Hospital Initiative (BFHI) *(12)*, to help motivate facilities providing maternity and newborn services worldwide to implement the Ten Steps to Successful Breastfeeding. Facilities that documented their full adherence to the Ten Steps, as well as their compliance with the *International Code of Marketing of Breast-milk Substitutes (13)* and relevant World Health Assembly (WHA) resolutions (the Code) *(14)* could be designated as "Baby-friendly". WHO published accompanying evidence for each of the Ten Steps in 1998 *(15)*.

At the 15th anniversary of the *Innocenti Declaration* in 2005, the Innocenti partners issued a call to action which included the call to revitalize the BFHI, maintaining the global criteria as the minimum requirement for all facilities and expanding the initiative's application to include maternity, neonatal and child health services and community-based support for lactating women and caregivers of young children *(16)*.

The BFHI package was updated in 2006 after extensive user surveys, and relaunched in 2009 *(17)*. The updated package reflected the new evidence for some of the steps (steps 4 and 8 for example) and their interpretation, and specifically addressed the situation of women living with HIV. It included guidelines for "mother-friendly care" and described breastfeeding-friendly practices in other facilities and communities. Standards for providing support for "non-breastfeeding mothers" were included, as the initiative wants to help ensure that ALL mothers, regardless of feeding method, get the feeding support they need. The package included updated training and assessment tools.

Several global health policy documents continue to emphasize the importance of the Ten Steps. The 2002 *Global strategy for infant and young child feeding* called upon ALL facilities providing maternity and newborn services worldwide to implement the Ten Steps to Successful Breastfeeding *(1)*. WHA resolutions in 1994 and 1996 called for specific action related to the BFHI *(18, 19)*.

In 2012, the WHA endorsed six targets for maternal, infant, and young child nutrition, including achieving a global rate of exclusive breastfeeding in the first 6 months of life of at least 50% *(20)*. The policy briefs and comprehensive implementation plan for the targets include expansion of the BFHI *(21)*. The 2014 International Conference on Nutrition (ICN2) Framework for Action, which forms the underpinnings of the United Nations Decade for Action on Nutrition, called for policies, programmes and actions to ensure that health services protect, promote and support breastfeeding, "including the Baby-friendly Hospital Initiative" *(22)*. The *Global Nutrition Monitoring Framework*, endorsed by the WHA in 2015, includes an indicator on the percentage of births occurring in "Baby-friendly" facilities *(23)*.

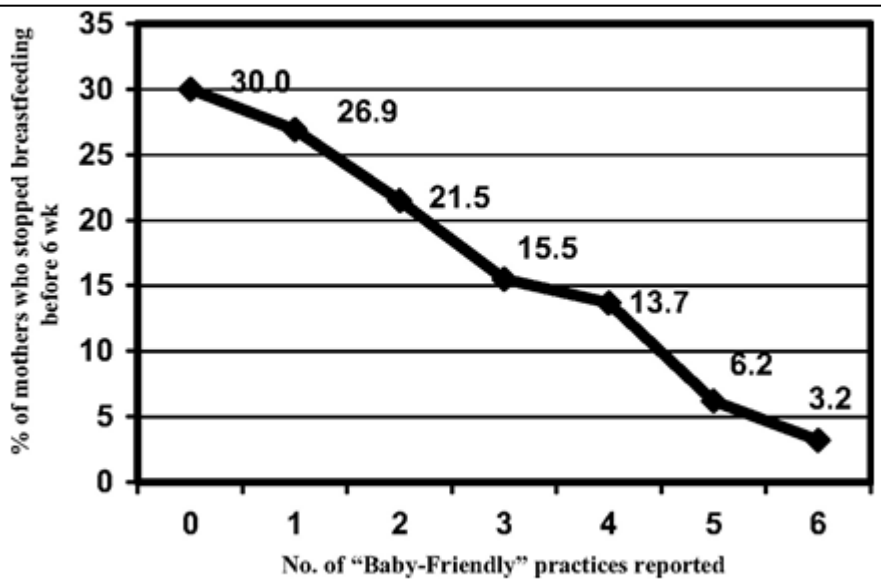
Almost all countries in the world have implemented the BFHI at some point in time. Coverage within most countries has remained low, however. In 2011, it was estimated that 28% of all facilities providing maternity and newborn services had been designated as "Baby-friendly at some point in time" *(24)*. However, as of 2017, WHO estimated that only about 10% of babies in the world were born in a facility currently designated as "Baby-friendly *(25)*.

1.3. Strengths and impact of the Baby-friendly Hospital Initiative

Substantial evidence has accumulated that the BFHI has the potential to significantly influence success with breastfeeding. In Belarus, a group-randomized trial undertaken at the end of the 1990s increased the rate of exclusive breastfeeding at 3 months to 43% in hospitals that implemented the Ten Steps to Successful Breastfeeding, compared to only 6% in the hospitals that did not receive the intervention *(26)*.

A systematic review of 58 studies on maternity and newborn care published in 2016 demonstrated clearly that adherence to the Ten Steps impacts rates of breastfeeding (early initiation immediately after birth, exclusive breastfeeding, and total duration of any breastfeeding) *(27)*. This review found a dose–response relationship between the number of BFHI steps women are exposed to and the likelihood of improved breastfeeding outcomes. Avoiding supplementation of newborns with products other than breast milk (step 6) was demonstrated to be a crucial factor for breastfeeding success, possibly because, in order to implement this step, other steps also need to be functioning well. Community support (step 10) proved crucial to maintaining the improved breastfeeding rates achieved in maternity and newborn facilities *(27)*. One study based in the United States of America found that adherence to just six of the specific maternity-care practices could reduce the risk of early termination of breastfeeding 13-fold (Fig. 1) *(28)*.

Fig. 1. Among women who initiated breastfeeding and intended to breastfeed for >2 months, the percentage who stopped breastfeeding before 6 weeks according to the number of Baby-friendly hospital practices they experienced.



Ann M. DiGirolamo et al. Pediatrics 2008;122:S43-S49

Experiences in BFHI implementation from that time showed that national ownership was key to a successful BFHI. National- or facility-level adaptation, ongoing facility-level monitoring, and making the BFHI part of the continuum of care were also found to be important for BFHI implementation *(29)*.

A recent article about the United States of America, which reviewed two national policy documents and 16 original studies, confirmed the BFHI's success in facilitating successful breastfeeding initiation and exclusivity *(30)*. The duration of breastfeeding also appears to increase when mothers have increased exposure to Baby-friendly practices. However, current breastfeeding tracking mechanisms are suboptimal and therefore limited reliable data are available on the duration of breastfeeding. Of the 10 steps of the BFHI, step 3 (antenatal education) and step 10 (postnatal breastfeeding support) were mentioned as the most challenging steps to implement *(30)*; however, these two steps have the potential to significantly impact maternal breastfeeding decisions.

In anticipation of the 25th anniversary of the BFHI, WHO and UNICEF undertook a broad-based assessment of the current status of the initiative. A global survey on the implementation at country level was conducted in June to August 2016 *(25)*. In-depth case-studies on how the initiative has operated in 13 countries were solicited and key informant interviews with the BFHI coordinators in 22 countries provided additional insights regarding challenges and lessons learnt over the first 25 years of the initiative *(30b,25)*.

The information gathered in the case-studies and key informant interviews indicates that the implementation of the BFHI has led to improvements in health professionals' capacity, as well as

strengthened protection, promotion and support of breastfeeding in large numbers of facilities providing maternity and newborn services, thereby possibly contributing to increased rates of early initiation of breastfeeding across the globe. The systematic approach to improving facility policies and practices, and the visibility and rewarding nature of the designation "Baby-friendly" is appreciated by many actors.

For facilities that were designated, the process of becoming Baby-friendly was often transformative, changing the whole environment around infant feeding. Care became more patient centred, staff attitudes about infant feeding improved, and skill levels dramatically increased. Use of infant formula typically dropped dramatically, and the use of nurseries for newborn babies was greatly reduced. The quality of care for breastfeeding clearly improved.

The case-studies and interviews also captured several challenges, which are described in the next section.

1.4. Challenges in implementing the Baby-friendly Hospital Initiative

Several key challenges in BFHI implementation emerged from the above-mentioned assessments.

In summary, the feedback from the case-studies and key informant interviews indicates that the vertical and often project-type implementation of the BFHI, while a strength in achieving specific and short-term goals, has proven a barrier to reaching a high coverage of the practices recommended in the Ten Steps, as well as to the sustainability of these practices and the monitoring of the initiative. Specific challenges mentioned are listed next.

- National and facility-level implementation often depends more on having committed individuals or "champions" and less on building and strengthening sustainable systems. When former champions are no longer associated with the BFHI, continuity of interventions is often affected.

- The processes of providing technical assistance to facilities, training and maintaining assessors, implementing assessments and re-assessments, and communicating about the initiative all require resources on an ongoing basis. For many countries, these resources are provided by external donors and not incorporated in the regular government budget. When donors shift funds to other priorities, this impacts on the BFHI.

- A key challenge is the building and maintenance of the staff capacity of facilities providing maternal and newborn services to protect, promote and support breastfeeding. Although the BFHI guidance mentions the importance of pre-service training as well as in-service training, the assessment processes and tools have a strong focus on in-service training. In virtually all countries and territories that responded to the case-studies or key informant interviews, the incorporation of breastfeeding in pre-service education has been insufficient. This has created barriers for implementation and maintenance of the BFHI, since ongoing in-service training is very human- and financial-resource intensive.

- Additionally, trainers need to be recruited or, when health professionals themselves, spend time away from their regular job, and the trainees are also taken away from their regular

tasks. While it is possible to undertake electronic and online courses, it may be costly to develop these, particularly when participant fees need to be paid to a commercial entity, and such courses cannot fully replace the need for face-to-face skill building and skills assessment and they will still keep trainees away from their main task. It has also proven difficult, in a 20-hour course, to change health professionals' behaviour, when they have implemented practices in a certain way for years.

- The focus on individual facilities instead of national standards of care makes it challenging to achieve high coverage of recommended facility practices.

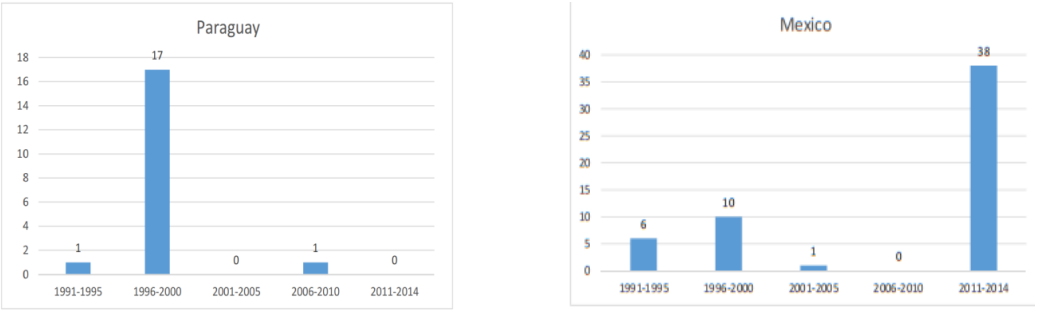
- At the level of individual facilities, the focus of the BFHI has often been on achieving "Baby-friendly" designation. It has often been challenging to sustain the changes made. Many facilities appear to make changes in their policies and procedures to obtain the designation, but then drift back into old ways over time, especially when there are no regular monitoring systems in place. As a result, it is difficult to know the extent to which designated facilities continue to adhere to the BFHI criteria.

- Full compliance with the *International Code of Marketing of Breast-milk Substitutes (14)* has also been a challenge for many facilities. Distributors of breast-milk substitutes have often been found to violate the Code by providing free or subsidized supplies to facilities or governments, and/or providing promotional materials to health facilities or health professionals. Facilities often find it difficult to resist these offers in the face of tight operating budgets. Breast-milk substitute companies often exert political influence at multiple levels, to weaken standards on the protection of breastfeeding and make it difficult for facilities to achieve the Baby-friendly standards.

In 2016, the Pan-American Health Organization (PAHO) published a report on the BFHI in the Americas, in which they examined the years in which BFHI designations or re-designations occurred *(31)*. The report showed that for most countries in the region, BFHI designations or re-designations occurred almost exclusively in a single 5-year window of time. Some countries designated many facilities in the 1990s but then stopped; others started later but then stopped; and a few countries have only recently been designating facilities. However, no country conducted more than a handful of designations outside of a peak 10-year period (see Fig. 2 for two examples). These results suggest that it is difficult for countries to sustain an ongoing designation and re-designation programme for more than a few years.

Whereas the Ten Steps to Successful Breastfeeding were focused on the in-facility care of healthy, full-term infants, many countries have expanded the concept of "Baby-friendly" into other areas of breastfeeding support outside of facilities providing maternity and newborn services, as suggested in the 2009 revision of the BFHI guidance *(17)*. While these programmes have successfully improved the quality of maternal and infant care in many countries, international standards have not been developed to give a specific set of criteria and evaluation tools for them, leading to tremendous diversity worldwide.

Fig. 2. Number of hospitals designated or re-designated by 5-year period in Paraguay and Mexico *(31)*.



Reprinted by permission of the publisher from Pan American Health Organization, World Health Organization Regional Office for the Americas. The Baby Friendly Hospital Initiative in Latin America and the Caribbean: current status, challenges, and opportunities. Washington, DC: Pan American Health Organization; 2016 *(31)*.

The large numbers of countries implementing the BFHI on the one hand, and the low percentage of designated facilities on the other hand, demonstrate the broad reach the initiative has achieved, but also indicate the huge need for continued improvement in maternity and newborn care. As long as adherence to the Ten Steps is limited to only selected facilities, inequities in the quality of health care for newborns will persist. Achieving adherence by *all* facilities will require redoubled efforts and new approaches.

The case-studies and key informant interviews *(30b,25)* showed that countries have adapted the BFHI guidance to their own situation and possibilities. This has resulted in several excellent examples of management and operational processes that can facilitate the sustainable implementation and scale-up of practices that support breastfeeding. These examples, as well as a broad set of general lessons learnt and recommendations for achieving the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services at scale, obtained from the case-studies and key informant interviews, and combined with an intensive consultative process with the external review group (see below), form the basis for this revised operational guidance.

1.5. Revision of the Ten Steps to Successful Breastfeeding and the operational guidance

In 2015, WHO and UNICEF began the process of reviewing and revising both the Ten Steps to Successful Breastfeeding and the operational guidance for countries on how to protect, promote, and support breastfeeding in facilities providing maternity and newborn services. Using the standard WHO guideline development process *(32)*, a guidelines development group was created. Systematic literature reviews were commissioned on each of the Ten Steps. In addition, an external review group was convened to provide additional expert guidance to the guideline development group and to develop the revised operational guidance for countries.

This updated guidance covers only those activities specifically pertinent to the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services. The care of small and preterm newborns cannot be separated from that of full-term infants, as they both occur in the

same facilities, often attended by the same staff. As such, the care for sick and small newborns in neonatal intensive care units or in regular maternity or newborn wards is included in the scope of this document.

While the 2009 BFHI guidance suggested to include "mother-friendly" actions focusing on ensuring mothers' physical and psychological health *(17)*, this updated BFHI guidance does not include guidance on these aspects, because relevant evidence-based guidance on the quality of care of maternal health is available elsewhere *(37)*.

Similarly, this document does not cover criteria for Baby-friendly communities, Baby-friendly paediatric units or Baby-friendly physicians' offices. Support for breastfeeding is critical in all of these settings, but is beyond the scope of this document.

1.5.1. Revision of the Ten Steps to Successful Breastfeeding

The 2017 *WHO guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternal and newborn care (34)* examined the evidence for each of the original Ten Steps to Successful Breastfeeding that were originally published in 1989 *(10)*. The document rewords the key recommendations, and this operational guidance presents a new framing of the Ten Steps that more clearly separates issues on standards for individual patient care and the institutional procedures necessary to ensure that that care is delivered consistently and ethically. The updated Ten Steps are described as six key clinical practices plus four critical management procedures. They are described in Box 1.

The core intent of the steps remains the same as the 1989 version of the Ten Steps, namely protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. In this update, the strict interpretation of how the step should be applied is, in many cases, left more to national discretion than previously. For example, the step on training health-care staff focuses more on competency assessment to ensure that staff have the knowledge and skills to support breastfeeding, rather than insisting on a specific curriculum. The step on providing mothers with practical support on how to breastfeed does not emphasize one type of milk expression, but focuses more on issues of positioning and latch, assessment of breast-milk intake, and responsive feeding. The step on post-discharge care focuses more on the responsibilities of the facility providing maternity and newborn services to plan for discharge and make referrals, rather than the specific creation of mother-to-mother support groups.

The previous step 9 on use of pacifiers and artificial teats has been removed because the systematic reviews conducted in the guideline development process found little or no difference in breastfeeding rates at different ages for healthy term infants who used pacifiers or artificial teats in the immediate postpartum period from those who did not. Among preterm infants, the systematic reviews on non-nutritive suckling did not find a difference in breastfeeding-related outcomes and found a positive impact on the duration of hospital stay. For preterm infants, the use of feeding bottles and teats is still discouraged, but this is described in the revision as a means of implementation rather than a step in its own right. The previous step 8 regarding on-demand feeding has been incorporated into the more general step on supporting mothers in learning how to breastfeed.

Full application of the *International Code of Marketing of Breast-milk Substitutes (13)* has always been a major component of the BFHI but was not part of the original Ten Steps. This revision makes it an explicit step. In addition, the need for ongoing internal monitoring of adherence to the clinical practices has been incorporated as one of the steps. This step was added because of the recognition that many facilities that had once been designated as Baby-friendly changed their practices over time and were thus unable to maintain the designation. Internal monitoring should help to ensure that adoption of the Ten Steps is maintained over time.

Box 1. Ten Steps to Successful Breastfeeding (revised 2017)

Key clinical practices

1. Where facilities provide antenatal care, pregnant women and their families should be counselled about the benefits and management of breastfeeding.
2. Early and uninterrupted skin-to-skin contact between mothers and infants should be facilitated and encouraged as soon as possible after birth, and all mothers should be supported to initiate breastfeeding as soon as possible after birth, within the first hour after delivery.
3. Mothers should receive practical support to enable them to initiate and maintain breastfeeding and manage common breastfeeding difficulties.
4. Mothers should be discouraged from giving any food or fluids other than breast milk, unless medically indicated.
5. Facilities providing maternity and newborn services should enable mothers and their infants to remain together and to practise rooming-in throughout the day and night.
6. As part of protecting, promoting and supporting breastfeeding, discharge from facilities providing maternity and newborn services should be planned for and coordinated, so that parents and their infants receive the appropriate care and have access to supportive resources.

Critical management procedures

7. Facilities providing maternity and newborn services should have a clearly written breastfeeding policy that is routinely communicated to staff and parents.
8. Facilities providing maternity and newborn services should fully comply with the *International Code of Marketing of Breast-milk Substitutes* and relevant World Health Assembly resolutions.
9. Health-facility staff who provide infant feeding services, including breastfeeding, should have sufficient knowledge, competence and skills to support women to breastfeed.
10. Facilities providing maternity and newborn services should establish ongoing monitoring and data-management systems to monitor compliance with the clinical practices above.

1.5.2. Revision of the operational guidance

This operational guidance proposes a number of revisions to the implementation of the BFHI, primarily focused on integrating the protection, promotion and support of breastfeeding more fully in the health-care system, in order to facilitate scale-up to every facility (public and private) and make implementation of the interventions more sustainable.

The guidance also incorporates, or is aligned with, other WHO or UNICEF technical guidance documents, including the *Guidance on ending the inappropriate promotion of foods for infants and young children (35)*, the 2016 WHO/UNICEF *Guideline: updates on HIV and infant feeding (36)*, the WHO *Standards for improving quality of maternal and newborn care in health facilities (37)* and the WHO *Framework on integrated people-centred health services (38)*.

This updated guidance is aimed at strengthening health services and proposes a less vertical management and implementation structure, requiring fewer resources dedicated specifically to the initiative. This guidance aims to integrate the strategies for integrated people-centred health services *(38)* and strengthen the quality-improvement aspects already present in the BFHI.

Box 2 summarizes the key updated directions for BFHI implementation, as described in detail in sections 3 and 4.

Box 2. Summary of updated directions for BFHI implementation

1. Appropriate care to protect, promote, and support breastfeeding is the responsibility of *every* facility providing maternity and newborn services.
2. Countries need to establish national standards for the protection, promotion and support for breastfeeding in all facilities providing maternity and newborn services, based on the Ten Steps to Successful Breastfeeding.
3. Countries must ensure that private facilities, as well as just public ones, provide appropriate care.
4. The Baby-friendly Hospital Initiative must be integrated with other initiatives for health-care improvement, health-systems strengthening and quality assurance.
5. While the designation of "Baby-friendly" is one way to recognize facilities that provide appropriate care, designation is not the most effective strategy to achieve sustainable improvement in the quality of maternity care.
6. Regular internal monitoring is a crucial element of both quality improvement and ongoing quality assurance.
7. External assessment is a valuable tool for validating the quality of maternity and newborn services and needs to be sufficiently streamlined to be manageable within existing resources.

2. The role of facilities providing maternity and newborn services

The core purpose of the BFHI is to ensure that mothers and newborns receive appropriate care before and during their stay in a facility providing maternity and newborn services, so that they can successfully

breastfeed according to international recommendations (initiating within the first hour, exclusively breastfeeding for 6 months, and continuing to breastfeed for 2 years or beyond). Families must receive quality and unbiased information about infant feeding. Facilities providing maternity and newborn services have a responsibility to promote breastfeeding, but they must also respect the mothers' preferences and provide support for mothers to successfully feed their newborn in the way they choose.

In line with the WHO Framework on Integrated People-Centred Health Services (38), it is important to ensure that "All people have equal access to quality health services that are co-produced in a way that meets their life course needs and respects social preferences, are coordinated across the continuum of care, and are comprehensive, safe, effective, timely, efficient and acceptable; and all carers are motivated, skilled and operate in a supportive environment". A specific aspect of this is providing care in a culturally appropriate manner, including providing print materials in languages all clients understand.

Facilities providing maternity and newborn services need to comply with the Ten Steps to Successful Breastfeeding. The 2017 version of the Ten Steps comprises six key clinical practices and four critical management procedures. The key clinical practices are evidence-based interventions to support mothers to successfully establish breastfeeding, and the critical management procedures provide an enabling environment in which these practices can be implemented sustainably. These "six plus four" steps are outlined in Box 1 and described in detail in sections 2.1 and 2.2, respectively. Annex 1 shows how the Revised Ten Steps to Successful Breastfeeding incorporate all of the new recommendations *(34)* and how they relate to the original Ten Steps. The new recommendations, as provided in the updated guideline *(34)*, are also presented in sections 2.1 and 2.2 with the relevant recommendation number added.

2.1. Clinical practices to support breastfeeding

The updated BFHI highlights six key clinical practices, based on the *WHO guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternal and newborn care (34)*, issued in 2017. These key practices are discussed in sections 2.1.1 to 2.1.6.

With regard to HIV, the 2016 WHO/UNICEF guideline on HIV and infant feeding *(36)* recommends that national or subnational health authorities should set recommendations for infant feeding in the context of HIV, and decide whether health services will mainly counsel and support mothers known to be living with HIV to either (i) breastfeed and receive antiretroviral (ART) drug interventions; or (ii) avoid all breastfeeding. Where authorities recommend breastfeeding plus ARTs, this includes early initiation of breastfeeding, exclusive breastfeeding for the first 6 months of life and continued breastfeeding, with adequate and safe complementary feeding, for at least 12 months and it may be continued up to 24 months or beyond (similar to the general population), while being fully supported for antiretroviral treatment adherence. Where authorities recommend avoiding all breastfeeding, it is likely that skilled and coordinated support can make replacement feeding safer. The BFHI can be implemented in both contexts.

2.1.1 Antenatal care

Where facilities provide antenatal care, pregnant women and their families should be counselled about the benefits and management of breastfeeding (recommendation 14)**.**

In many settings, antenatal care is primarily provided through primary health-care clinics or community health workers. Facilities providing maternity and newborn services may not have direct authority over these care providers, but are encouraged to work with them to ensure that mothers are fully informed about the importance of breastfeeding and know what to expect when they deliver at the facility. In other cases, the facility directly provides antenatal care services or offers classes for pregnant women. In this case, provision of breastfeeding counselling is the direct responsibility of the facility.

All pregnant women need to have basic information about breastfeeding, in order to make informed choices. This would include information on the importance of breastfeeding and the risks of giving formula or other breast-milk substitutes; health-professional recommendations for infant feeding; and the basics of positioning and attachment. They also need to know what to expect in the facility providing maternity and newborn services regarding skin-to-skin contact, initiation of breastfeeding, supplementation and rooming-in. But beyond simply knowledge, it is important that antenatal breastfeeding counselling is tailored to the individual needs of the woman and her family, addressing any concerns they have. This counselling needs to be sensitively given and consider the social and cultural context of each family.

Wherever possible, conversations on breastfeeding should begin with the first or second antenatal visit, so that there is time to discuss any challenges if needed. This is particularly important in settings where women have few antenatal check-ups, and/or initiate their check-ups late in their pregnancy. Additionally, women who deliver prematurely may not have adequate opportunities to discuss breastfeeding if the conversations are delayed until late in pregnancy.

Information on breastfeeding can be provided in a variety of ways. Printed or online information that is in a language mothers (including illiterate ones) understand is one way to ensure that all relevant topics are covered. However, there is no assurance that all women will read this information, and it may not directly address the key questions they have. Interpersonal counselling, either one-on-one or in groups, is important to allow women to discuss their feelings, doubts and questions about infant feeding.

Adolescent girls who are pregnant, and pregnant women who are hospitalized during the pregnancy, are at increased risk for preterm delivery or birth of a sick infant *(39)*. It is especially important to begin discussions about breastfeeding with these women, giving particular consideration to the special circumstances of feeding a premature or low-birth-weight or a sick baby.

2.1.2 Immediate postnatal care

Early and uninterrupted skin-to-skin contact between mother and infants should be facilitated and encouraged as soon as possible after birth, **and all mothers should be supported to initiate breastfeeding as soon as possible after birth, within the first hour after delivery** (recommendations 1 & 2)**.**

Early skin-to-skin contact and early initiation of breastfeeding are two closely linked interventions that need to take place in tandem for optimal benefit. Early and uninterrupted skin-to-skin contact facilitates the newborn's natural rooting reflex that helps to imprint the behaviour of looking for the breast and suckling at the breast. Additionally, early skin-to-skin contact helps populate the newborn's microbiome and prevents hypothermia (if the baby is dry and has its back covered). Early suckling at the breast will

trigger the production of breast milk and accelerate lactogenesis. Many mothers stop breastfeeding early or believe they cannot breastfeed because of insufficient milk, so establishment of a milk supply is critically important for success with breastfeeding. In addition, early initiation of breastfeeding has been proven to reduce mortality risk *(40)*. Early and uninterrupted skin-to-skin contact between mothers and infants should be facilitated and encouraged as soon as possible after birth (recommendation 1).

Skin-to-skin contact is when the infant is placed prone on the mother's abdomen or chest in direct ventral-to-ventral skin-to-skin contact. It is recommended that skin-to-skin contact begins immediately after delivery. It should be uninterrupted for at least 60 minutes. Initiation of breastfeeding is typically a direct consequence of uninterrupted skin-to-skin contact, as it is a natural behaviour for most babies to slowly squirm or crawl toward the breast. Mothers may be supported to help the baby to the breast if desired. Mothers should be shown how to hold the baby and how to make sure the baby is properly attached at the breast. All mothers should be supported to initiate breastfeeding as soon as possible after birth, within the first hour after delivery (recommendation 2).

It should be noted that the milk a newborn consumes immediately after birth is colostrum, which is thicker than regular milk and yellow in colour. The amount of colostrum a newborn will receive in total is very small. Early suckling is important for stimulating milk production and establishing optimal breastfeeding behaviours, and the amount of milk ingested is a relatively unimportant factor.

During early skin-to-skin contact, and for at least the first 2 hours after delivery, sensible vigilance and safety precautions should be taken so that health-care personnel can observe for, assess and manage any signs of distress. Mothers who are sleepy or under the influence of anaesthesia or drugs will require more supervision. In this case, a health worker, doula, friend or family member should accompany the mother to prevent the baby from being hurt accidentally.

Early skin-to-skin care and breastfeeding initiation is feasible following a caesarean section with local anesthesia (epidural) *(41)*. After a caesarean section with general anesthesia, skin-to-skin contact and initiation of breastfeeding may need to be delayed until the mother is sufficiently alert to hold the infant. Other mothers who are medically unstable following delivery may need to delay the initiation of breastfeeding. However, even if these mothers are not able to initiate breastfeeding during the first hour after delivery, they should still be supported to breastfeed as soon as they are able *(42)*.

Skin-to-skin contact is particularly important for preterm and low-birth-weight infants. Kangaroo mother care involves early, continuous and prolonged skin-to-skin contact between the mother and the baby *(43)*, and can be used as the main mode of care as soon as the baby is stable (defined as the absence of severe apnoea, desaturation and bradycardia), owing to demonstrated benefits in terms of survival, thermal protection and initiation of breastfeeding. The baby is generally firmly attached to the mother's chest, often between the breasts. Preterm infants are able to root, latch on and suckle from 27 weeks *(44)*. However, early initiation of breastfeeding may be difficult for these infants if the suckling reflex is not yet established and the mother's milk has not come in. Transition to direct and exclusive breastfeeding should be an aim whenever possible *(45)* and is facilitated by prolonged skin-to-skin contact.

2.1.3 Support with breastfeeding

Mothers should receive practical support to enable them to initiate and maintain breastfeeding and manage common breastfeeding difficulties (recommendation 3)**.**

Showing mothers how to breastfeed includes providing emotional and motivational support, imparting information, and teaching practical skills to enable mothers to breastfeed successfully. The stay in the facility providing maternity and newborn services is a unique opportunity to discuss and assist the mother with questions or problems related to breastfeeding and to build confidence in her ability to breastfeed.

First-time mothers and mothers who have not breastfed before will require extra support. However, even mothers who have had another child might have had a negative breastfeeding experience and need support to avoid previous problems. Mothers delivering by caesarean section, and obese mothers, may require additional help with positioning and latch.

Practical support for preterm, including late preterm, newborns is particularly critical, in order to establish and maintain the production of breast milk. Mothers of preterm infants may have health problems of their own and need motivation and support for frequent milk expression, especially when their infants are not yet able to suckle. Late preterm infants are generally able to exclusively breastfeed at the breast, but are at greater risk of jaundice, hypoglycaemia and feeding difficulties than full-term infants, and thus require increased vigilance *(46)*. Mothers of twins also need extra support, especially for positioning and attachment.

A number of issues should be included in teaching mothers to breastfeed. Perhaps most essential is showing mothers good positioning and attachment at the breast, which are crucial for stimulating the production of breast milk and to ensure the infant receives enough milk. Direct observation of a feed can ensure that the baby is able to latch and suckle at the breast. Additionally, management of engorged breasts, ways to ensure a good milk supply, prevention of cracked and sore nipples, and evaluation of milk intake are important skills for the mother to learn.

Mothers should be coached on how to express breast milk as a means of maintaining lactation in the event of their being separated temporarily from their infants (recommendation 4). Expression of breast milk could also be useful in reassuring a mother that milk is being produced by her breasts (particularly in the first few days after birth). There is not sufficient evidence that one method of expression (hand expression, manual pump or electric pump) is more effective than another *(47)*, and thus any method(s) may be taught, depending on the mother's context. Hand expression may have the advantage of allowing the mother to relieve pressure or express milk when a pump is not available.

If expressed milk or other feeds are medically indicated for term infants, feeding methods such as cups, spoons or artificial teats may be used during their stay at the facility (recommendation 10). It is important that the facility staff ensures appropriate hygiene in the cleaning of these utensils, since they can be a breeding ground for bacteria. If expressed breast-milk or other feeds are medically indicated for preterm infants, feeding methods such as cups or spoons are preferable to feeding bottles and teats (recommendation 11), since these may interfere with learning to suckle at the breast. On the other hand, for preterm infants who are unable to breastfeed directly, non-nutritive sucking and oral stimulation may be beneficial until breastfeeding is established (recommendation 9). Using hygienic practices is crucial to protect the infants' health.

Mothers should be supported to recognize and respond to their infants' cues for feeding, closeness and comfort, and enabled to respond accordingly to these cues with a variety of options, during their stay at the facility providing maternity and newborn services (recommendation 8). Supporting mother to respond in a variety of ways to behavioural cues for feeding, comfort or closeness enables them to build a caring, nurturing relationship with their infants and increases their confidence in themselves, in breastfeeding and in their infants' growth and development. Mothers should be supported to practise responsive feeding as part of nurturing care (recommendation 6). Responsive feeding (also called on-demand or baby-led feeding) puts no restrictions on the frequency or length of the infants' feeds, and mothers are advised to breastfeed whenever the infant is hungry or as often as the infant wants. Scheduled feeding, which prescribes a predetermined, and usually time-restricted, frequency and schedule of feeds is not recommended. It is important that mothers know that crying is a late cue and that it is better to feed the baby earlier, since correct positioning and attachment are more difficult when an infant is in distress.

When the mother and baby are not in the same room for medical reasons (post-caesarean section, preterm or sick baby), the facility staff need to support the mother to visit the baby as often as possible, so that she can recognize feeding cues. When staff notice feeding cues, they should bring the mother and baby together. It is advisable not to wait until the baby cries because then positioning and attachment are more difficult.

2.1.4 No supplements

Mothers should be discouraged from giving any food or fluids other than breast milk, unless medically indicated (recommendation 7)**.**

Giving newborns any foods or fluids other than breast milk in the first few days after birth interferes with the establishment of breast-milk production. Newborns' stomachs are very small and easily filled. Newborns that are fed other foods or fluids will suckle less vigorously at the breast and thus inefficiently stimulate milk production, creating a cycle of insufficient milk and supplementation. In addition, foods and liquids may contain harmful bacteria and carry a risk of disease. Supplementation with artificial milk significantly alters the intestinal microflora (47a).

Very few conditions of the infant or mother preclude the feeding of breast milk and necessitate the use of breast-milk substitutes *(48, 49)*. However, some breastfed infants will require supplementation. Infants should be assessed for signs of inadequate milk intake and supplemented when indicated, but routine supplementation is rarely necessary in the first few days of life. Lack of resources, staff time or knowledge are not justifications for the use of early additional foods of fluids.

Mothers who intend to "mixed feed" (a combination of both breastfeeding and feeding with breast-milk substitutes) should be taught the importance of exclusive breastfeeding in the first few weeks of life, to establish a milk supply and ensure that the infant is able to successfully latch and suckle at the breast. Supplementation can be introduced at a later date if the mother chooses.

Mothers who report they have chosen not to breastfeed should be counselled on the importance of breastfeeding. However, if they still do not wish to breastfeed, feeding with breast-milk substitutes will be necessary. Mothers who are feeding breast-milk substitutes, by necessity or by choice, need to be taught how to prepare and give feeds safely.

Low-birth-weight infants, including those with very low birth weight, who cannot be fed their mother's own milk should be fed donor human milk *(50, 51)*. If donor milk is unavailable or culturally unacceptable, breast-milk substitutes will be required. As noted above, supplemental feeding of preterm infants should be done with cups or spoons rather than feeding bottles and teats.

2.1.5 Rooming-in

Facilities providing maternity and newborn services should enable mothers and their infants to remain together and to practise rooming-in throughout the day and night (recommendation 5)**.**

Rooming-in is necessary to enable mothers to practise responsive feeding, as mothers cannot recognize and respond to their infants' cues for feeding if they are separated from their babies. Rooming-in involves keeping mothers and infants together in the same room, immediately after leaving the labour or delivery room after a normal facility birth, or from the time when the mother is able to respond to the infant, until discharge. This means that mother and infant are together throughout the day and night. When mother and baby are together throughout the day and night, it is easy for mother to learn to recognize feeding cues and respond to them. This will facilitate the establishment of breastfeeding.

The postnatal wards need to be designed so that there is enough space for mothers and their newborns to be together. Facility staff need to visit the ward regularly to ensure the babies are safe. Babies should only be separated from their mothers for justifiable reasons. Minimizing disruption to breastfeeding during the stay in the facilities providing maternity and newborn services will require health-care practices that enable a mother to breastfeed for as much, as frequently and for as long as she can.

When a mother is placed in a dedicated ward to recover from a caesarean section, the baby should be accommodated in the same room with her close by. She will most likely need practical support to position her baby to breastfeed, especially when the baby is in a separate cot or bed.

Rooming in may not be possible in circumstances when infants need to be moved for specialized medical care (recommendation 5). Preterm or sick babies may need to be in a separate room to allow for adequate treatment and supervision. In these circumstances, efforts need to be made for the mother to stay with the baby as much as possible. There should be no restrictions for mothers visiting their newborns. In some cases, rooming-in might be possible.

2.1.6 Care at discharge

As part of protecting, promoting and supporting breastfeeding, discharge from facilities providing maternity and newborn services should be planned for and coordinated, so that parents and their infants receive the appropriate care and have access to supportive resources (recommendation 15)**.**

Mothers need sustained support to continue breastfeeding. While the time in the facility providing maternity and newborn services should provide a mother with basic breastfeeding skills, she will encounter several different phases in her production of breast milk, her infant's growth and her own circumstances (e.g. going back to work or school), in which she might need to apply her skills in a different way or when she might need additional support. Breastfeeding support is especially critical in

the succeeding days and weeks after discharge to identify and address early breastfeeding challenges that occur.

Facilities providing maternity and newborn services need to identify appropriate community resources for continued and consistent breastfeeding support that is culturally and socially sensitive to their needs. The facilities have a responsibility to engage with the surrounding community to enhance such resources. This may include primary health-care centres, community health workers, home visitors, breastfeeding clinics, nurses/midwives, lactation consultants, peer counsellors, mother-to-mother support groups, or phone lines ("hot lines"). The facility should maintain contact with the groups and individuals providing the support as much as possible, and invite them to the facility where feasible.

Each mother should be linked to these resources upon discharge. Facilities need to provide appropriate referrals to ensure that mothers and babies are seen again a few days post-discharge to assess the feeding situation. Printed information could be useful to provide contacts where mothers may turn in case of difficulties, but this should not substitute for active follow-up care by a skilled professional.

Follow-up care is especially crucial for preterm and low-birth-weight babies discharged before full oral feeding has been achieved. In these cases, the lack of a clear follow-up plan could lead to significant health hazards. Ongoing support from experienced professionals is needed.

2.2. Management procedures to support breastfeeding

To ensure that the clinical practices are routinely carried out, facilities providing maternity and newborn services also need to adopt and maintain four critical management procedures, which should be part of national policies in support of breastfeeding. They are described in detail in sections 2.2.1 to 2.2.4.

2.2.1. Facility breastfeeding policy

Facilities providing maternity and newborn services should have a clearly written breastfeeding policy that is routinely communicated to staff and parents (recommendation 12).

A facility breastfeeding policy may stand alone as a separate document, be included in a broader infant feeding policy, or be incorporated into a number of other policy documents. However organized, the policy should include guidance on how each of the clinical and care practices should be implemented to ensure that they are applied consistently to all mothers. The policy should also spell out how the management procedures should be implemented, preferably via specific processes that are institutionalized.

2.2.2. *International Code of Marketing of Breastmilk Substitutes (13)*

Facilities providing maternity and newborn services should fully comply with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions.

Compliance with the *International Code of Marketing of Breast-milk Substitutes (13)* and subsequent relevant WHA resolutions *(14)* (the Code) is important for facilities providing maternity and newborn

services, since the promotion of breast-milk substitutes is one of the largest undermining factors for breastfeeding *(52)*. Companies marketing breast-milk substitutes are repeatedly found to violate the Code *(53)*. It is also expected that the sales of breast-milk substitutes will continue to increase, which is detrimental for children's survival and well-being *(54, 55)*. This situation means that ongoing concerted efforts will be required to protect, promote and support breastfeeding, including in facilities providing maternity and newborn services.

The Code lays out clear responsibilities of health-care systems to not promote infant formula, feeding bottles or teats and to not be used by manufacturers and distributers of breast-milk substitutes for this purpose. This includes the provision that all facilities providing maternity and newborn services must acquire any breast-milk substitutes they require through normal procurement channels and not receive free or subsidized supplies (WHA Resolution 39.28 *(56)*). Furthermore, staff of facilities providing maternity and newborn services should not display any type of advertising of breast-milk substitutes, should not display or distribute any materials bearing the brand of manufacturers of breast-milk substitutes or discount coupons, and should not give samples of infant formula to mothers to use in the facility or to take home.

In line with the WHO *Guidance on ending the inappropriate promotion of foods for infants and young children*, published in 2016 and endorsed by the World Health Assembly *(35)*, health workers and health systems should avoid conflicts of interest with companies that market foods for infants and young children. Health-professional meetings should never be sponsored by industry and industry should not participate in parenting education.

2.2.3. Regular competency assessment

Health-facility staff who provide infant feeding services, including breastfeeding support, should have sufficient knowledge, competence and skills to support women to breastfeed (recommendation 13)**.**

Appropriate care for breastfeeding mothers can only be accomplished if staff have the knowledge and skills to carry it out. In general, the responsibility for building this capacity resides with the national pre-service education system. However, if staff capacity is deficient, facilities providing maternity and newborn services will need to take corrective measures to strengthen that capacity, such as by offering courses at the facility or requiring that staff take courses elsewhere. While some material can be taught through didactic lectures (including electronic resources), some supervised clinical experience with competency testing is necessary. It is important to focus not on a specific curriculum but on the knowledge and skills obtained.

2.2.4. Monitoring and data-management systems

Facilities providing maternity and newborn services should establish ongoing monitoring and data-management systems to monitor compliance with the clinical practices above.

Facilities providing maternity and newborn services need to integrate the recording and monitoring of the clinical practices related to breastfeeding into their quality-improvement/monitoring systems (see section 2.4).

All facilities should routinely track rates of early initiation of breastfeeding and exclusive breastfeeding during the facility stay (Table 1). Recording of information on these sentinel indicators should be incorporated into the medical charts for each mother–infant pair and collated into relevant registers. The group or committee that coordinates the BFHI-related activities within a facility needs to review progress on a monthly basis. The purpose of the review is to continually track the values of these indicators to determine whether established targets are met, and if not, plan and implement corrective actions. In addition, if the facility has an ongoing system of maternal discharge surveys for other quality improvement/quality assurance assessments and it is possible to add question(s), one or both indicators could be added for additional verification purposes or periodic checks. Facilities should aim for at least 90% early initiation and exclusive breastfeeding.

Table 1. Sentinel indicators for facility-based monitoring of the protection, promotion and support of breastfeeding

Indicator	Definition	Target	Primary source	Alternative sources
Early initiation of breastfeeding	The percentage of term infants who were put to the breast within one hour of birth	>90%	Clinical records	Interviews of mothers of term infants
Exclusive breastfeeding during facility stay	The percentage of infants who received only breast milk (either from their own mother or from a human milk bank) throughout their stay at the facility	>90%	Clinical records	Interviews of mothers of preterm and term infants

Nine process indicators for monitoring adherence to the six recommendations for Key Clinical Practices and means of verification are recommended (Table 2). Two alternative methods for verification, newborn registries and maternal discharge surveys (which could be done in a written or oral way or via a cell phone (SMS)), are proposed. Facilities are not expected to use both methodologies at the same time. Depending on what other monitoring systems facilities are using, either may be more practical and feasible.

These indicators are particularly important during an active process of quality improvement and should be assessed monthly during this process. Once acceptable levels of compliance have been achieved, the frequency of data collection on these additional indicators can be reduced, for example to annually. However, if the level of the sentinel indicators falls below 90% or below national standards, it will be important to assess both the clinical practices and all management procedures to determine where the bottlenecks are and what needs to be done to achieve the required standards.

The frequency of data collection will depend on the method of verification. For example, if questions are added to already ongoing maternal discharge surveys the periodicity will, by default, be a function of the periodicity of the ongoing survey. If the information is collected though newborn registries and the registries are already being reviewed to collect data on the sentinel outcome indicators, it may make sense to also collect data on the Key Clinical Practices for all newborns. Alternatively, a sample of registries could be reviewed every six months to collect this information to reduce the burden of

abstracting, summarizing, and reviewing large amounts of data from the registries. If a new system of maternal discharge surveys is put into place, a periodicity of every six months may be called for. However, as noted in the Introduction the goal is to have monitoring streamlined and manageable within the facilities existing resources.

Thus, to the extent possible it is best to not implement new methods of data collection, unless necessary or for periodic purposes of verification. The same goes for the amount of data collected; more is not necessarily better if systems are not in place to analyze and use the information to improve breastfeeding support.

Table 2. Clinical practice indicators for facility-based monitoring of the protection, promotion and support of breastfeeding

Key clinical practice	Proposed indicator definition	Target	Primary source	Additional sources
1. Where facilities provide antenatal care, pregnant women and their families should be counselled about the benefits and management of breastfeeding.	• The percentage of mothers of preterm and term infants who received prenatal care at the facility who received prenatal counselling on breastfeeding	• >90%	• Interviews of mothers of preterm and term infants	• Clinical records
2. Early and uninterrupted skin-to-skin contact between mother and infants should be facilitated and encouraged as soon as possible after birth, and all mothers should be supported to initiate breastfeeding as soon as possible after birth within the first hour after delivery.	• The percentage of mothers of term infants who had skin-to-skin contact with their baby immediately or within 5 minutes of birth that lasted an hour or more • The percentage of term infants who were put to the breast within one hour of birth	• >90% • >90%	• Interviews of mothers of term infants	• Clinical records
3. Mothers should receive practical support to enable them to initiate and maintain breastfeeding and manage common breastfeeding difficulties.	• The percentage of mothers of term infants who are able to demonstrate that they can position their baby and that the baby correctly latches to the breast • The percentage of mothers of term infants who report having been informed on at least two items that help evaluate whether a breastfed baby drinks enough milk	• >90% • >90%	• Interviews of mothers of term and preterm infants and observation in neonatal intensive care units	

	• The percentage of mothers of preterm and term infants who can correctly demonstrate or describe how to express breast milk	• >90%		
4. Mothers should be discouraged from giving any food or fluids other than breast milk, unless medically indicated.	• The percentage of infants who received only breast milk (either from their own mother or from a human milk bank) throughout their stay at the facility	• >90%	• Interviews of mothers of preterm and term infants	• Clinical records
5. Facilities providing maternity and newborn services should enable mothers and their infants to remain together and to practise rooming-in throughout the day and night.	• The percentage of mothers of term infants who stayed with their babies since birth without separation lasting for more than 1 hour	• >90%	• Interviews of mothers of term infants	• Clinical records
6. As part of protecting, promoting, and supporting breastfeeding, discharge from facilities providing maternity and newborn services should be planned for and coordinated, so that parents and their infants receive the appropriate care and have access to supportive resources.	• The percentage of mothers of preterm and term infants who report that a staff member has informed them where they can access breastfeeding support in the community	• >90%	• Interviews of mothers of term and preterm infants	

For the practice indicators, monitoring is best if based on maternal report. Collection of data for some indicators could be done through electronic medical records or from paper reports on each mother–infant pair, but runs the risk that staff completing these records will overreport practices that they have been taught they are supposed to do. Options for maternal data collection include:

- exit interviews with mothers (preferably by a person not directly in charge of their care);
- short paper questionnaires to mothers for confidential completion upon discharge;
- sending questions to the mother via SMS.

It is recommended that a minimum of 20 mother–infant pairs be included for each indicator, each time the data are reviewed, although small facilities may need to settle for a smaller number if 20 pairs are

not available. Each facility should attempt to regularly achieve 90% adherence on each indicator, and facilities that do not meet this target should focus on increasing the percentage over time.

2.3. Coordination

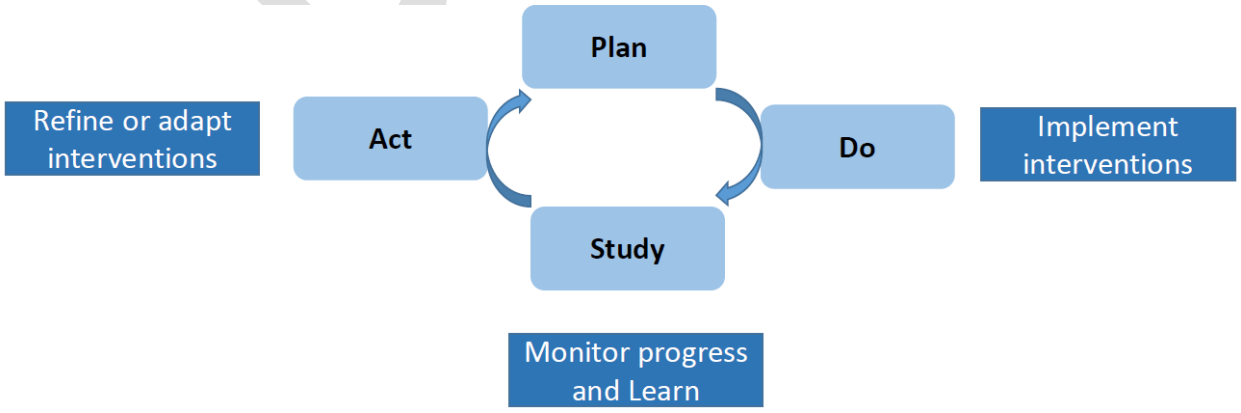
Each facility needs to have a structure in place to coordinate the protection, promotion and support of breastfeeding. It is recommended that this area of work is incorporated into the responsibilities of an existing committee or working group comprising decision-makers in the areas of maternal and newborn health, quality assurance and management. If there is no existing structure that can be utilized for this purpose, it might be appropriate to establish a separate body. This body will need to have strong linkages with maternal and newborn health, quality-assurance and management structures and decision-makers.

2.4. Quality-improvement process

The process of changing health-care practices takes time. There are well-documented methods for implementing changes and building systems to sustain the changes once a specific goal has been reached. Quality improvement is a management approach that health workers can use to reorganize patient care to ensure that patients receive good quality health care *(57)*. Quality improvement can be defined as "systematic and continuous actions that lead to measurable improvement in health care services and the health status of targeted patient groups" *(58)*. The process of quality improvement has been extensively studied and there are well-developed models of quality improvement in health care (including by the WHO Regional Office for South-East Asia *(57, 59)* , the Institute for Healthcare Improvement [IHI] *(60, 61)* and the US Department for Health and Human Services *(58)*).

Quality-improvement processes are cyclical and comprise the following steps: (i) planning a change in the quality of care; (ii) implementing the changes; (iii) measuring the changes in care practices and/or outcomes; and (iv) analysing the changed situation and taking further action to either further improve or maintain the practices. In the IHI model, these steps are called plan, do, study and act (PDSA) and are visualized in Fig. 3.

Fig. 3. Visualization of the four steps of quality improvement



In the context of the BFHI, a PDSA cycle can be used to improve implementation of each of the Ten Steps. It is recommended to do this for the steps that are identified as not being implemented adequately. Once the desired level is achieved, the implementing team can focus on monitoring the performance of the sentinel indicators. The quality-improvement approach is very relevant for the BFHI, and countries are strongly encouraged to apply this approach. It helps to improve sustainability, since standard processes require fewer external resources or additional staff. The BFHI-related aspects can easily be combined with other quality-improvement initiatives that are already ongoing in newborn health or maternal and child health at the facility.

Regardless of what model of quality improvement is used, some key principles of quality improvement are central:

- *the triad of planning, improvement and control is central to the approach*: implementing teams need guidance on how to move through these steps;
- *active participation of main service providers or front-line implementers*: a team of staff members in the facility should review their own practices and systems and decide on the processes or actions that need to be changed; the day-to-day service providers like nurses, and possibly one or more physicians, know best what works and which obstacles they face;
- *engagement of leadership personnel*: facility administrators, heads of medical departments and thought leaders need to be convinced of the importance of the protection, promotion and support of breastfeeding and achieving high rates for early initiation and exclusive breastfeeding; they need to encourage the front-line implementers to adapt their practices where needed, and facilitate and actively support necessary changes; facility managers also play a pivotal role in implementing the critical management procedures;
- *measurement and analysis of progress over time*: using data to identify where problems are occurring allows a more focused approach to solving them (see the list of possible indicators in Table 2); the team needs to decide on the key indicators to measure in addition to the two sentinel indicators;
- *external evaluation or assessment*: quality-assurance systems implemented by national or decentralized authorities with an agreed regularity can be relevant to validate the results and the maintenance of the agreed standards; the indicators in Table 2 can be used for external assessments as well.

3. Country-level implementation and sustainability

While the changes to clinical care and maintenance of a supportive breastfeeding environment necessarily rest with each facility providing maternity and newborn services, there is considerable work to be done at the national level to ensure that mothers and babies receive appropriate care. It is important that this work is done with a health-systems approach that includes all aspects of the health system and strengthening it where needed. A health promotion approach is also encouraged, including consultations with consumers' organizations, health care providers and staff to ensure that there is support for mothers beyond the facility. It is also important to establish or strengthen a learning system in which knowledge about BFHI implementation in a specific country is shared.

The aforementioned pressure from the breast-milk substitutes industry will most likely remain and might undermine BFHI efforts at different levels. The protection, promotion and support of

breastfeeding in facilities providing maternity and newborn services needs to be well grounded in national policies, and actions need to be well coordinated.

3.1. National leadership and coordination

Every country should have an active national coordination body that is responsible for breastfeeding in general and the protection, promotion and support of breastfeeding, specifically in facilities providing maternity and newborn services. Where possible, the coordination body should be multisectoral. The national coordination body should include representation from government (including health and nutrition, financing and social services), academia, professional organizations and nongovernmental organizations (NGOs). Actors with a conflict of interest cannot be members of the coordination body. A conflict of interest is a set of circumstances where the interests of the BFHI may be unduly influenced by the conflicting interest of a partner in a way that affects, or may reasonably be perceived to affect, the integrity, independence, credibility of and public trust in the BFHI in a given country and its ability to protect, promote and support breastfeeding in facilities providing maternity and newborn services.

It is most practical when the functions of the coordination body can be added to the functions of an existing governmental department or existing institution or NGO. This helps avoid the BFHI becoming a vertical intervention. It is also recommended that the coordination body is incorporated in the national strategy under which the BFHI is covered. Where quality-improvement initiatives exist, the coordination body can be incorporated into quality-improvement committees to ensure institutionalization. When coordination is managed outside of the government, it is recommended that a government person coordinates and collaborates with this group. The coordination with this group should be part of that person's position and job description and not depend on the individual who occupies the position.

In countries where the health system is managed in a decentralized manner, subnational coordination bodies can be established or alternatively, members from decentralised levels can be incorporated in one national body. Where feasible, WHO and UNICEF can be included as members of the coordinating body to provide technical support and guidance.

It is recommended to have one clearly identified focal person for the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services. This can either be a government staff member for whom this is part of their duties, or, where needed and feasible, a person appointed only for this task. The coordination body needs to have a workplan with a scope of at least 1 year.

In addition to overseeing BFHI implementation, this guidance describes a further seven key functions of a national BFHI coordinating body (Box 3). A full description of each of these functions is outlined in greater detail in sections 3.2 to 3.8.

Box 3. Key functions of a national BFHI coordinating body

1. Oversee BFHI implementation in all facilities providing maternity and newborn services in the country, including private as well as public facilities.
2. Incorporate the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services into all relevant national policy documents and professional standards of care.
3. Ensure that all health professionals and managers engaged in maternal and newborn care have adequate capacity to implement the national BFHI standards and management procedures.
4. Develop external assessment systems to regularly evaluate the adherence of facilities providing maternity and newborn services to the national BFHI standards.
5. Develop and implement incentives for compliance and/or sanctions for non-compliance with the national standards.
6. Execute strategies to scale up application of the BFHI standards to include all facilities providing maternity and newborn services.
7. Develop and maintain a monitoring system on the implementation of the programme.
8. Ensure the ongoing funding of the initiative.

The national coordination body has overall responsibility to plan and coordinate all the key functions of the national BFHI programme as described in Box 3. Key tasks that would facilitate this general scope of work include:

- establishing/updating the national BFHI guidance, based on the recommended steps and global criteria;
- establishing national standards for the protection, promotion and support of breastfeeding in all facilities providing maternity and newborn services, based on the Ten Steps to Successful Breastfeeding;
- conducting a needs assessment that defines areas of greatest weakness and opportunities for rapid change;
- identifying opportunities to integrate BFHI-related activities into other programmes, interventions and initiatives, as relevant;
- establishing a learning system to support the implementation of quality improvement at the facility level;
- developing a scale-up strategy and action plan aimed at national coverage, with an accompanying budget.

More details are provided in the sections that follow.

3.2. Policies and professional standards of care

Countries are encouraged to explore all possible avenues for mandating the Baby-friendly standards so that all mother–infant pairs can benefit from appropriate care. The strongest incentive for facilities providing maternity and newborn services is often a governmental mandate. Through legislation, regulation, accreditation or certification, governments can require health-care facilities to adhere to specific policies and procedures. For example, legislation can require that all facilities have a

breastfeeding policy and prohibit them from accepting donations of breast-milk substitutes. Facility accreditation can be made dependent on adherence to a full set of clinical standards and specific management procedures.

The protection, promotion and support of breastfeeding in facilities providing maternity and newborn services need to be integrated in all relevant policy and planning documents, for example in the national nutrition policy and action plan and action plans for maternal, newborn and child health or hospital accreditations. Broader development plans, such as a national strategy for the reduction of newborn deaths or a national development strategy, should explicitly include protection, promotion and support of breastfeeding in facilities providing maternity and newborn services. Such inclusion will facilitate the integration of service delivery and inclusion in (national) budgets. It is also important to ensure that other supportive policy documents are developed, including on implementation of the *International Code of Marketing of Breast-milk Substitutes (13)*.

The key clinical practices of the revised Ten Steps to Successful Breastfeeding should be written into the standards of care for professional bodies. At a minimum, standards for family medicine, obstetrics, paediatrics, neonatology and nursing should lay out these steps as basics of care for all newborns. The national protocols for feeding of infants of mothers who are living with HIV also need to be incorporated into these standards. In addition, the management procedures need to be reflected in relevant guidance documents for clinical professionals and countries need to develop tools to measure whether the standards of care are being met (see section 3.7).

A relevant guidance document for incorporating the key clinical practices into standards of care is *Standards for improving quality of maternal and newborn care in health facilities (37)*. This document provides clear standards and has incorporated most of the Ten Steps. Several countries are already working to implement these standards in the context of the Quality of Care initiative *(62)*.

It should be clear in the policies and standards of care that the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services need to be maintained and, where necessary, strengthened in humanitarian settings.

3.3. Capacity-strengthening

At all levels of the health-care system, health professionals need to have adequate knowledge, skills and competencies to implement globally recommended practices and procedures for the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services. Individual facilities have the responsibility for assessing competencies and ensuring that their staff have appropriate knowledge and skills when these are found to be substandard.

Pre-service training for all professions who will interact with pregnant women, deliveries and newborns needs to include adequate time and attention on breastfeeding, including on the Ten Steps to Successful Breastfeeding, and should include theoretical as well as practical sessions. Since current pre-service training on breastfeeding is inadequate in many countries, new national curricula may need to be developed and their quality guaranteed. It is understood that this is often a lengthy process that involves several stakeholders who are not usually involved in breastfeeding-related activities (such as the ministry of education). In addition, the teaching staff in relevant schools and universities will

probably also need to be trained in the new material. However, this is an essential investment for long-term sustainable capacity-strengthening.

National curricula on breastfeeding need to include clinical and administrative practices related to the protection, promotion and support of breastfeeding, as well as health-worker responsibilities under the *International Code of Marketing of Breast-milk Substitutes (13).*

While pre-service training is a critical component of long-term change in maternity practices, staff already in practice also need to be educated on appropriate care. Continuing education and in-service training will be important until several batches of newly trained professionals have graduated. Where national guidance, or national curricula for in-service training of health workers, exist, the clinical practices and the *International Code of Marketing of Breast-milk Substitutes (13)* need to be incorporated in the curricula. This also ensures that each individual facility does not need to develop its own materials or procedures. It might be necessary to retrain the trainers for in-serve training. Continuing education and in-service training must be seen as a short-term solution to a problem, not an ongoing method of capacity-development. On-the-job refresher training sessions are needed regularly and can be done in a modular way so that they do not interfere too much with the provision of services.

Many of the educational materials needed for appropriate maternity care could be taught through electronic or online courses. This could be an efficient and low-cost means of education, also allowing health workers to learn at their own pace and review information when they need to refresh their knowledge later on. Existing resources already exist in some countries and could be shared. However, teaching some skills will require face-to-face interaction. In addition, skills assessment will require direct observation. As a result, some one-to-one learning and competency-based assessment will still be needed.

The role of facility managers in the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services is crucial. Performance-based contracts with targets for breastfeeding rates in general, or BFHI implementation in particular, might be useful to strengthen accountability. Facility managers need to have an adequate understanding of breastfeeding and the BFHI, so that they can guide and oversee BFHI implementation at the facility level.

Proactive education of facility administrators and medical directors, combined with technical assistance as needed, may be sufficient input to stimulate change on many practices. Most of the Baby-friendly standards do not cost more money (some could even save facilities money), but simply require a conscious decision to make a change. If directors understand the rationale for recommended standards, can have their questions answered, and can be helped through challenges, this may be sufficient incentive to make the change.

3.4. External assessment

All facilities providing maternity and newborn services are responsible for providing appropriate care for mothers and newborns, in line with the Baby-friendly guidelines *(17)* and national evidence-based quality standards. As described above, facilities need to develop internal monitoring mechanisms to ensure adherence to quality standards. However, external assessment is also critical for quality

assurance. The primary purpose of external assessment should be technical assistance and correction of inappropriate practices.

Monitors from outside the facility are able to validate the results and identify gaps in care and non-compliance with standards much more readily than those within the facility. As such, countries need to maintain an ongoing external assessment process (including assessments and re-assessments) to validate adherence to the Ten Steps and to provide feedback to each facility on areas for improvement.

It is strongly recommended that an external assessment process is integrated with other quality-assurance processes, such as facility certification or accreditation, assessments for health insurance schemes, and International Organization for Standardization (ISO) processes. Incorporation of the BFHI clinical standards into facility certification procedures would help to institutionalize them and would reduce the costs of the overall programme.

The frequency of external (re-)assessments and the number of indicators included will need to be designed so that it is feasible with the available financial and human resources, while adequately measuring compliance with national standards.

Initially, the external assessment should review documentation on the two sentinel outcome indicators. If the values of these indicators are satisfactory (either meeting the target or showing an increase towards the target), additional review of the indicators for assessment of critical management procedures may not be necessary. However, if the values of the sentinel outcome indicators are not increasing and/or below the target, a review of some or all of the indicators for key clinical practices as well as the indicators for critical management procedures may be warranted. The practice indicators proposed in section 2.2.4 (Table 2) may be extremely useful for external assessments. If the data are regularly collected by the facilities, they can be reviewed by the external review team to assess consistent adherence to the clinical steps. A particular threshold (e.g. the >90% target) could be applied to decide whether the facility "passes" on each step.

In addition, indicators of the adherence to the four critical management practices can be assessed with standard indicators. Table 3 provides a suggested list of 11 indicators for these management practices, and their means of verification. The methods of verification include observation, interviews with clinical staff and review of records. Some of the indicators, such as the facility having a writing breastfeeding policy and a summary of the policy is visible to pregnant women, mothers and their partners, are easily verifiable.

Table 3. Suggested indicators for assessment of critical management procedures

Recommendation	Proposed indicators	Means of verification
1. Facilities providing maternity and newborn services should have a clearly written breastfeeding policy that is routinely communicated to staff and parents.	• The health facility has a written breastfeeding policy • The percentage of clinical staff who provide antenatal delivery and/or newborn care who report that they are aware of the breastfeeding policy • A summary of the policy is visible to	• Interviews with clinical staff • Observation of policy where pregnant/post-partum women are served

	pregnant women, mothers and their partners	
2. Facilities providing maternity and newborn services should fully comply with the *International Code of Marketing of Breast-milk Substitutes* and relevant World Health Assembly resolutions.	• All infant formula used in the facility has been purchased through normal procurement channels • The facility has no display of products covered under the Code or items with logos of companies that produce breast-milk substitutes • The facility has a policy of not giving samples of infant formula to mothers	• Review of facility purchasing records
3. Health-facility staff who provide infant feeding services, including breastfeeding support, should have sufficient knowledge, competence and skills to support women to breastfeed	• The percentage of clinical staff who provide antenatal, delivery and/or newborn care who report they have received pre-service or in-service training on breastfeeding during the previous 2 years • The percentage of clinical staff who report receiving competency assessments in breastfeeding at least every 2 years • The percentage of clinical staff members who provide antenatal, delivery, and/or newborn care who are able to correctly answer three out of four questions on breastfeeding knowledge and skills to support breastfeeding	• Interviews of clinical staff
4. Facilities providing maternity and newborn services should establish ongoing monitoring and data-management systems to monitor compliance with the clinical practices above.	• The facility has a protocol for an ongoing monitoring and data-management system to comply with the six key clinical practices • The frequency with which clinical staff at the facility meet to review implementation of the system	• Documentation of protocol and schedule of meetings

External assessments should be conducted regularly; this may be every 3 years (but never less than every 5 years). The depth and frequency of the external assessments depends on the quality and frequency of internal monitoring, and which information is reported to higher levels.

It might be necessary to select a reduced number of indicators for mainstreaming into other certification/quality-assurance systems. At a minimum, the sentinel indicators on early initiation of breastfeeding and the rate of exclusive breastfeeding throughout the hospital stay should be included in such systems, since breastfeeding should be the norm in all maternity and newborn care.

If integration of external assessment in other quality-assessment systems is inadequate to guarantee compliance with breastfeeding standards, a vertical stand-alone assessment can be developed instead of, or in addition to, an integrated assessment. An argument in favour of a vertical assessment is that it might be able to include more specific indicators on breastfeeding. Vertical assessments, however, might be more costly and more difficult to sustain in the long term.

Alternatively, spot checks may be used. If adequately resourced, a department of the ministry of health could manage an external assessment system. Embedding it within existing professional organizations or well-functioning NGOs might also be an option in certain settings. In the latter case, it is important that the ministry of health provides an oversight function.

3.5. Incentives for compliance and sanctions for non-compliance with national standards

Health-care facilities make decisions about their policies and procedures based on a number of considerations, including review of scientific evidence, national or international recommendations, regulations, costs, case-load, patient satisfaction and public perceptions. National programmes need to consider what incentives or sanctions are most appropriate to get facilities providing maternity and newborn services to make the necessary changes needed to fully protect, promote and support breastfeeding. Table 4 lists several options for incentivizing compliance with the BFHI standards, which countries are expected to adopt as national standards, and lists key benefits and considerations for each.

Table 4. Options for incentivizing compliance with the BFHI standards

Description	Benefits	Challenges	Country type for which this option would be most suitable
Performance-based financing	• Meeting the standards would financially benefit the facility	• Compliance must be monitored externally • Costly if the schema is to pay "extra" for meeting the standards	Countries already applying performance-based financing for other relevant interventions
Inclusion in performance contracts	• Clear accountability	• Requires indicators that help ensure the sustainability of appropriate facility practices (and not only meeting a specific target)	Countries already using performance contracts
Public recognition of excellence/award/designation	• Staff efforts are acknowledged • Motivating for staff • Meeting the standards would improve the image of the facility and	• Compliance must be monitored externally • Often perceived as an end-point by national and facility managers and staff	Countries with a successful BFHI designation programme.

	lead to an increase in the number of clients and therefore revenue	• The meaning of the designation needs to be communicated to the public • Only relevant when time bound and removed when compliance falters • Public facilities typically are not competing to increase their case-load. • Is at odds with the principle that breastfeeding is the norm; allows non-compliance with standards to be seen as "normal care"	
Public reporting of quality indicators and outcomes	• Might not need external assessments with specific frequency	• Reliance on self-reporting could be biased (although external spot checks could improve quality) • Requires public understanding of what practices and outcomes are good	Countries in which public opinion is an important driver of health-care delivery

A strong incentive would be to financially tie payments for facilities providing maternity and newborn services to an external assessment process. For example, facilities identified as having more deficiencies in practices might receive a lower rate of reimbursement per delivery compared to those in full compliance with all the standards. This "performance-based financing" model of health-care payment is increasingly being used to incentivize quality and efficiency *(63)*. Alternatively, third-party payers or insurance companies might give preference to facilities with better compliance with the national standards.

Some countries use performance contracts for managers and/or staff public services (facilities or geographic areas), which include specific goals to be met. It can be useful to include one or more indicator related to the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services in these contracts.

Public recognition of excellence can also serve as an incentive for improving the quality of care. Hospitals can gain esteem when they achieve certain awards for excellence, as determined by an external assessment. Public recognition of excellence for adherence to the updated Ten Steps to Successful Breastfeeding might incentivize facilities to comply with the Baby-friendly standards. With this kind of incentive, it is crucial that internal and external quality-assurance systems are in place to

sustain the quality of services once the desired level is reached. These need to be designed by national authorities (the national coordination body), so that they are feasible with the available financial and human resources.

Note: The traditional Baby-friendly model was largely organized around the naming of Baby-friendly facilities. While designation is one option that countries can consider to encourage change in facilities providing maternity and newborn services, it should no longer be seen as a primary focus of the international BFHI programme.

Public reporting of quality indicators and outcomes is another way to hold facilities providing maternity and newborn services accountable for the quality of care they provide, and incentivize improvements. A public listing of all facilities in the country providing maternity and newborn services, with their rates of exclusive breastfeeding at discharge, would probably encourage those with the lowest rates to make improvements. Similarly, reporting on rates of skin-to-skin contact would highlight the importance of this practice and call upon individual facilities to catch up with the rest. Consumers' and patients' or clients' groups can also play a role in this accountability process.

Countries need to examine which of these incentives would work best in their context. Some require greater political will but would have long-lasting effects. Others may be more politically feasible but require ongoing engagement and resources.

3.6. Scaling up to national implementation

Achieving the goal of having *every* facility providing maternity and newborn services (including public as well as private facilities) practising appropriate care for breastfeeding will require a substantial scaling-up process, which needs to be planned by the national coordinating body. Some activities to support the BFHI, such as national legislation or changes to the medical school curriculum, would have impacts on all facilities in the country and should therefore be prioritized in planning. Others, such as providing technical assistance to individual facilities or conducting external assessments, require some resources for each facility in the country and thus it may take longer to reach all facilities in the country. Strategies to scale up implementation of breastfeeding standards to a national scale in a stepwise fashion must therefore be developed. A health-systems approach is crucial.

It is crucial that decision-makers at all relevant government and nongovernment institutions understand breastfeeding as the biological norm and recognize the harmful impact of inadequate breastfeeding. It might be necessary to invest in specific advocacy efforts to obtain this understanding. These efforts might include:

- identifying key decision-makers;
- identifying existing perceptions of breastfeeding;
- developing/adapting messages on the impact of not breastfeeding, including health and economic impacts (an example of a set of messages that can be adapted is given in reference *(64)*);
- identifying channels and messengers to influence decision-makers.

In addition to the ultimate decision-makers, groups directly affected by changes in standards for breastfeeding care might also require targeted communications and advocacy. For example, it is important that professional associations of obstetricians, paediatricians, neonatologists, and dietitians

be supportive of the BFHI standards. Nurses and midwives are often the most directly affected in their day-to-day work and so the support of their organizations will be critical. Hospital associations can also be helpful. These organizations can become important allies in advocating for systems changes.

It is also important to increase the demand from consumers for improved protection, promotion and support of breastfeeding in facilities providing maternity and newborn services. Achieving this might involve consumers' and women's organizations where these exist, and/or work with community leaders. Countries where consumer or client monitoring or reporting systems are in place might use these to increase accountability for facilities providing maternity and newborn services.

With regard to implementing the BFHI, it could be strategic to start with ensuring that teaching hospitals have adequate policies in place and follow the recommended clinical practices. It is important that pre-service training on breastfeeding protection, promotion and support in facilities providing maternity and newborn services be reinforced by experiences at teaching hospitals that endorse these policies and practices. While it takes time before new batches of professionals graduate from schools and universities with an improved curriculum, modifying policies and practices in teaching hospitals can be a first action.

Establishing and supporting a learning approach, in which facilities exchange experiences, is recommended. This can be done with groups of facilities, with a geographic focus or with another relevant grouping.

A strategic geographic focus, such as one facility in each province, would ensure that throughout the country, facilities have a nearby facility to look to as a role model in implementing the recommended policies and practices. Focusing first on facilities that are most likely to comply with the recommendations (e.g. facilities previously designated Baby-friendly, facilities with a history of quality-improvement successes) could provide early wins and demonstrate to other facilities the feasibility of the recommendations. Large facilities are also an important early target because the health of a large number of mothers and babies can be improved with just a few key changes in one place. Also, large facilities often serve as a point of comparison for smaller facilities, so having optimal practices in place at these facilities is helpful for scaling up.

Working with groups of facilities to support one another in the change process can be very effective. The IHI has developed a process for quality improvement through "collaboratives", or groups of similar facilities that engage in policy and practice change through group learning and mutual support *(65)*. In some countries, hospital systems that own and operate a series of facilities have the power to set policy for many hospitals at once. Such systems provide an opportunity to change many facilities at the same time, with a more streamlined approach.

Countries can also develop a cadre of trained professionals to provide technical assistance to facilities working through the change processes. This train-the-trainer approach could relieve the burden on the ministry of health or a single NGO that is tasked with Baby-friendly oversight in working with individual facilities. Specific resources and time commitment from the trained professionals' organizations need to be ensured.

3.7. National monitoring

Just as individual facilities need to monitor their activities in protecting, promoting and supporting breastfeeding, as well as feeding behaviours, countries need to monitor their activities and breastfeeding outcomes at the national level, and the subnational level where appropriate. The activities needed by countries are quite variable and so the indicators to be monitored will depend greatly on the national action plan. Some key outcome and process indicators to be monitored at national and subnational level are listed in Table 5.

Table 5. Indicators for national monitoring of protection, promotion and support of breastfeeding

Indicator	Definition	Primary source	Possible additional sources
Outcome Indicators			
Early initiation of breastfeeding	The percentage of children who were put to the breast within one hour of birth	HMIS	Household surveys (MICS, DHS, etc.)
Exclusive breastfeeding during facility stay	The percentage of infants who received only breast milk (either from their own mother or from a human milk bank) throughout their stay at the facility	HMIS	Household surveys (MICS, DHS, etc.)
Exclusive breastfeeding in children aged under 6 months	The percentage of infants 0-5 months of age who received only breast milk in the previous day	Household surveys (MICS, DHS, etc.)	
Skin-to-skin contact	The percentage of mothers of term infants who had skin-to-skin contact with their baby immediately or within 5 minutes of birth that lasted an hour or more	HMIS	Household surveys (MICS, DHS, etc.)
Output Indicators			
Regulation of BFHI standards (if regulation is decentralized to provincial level)	The percentage of provinces/states/districts with regulations on Baby-friendly standards	Reports (to be defined at country level)	
Pre-service training on the BFHI standards	The percentage of newly graduated health professionals who received training on the updated BFHI standards	Reports (to be defined at country level)	
In-service training on the	The percentage of	Reports (to be	

Indicator	Definition	Primary source	Possible additional sources
BFHI standards	practising health professionals who received in-service training on the updated BFHI standards	defined at country level)	
Facility compliance with BFHI standards	The percentage of facilities providing maternity and newborn services that "passed" external assessment or met a specific level of compliance with BFHI standards (as per the national programme)	Reports; national database where present	
Activity Indicators			
Ongoing operation of external assessment process	The percentage of facilities providing maternity and newborn services that have completed an external assessment in the past 3 years	Reports (to be defined at country level)	

DHS: demographic and health survey; HMIS: health management information system; MICS: multiple indicator cluster survey.

Various data sources can be used for countries to assess adherence to the Ten Steps to Successful Breastfeeding. Where facilities providing maternity and newborn services routinely report data into health management information systems, the data collected at the facility level can be reported to the district, provincial or national database. These reports can be used to document the overall percentage of babies experiencing recommended care, or the percentage of facilities that are meeting a given threshold for acceptable practices.

Some countries have developed ongoing survey mechanisms in which key informants from facilities report on their adherence to the Ten Steps. The reports may be based on actual clinical records or on perception of usual practice or facility policies. These surveys may be based on a random sample of facilities or on a complete assessment of all facilities in the country.

Household surveys, such as demographic and health surveys (DHS), may also be used to estimate the percentage of mothers whose maternity experiences adhere to recommended standards. The UNICEF multiple indicator cluster survey (MICS) already includes questions on early initiation of breastfeeding, exclusive breastfeeding during the facility stay, and skin-to-skin contact. Patient satisfaction surveys are routinely conducted in many countries and could also provide an opportunity to collect national data on selected aspects of maternity care.

It is strongly recommended to report progress with the BFHI externally, including in reports to the Committee on the Right to Food, the Committee on the Rights of the Child, the Scaling Up Nutrition movement and the WHA.

3.8. Financing

Funding for the protection, promotion and support of breastfeeding in facilities providing maternity and newborn services should primarily come from government resources with multi-year commitments. The activities need to be incorporated into regular government budget processes so that they can be funded in a sustainable way. Governments need to ensure that strategies and activities are designed in such a way that they can be funded by the government in a sustainable manner, in either the short or medium term. Suggestions for lower-cost and cost-effective approaches include:

- invest in updating and strengthening the coverage of breastfeeding and the skills required for the Ten Step to Successful Breastfeedings in the pre-service curricula for all relevant professionals (nurses, midwives, physicians, paediatricians, gynaecologists, dietitians, etc.); over time, this will reduce the need for in-service training;
- if in-service training is needed, identify options that require less time (including travel time) from trainers, and that are flexible with regard to the hours when they are done (this might include electronic or online training), while ensuring quality and skills building;
- incorporate BFHI-relevant indicators into existing systems for hospital licensing, monitoring, quality assurance and/or accreditation.

External funding sources, such as international donors, foundations or NGOs, can temporarily be used for specific interventions related to the BFHI, but these should not be a primary stream of funding. Funding sources for the BFHI cannot have a conflict of interest with breastfeeding.

Where practicable, the costs of conducting external assessments of the BFHI standards could be charged to the facilities providing maternity and newborn services themselves. It is important that these charges do not create a barrier to participation in the assessment process.

4. Coordination of the Baby Friendly Hospital Initiative with other breastfeeding initiatives outside facilities providing maternity and newborn services

Clearly, facilities providing maternity and newborn services constitute only one of many entry points for protecting, promoting, and supporting breastfeeding. Many other interventions are needed for breastfeeding in antenatal care, postpartum care, communities and workplaces. The 2009 BFHI guidance *(17)* proposed optional programmes on Baby-friendly communities, Baby-friendly paediatric units or Baby-friendly physician's offices that are not discussed in this document. However, it is important that those working to improve policies and programmes in facilities providing maternity and newborn services integrate their work with those working in other areas.

For example, health-professional education on breastfeeding is typically quite weak and needs to be strengthened. Training for health workers on BFHI standards will probably need to be integrated into broader pre-service breastfeeding education. Development of a medical textbook chapter on

breastfeeding would not generally be the responsibility of a BFHI programme manager, but contribution of the information on the BFHI standards for such a chapter probably would.

Similarly, while the BFHI coordination would not be responsible for improving breastfeeding counselling in antenatal clinics, it would need to ensure that the standards for antenatal care do provide mothers with adequate knowledge about breastfeeding before they enter the facility providing maternity and newborn services. Similarly, the BFHI needs to work with existing programmes and initiatives to ensure that there are sufficient breastfeeding-support structures in the community to connect mothers to upon facility discharge, even though the programme itself does not carry out services in the community. Here again, integration with others working in these areas is a critical component of protecting, promoting and supporting breastfeeding.

Improved community support for breastfeeding, including improved quality of primary health care and strong peer networks, is critically important to ensure that mothers are able to successfully breastfeed. Perez-Escamilla (2016) identified community support as a critical step for sustaining breastfeeding beyond the first few weeks of life *(27)*. The UNICEF- and WHO-led Global Breastfeeding Collective *(66)* has identified linkage between health facilities and communities, and encourages community networks that protect, promote and support breastfeeding as a top priority.

The 2009 BFHI guidance *(17)* recommended the expansion of "Baby-friendly" communities, without specifying criteria for their implementation or designation. As a result, many countries have created Baby-friendly community initiatives using a variety of standards and approaches. Where such initiatives have proven to be successful, they can be continued and strengthened, with a vision of achieving maximum coverage. Each country or locality will need to use its own guidelines for these initiatives.

5. Transition of BFHI implementation

This operational guidance for the BFHI describes substantive changes to the Ten Steps to Successful Breastfeeding and introduces a number of new strategies for national action and facility implementation. As such, countries will need to examine how to transition existing activities related to the BFHI, in light of these changes.

5.1. Well-functioning national Baby-friendly hospital designation programmes

This updated operational guidance moves the BFHI away from a traditional model that focused on facility designation as a main outcome and driver of practice changes. For those countries that currently have a well-functioning designation programme that is able to reach the majority of facilities providing maternity and newborn services nationwide, this new guidance should not be viewed as a reason to discontinue a successful programme.

Countries in this category should examine the updated Ten Steps to Successful Breastfeeding and adapt the country's current designation criteria accordingly. The internal monitoring indicators described in section 2.2.4 may be useful for this purpose, but are likely to be insufficient for application in facility designation. Where "mother-friendly" criteria that go beyond the Ten Steps have been incorporated into the designation criteria, there is no reason to remove these. Changes to the designation criteria will need to be communicated to facilities providing maternity and newborn services that are in a pathway

to becoming Baby-friendly or that are already designated, with a clear timeline by which adherence to the new criteria is expected.

While maintaining a designation programme, these countries should also work on integration of the Ten Steps into quality improvement and maternal and child health programmes, as described in section 3. The responsibilities of a national breastfeeding or BFHI coordinating body summarized in Box 3 are equally applicable whether a country operates a designation programme or not.

5.2. Transitioning away from a designation focus

In countries where the BFHI is not implemented, or where it has not been possible for Baby-friendly designation to reach a majority of facilities, the energy and resources spent on designation may be better spent focusing on integration and institutionalization of the Ten Steps, with a quality-improvement approach at facility level and a solid, supportive policy environment and monitoring and accountability mechanisms. The activities in section 3 lay out priority actions to revitalize the BFHI in a sustainable way.

Annex 1. Ten Steps to Successful Breastfeeding – revised 2017 version

Comparison to original Ten Steps and the new 2017 WHO guidelines

Ten Steps to Successful Breastfeeding – revised 2017	Corresponding recommendations from *WHO guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services* (2017) *(34)*	Ten Steps in *Protecting, promoting and supporting breast-feeding: the critical role of maternity services*, 1989 *(10)*
Key clinical practices		
1. Antenatal care: Where facilities provide antenatal care, pregnant women and their families should be counselled about the benefits and management of breastfeeding.	**Recommendation 14:** Where facilities provide antenatal care, pregnant women and their families should be counselled about the benefits and management of breastfeeding.	**Step 3:** Inform all pregnant women about the benefits and management of breastfeeding.
2. Immediate postnatal care: Early and uninterrupted skin-to-skin contact between mothers and infants should be facilitated and encouraged as soon as possible after birth and all mothers should be supported to initiate breastfeeding as soon as possible after birth, within the first hour after delivery.	**Recommendation 1:** Early and uninterrupted skin-to-skin contact between mothers and infants should be facilitated and encouraged as soon as possible after birth. **Recommendation 2:** All mothers should be supported to initiate breastfeeding as soon as possible after birth within the first hour of delivery.	**Step 4:** Help mothers initiate breastfeeding within a half-hour of birth.
3. Support with breastfeeding: Mothers should receive practical support to enable them to initiate and maintain breastfeeding and manage common breastfeeding difficulties.	**Recommendation 3:** Mothers should receive practical support to enable them to initiate and maintain breastfeeding and manage common breastfeeding difficulties. **Recommendation 4:** Mothers should be coached on how to express breast milk as a means of maintaining lactation in the event of their being separated temporarily from their infants. **Recommendation 6:** Mothers should be supported to practise responsive feeding as part of nurturing care. **Recommendation 8:** Mothers should be supported to recognize their infants' cues for feeding, closeness and comfort, and enabled to respond accordingly to these cues with a variety of options, during	**Step 5:** Show mothers how to breastfeed and maintain lactation, even if they should be separated from their infants. **Step 8:** Encourage breastfeeding on demand. **Step 9:** Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.

Ten Steps to Successful Breastfeeding – revised 2017	Corresponding recommendations from *WHO guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services* (2017) *(34)*	Ten Steps in *Protecting, promoting and supporting breast-feeding: the critical role of maternity services*, 1989 *(10)*
	their stay at the facility providing maternity and newborn services. **Recommendation 9:** For preterm infants who are unable to breastfeed directly, non-nutritive sucking and oral stimulation may be beneficial until breastfeeding is established. **Recommendation 10:** If expressed breast milk or other feeds are medically indicated for term infants, feeding methods such as cups, spoons or feeding bottles and teats may be used during their stay at the facility. **Recommendation 11:** If expressed breast milk or other feeds are medically indicated for preterm infants, feeding methods such as cups or spoons are preferable to feeding bottles and teats.	
4. No supplements: Mothers should be discouraged from giving any food or fluids other than breast milk, unless medically indicated.	**Recommendation 7:** Mothers should be discouraged from giving any food or fluids other than breast milk, unless medically indicated. **Recommendation 11:** If expressed breast milk or other feeds are medically indicated for preterm infants, feeding methods such as cups or spoons are preferable to feeding bottles and teats	**Step 6:** Give newborn infants no food or drink other than breastmilk, unless *medically* indicated.
5. Rooming-in: Facilities providing maternity and newborn services should enable mothers and their infants to remain together and to practice rooming-in throughout the day and night.	**Recommendation 5:** Facilities providing maternity and newborn services should enable mothers and their infants to remain together and to practise rooming-in throughout the day and night. This may not apply in circumstances when infants need to be moved for specialized medical care. **Recommendation 6:** Mothers should be supported to practise responsive feeding as part of nurturing care.	**Step 7:** Practise rooming in – allow mothers and infants to remain together – 24 hours a day.
6. Care at discharge: As part of protecting, promoting and supporting breastfeeding, discharge from facilities providing	**Recommendation 15:** As part of protecting, promoting and supporting breastfeeding, discharge from facilities providing maternity and newborn	**Step 10:** Foster the establishment of breastfeeding support groups and refer mothers to

Ten Steps to Successful Breastfeeding – revised 2017	Corresponding recommendations from *WHO guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services* (2017) *(34)*	Ten Steps in *Protecting, promoting and supporting breast-feeding: the critical role of maternity services*, 1989 *(10)*
maternity and newborn services should be planned for and coordinated, so that parents and their infants receive the appropriate care and have access to supportive resources.	services should be planned for and coordinated, so that parents and their infants receive the appropriate care and have access to supportive resources.	them on discharge from the hospital or clinic.
Critical management procedures		
7. Facility breastfeeding policy: Facilities providing maternity and newborn services should have a clearly written breastfeeding policy that is routinely communicated to staff and parents.	**Recommendation 12:** Facilities providing maternity and newborn services should have a clearly written breastfeeding policy that is routinely communicated to staff and parents.	**Step 1:** Have a written breastfeeding policy that is routinely communicated to all health-care staff.
8. *International Code of Marketing of Breast-milk Substitutes*: Facilities providing maternity and newborn services should fully comply with the *International Code of Marketing of Breast-milk Substitutes* and relevant World Health Assembly resolutions.	N/A	N/A (incorporated in the hospital self-appraisal and monitoring guidelines and the external assessment)
9. Regular competency assessment: Health-facility staff who provide infant feeding services, including breastfeeding support, should have sufficient knowledge, competence and skills to support women to breastfeed.	**Recommendation 13:** Health-facility staff who provide infant feeding services, including breastfeeding support, should have sufficient knowledge, competence and skills to support women to breastfeed.	**Step 2:** Train all health-care staff in skills necessary to implement this policy.
10. Monitoring and data-management systems: Facilities providing maternity and newborn services should establish ongoing monitoring and data-management systems to monitor compliance with the clinical practices above.	N/A	N/A

References

1. World Health Organization, United Nations Children's Fund. Global strategy for infant and young child feeding. Geneva: World Health Organization; 2003 (http://apps.who.int/iris/bitstream/10665/42590/1/9241562218.pdf, accessed 20 September 2017).
2. NEOVITA Study Group. Timing of initiation, patterns of breastfeeding, and infant survival: prospective analysis of pooled data from three randomised trials. Lancet Glob Health. 2016;4(4):e266–75. doi:10.1016/S2214-109X(16)00040-1.
3. The optimal duration of exclusive breastfeeding. Report of an expert consultation Geneva, Switzerland, 28–30 March 2001. Geneva: World Health Organization; 2011 (http://apps.who.int/iris/bitstream/10665/67219/1/WHO_NHD_01.09.pdf?ua=1, accessed 20 September 2017).

3b. Salmon L. Food security for infants and young children: an opportunity for breastfeeding policy? Int Breastfeed J. 2015;10:7. doi: 10.1186/s13006-015-0029-6.

4. Victora CG, Bahl R, Barros AJ, França GV, Horton S, Krasevec J et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet.2016;387(10017):475-90. doi:10.1016/S0140-6736(15)01024-7.
5. Cohen R, Mrtek MB, Mrtek RG. Comparison of maternal absenteeism and infant illness rates among breast-feeding and formula-feeding women in two corporations. Am J Health Promot. 1995;10(2):148-153. doi:10.4278/0890-1171-10.2.148.
6. Colchero MA, Contreras-Loya D, Lopez-Gatell H, González de Cosío T. The costs of inadequate breastfeeding of infants in Mexico. Am J Clin Nutr. 2015;101(3):579-86. doi:10.3945/ajcn.114.092775.
7. Bartick M, Reinhold A. The burden of suboptimal breastfeeding in the United States: a pediatric cost analysis. Pediatrics. 2010;125(5):e1048–1056. doi:10.1542/peds.2009-1616.
8. Dadhich JP, Smoth J, Iellamo A, Suleiman A. Report on carbon footprints due to milk formula: a study from selected countries of the Asia- Pacific Region. Delhi: BPNI/IBFAN Asia; 2016 (http://ibfan.org/docs/Carbon-Footprints-Due-to-Milk-Formula.pdf, accessed 20 September 2017).
9. Infant and young child feeding in emergencies. Operational guidance for emergency relief staff and programme managers, version 2.1 Oxford: IFE Core Group; 2007 (http://files.ennonline.net/attachments/1001/ops-guidance-2-1-english-010307-with-addendum.pdf, accessed 20 September 2017).
10. Protecting, promoting and supporting breast-feeding. The special role of maternity services. A joint WHO/UNICEF statement. Geneva: World Health Organization; 1989 (http://apps.who.int/iris/bitstream/10665/39679/1/9241561300.pdf, accessed 20 September 2017).
11. Innocenti Declaration on the protection, promotion and support of breastfeeding. New York: United Nations Children's Fund; 1991 (http://www.who.int/about/agenda/health_development/events/innocenti_declaration_1990.pdf, accessed 20 September 2017).
12. World Health Organization, United Nations Children's Fund, Wellstart International.The Baby-friendly Hospital Initiative: monitoring and reassessment: tools to sustain progress. Geneva: World Health Organization; 1991 (WHO/NHD/99.2; http://apps.who.int/iris/handle/10665/65380, accessed 20 September 2017).

13. International Code of Marketing of Breast-milk Substitutes. Geneva: World Health Organization; 1981 (http://www.who.int/nutrition/publications/code_english.pdf, accessed 20 September 2017).
14. The International Code of Marketing of Breast-Milk Substitutes – 2017 update: frequently asked questions. Geneva: World Health Organization; 2017 (http://apps.who.int/iris/bitstream/10665/254911/1/WHO-NMH-NHD-17.1-eng.pdf?ua=1, accessed 20 September 2017).
15. Evidence for the ten steps to successful breastfeeding. Geneva: World Health Organization; 1998 (WHO/CHD/98.9; http://apps.who.int/iris/bitstream/10665/43633/1/9241591544_eng.pdf, accessed 20 September 2017).
16. Innocenti Declaration 2005 on infant and young child feeding, 22 November 2005, Florence, Italy. Geneva: United Nations Children's Fund; 2005 (http://www.unicef.org/nutrition/files/innocenti2005m_FINAL_ARTWORK_3_MAR.pdf, accessed 20 September 2017).
17. World Health Organization, United Nations Children's Fund. Baby-friendly Hospital Initiative: revised, updated and expanded for integrated care. Geneva: World Health Organization; 2009 (http://apps.who.int/iris/handle/10665/43593, accessed 21 September 2017).
18. Resolution WHA47.5. Infant and young child nutrition. In: Forty-seventh World Health Assembly, Geneva, 2-12 May 1994. Resolutions and decisions, annexes. Geneva: World Health Organization; (http://www.who.int/nutrition/topics/WHA47.5_iycn_en.pdf, accessed 6 October 2017).
19. Resolution WHA49.15. Infant and young child nutrition. In: Forty-ninth World Health Assembly, Geneva, 20-25 May 1996. Resolutions and decisions, annexes. Geneva: World Health Organization; (http://www.who.int/nutrition/topics/WHA49.15_iycn_en.pdf, accessed 6 October 2017).
20. Resolution WHA65.6. Comprehensive implementation plan on maternal, infant and young child nutrition. In: Sixty-fifth World Health Assembly, Geneva, 21–26 May 2012. Resolutions and decisions, annexes. Geneva: World Health Organization; 2012:12–13 (WHA65/2012/REC/1; http://www.who.int/nutrition/topics/WHA65.6_resolution_en.pdf, accessed 20 September 2017).
21. World Health Organization. Global targets 2025. To improve maternal, infant and young child nutrition (http://www.who.int/nutrition/global-target-2025/en/, accessed 20 September 2017).
22. Food and Agriculture Organization and World Health Organization. Second International Conference on Nutrition, Conference Outcome Document: Framework for Action. Rome, 19-21 November 2014. http://www.fao.org/3/a-mm215e.pdf.
23. WHO. Indicators for the Global Monitoring Framework on Maternal, Infant and Young Child Nutrition. 24 November 2014. (http://www.who.int/nutrition/topics/proposed_indicators_framework/en/. accessed 6 October 2017).
24. Labbok MH. Global Baby-friendly Hospital Initiative monitoring data: update and discussion. Breastfeed Med. 2012;7:210–22. doi: 10.1089/bfm.2012.0066.
25. National implementation of the Baby-friendly Hospital Initiative. Geneva: World Health Organization; 2017 (http://apps.who.int/iris/bitstream/10665/255197/1/9789241512381-eng.pdf?ua=1, accessed 20 September 2017).
26. Kramer MS, Chalmers B, Hodnett ED, Sevkovskaya Z, Dzikovich I, Shapiro S et al. Promotion of Breastfeeding Intervention Trial (PROBIT): a randomized trial in the Republic of Belarus. JAMA. 2001;285: 413–20.

27. Pérez-Escamilla R, Martinez JL, Segura-Pérez S. Impact of the Baby-friendly Hospital Initiative on breastfeeding and child health outcomes: a systematic review. Matern Child Nutr. 2016;12(3):402–17. doi:10.1111/mcn.12294.
28. DiGirolamo AM, Grummer-Strawn LM, Fein SB. Effect of maternity-care practices on breastfeeding. Pediatrics. 2008; 122(Suppl. 2):S43–9. doi:10.1542/peds.2008-1315e.
29. Saadeh RJ. The Baby-Friendly Hospital Initiative (BFHI) 20 years on: facts, progress and the way forward. J Hum Lact. 2012. doi: doi:10.1177/0890334412446690.
30. Munn AC, Newman SD, Mueller M, Phillips SM, Taylor SN. The impact in the United States of the Baby-Friendly Hospital Initiative on early infant health and breastfeeding outcomes. Breastfeed Med. 2016;11:222–30. doi:0.1089/bfm.2015.0135.
30b. UNICEF and WHO. Country experiences with the Baby-friendly Hospital Initiative: Compendium of case studies from around the world. August 2017. (https://www.unicef.org/nutrition/files/BFHI_Case_Studies_FINAL.pdf accessed 6 October 2017).
31. Pan American Health Organization, World Health Organization Regional Office for the Americas. The Baby Friendly Hospital Initiative in Latin America and the Caribbean: current status, challenges, and opportunities. Washington, DC: Pan American Health Organization; 2016 (http://iris.paho.org/xmlui/bitstream/handle/123456789/18830/9789275118771_eng.pdf?sequence=1&isAllowed=y, accessed 20 September 2017).
32. WHO handbook for guideline development, 2nd ed. Geneva: World Health Organization; 2014 (http://www.who.int/kms/handbook_2nd_ed.pdf?ua=1, accessed 20 September 2017).
33. Standards for improving quality of maternal and newborn care in health facilities. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/249155/1/9789241511216-eng.pdf?ua=1, accessed 20 September 2017).
34. WHO guideline: Protecting, promoting and supporting breastfeeding in facilities providing maternal and newborn care. Geneva: World Health Organization; 2017.
35. Guidance on ending the inappropriate promotion of foods for infants and young children. In: Sixty-ninth World Health Assembly, Geneva, 23–28 May 2016. Provisional agenda item 12.1. Geneva: World Health Organization; 2016 (A69/7 Add 1; http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_7Add1-en.pdf?ua=1, accessed 20 September 2017).
36. World Health Organization, United Nations Children's Fund. Guideline: updates on HIV and infant feeding. The duration of breastfeeding and support from health services to improve feeding practices among mothers living with HIV. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/246260/1/9789241549707-eng.pdf, accessed 20 September 2017).
37. Standards for improving quality of maternal and newborn care in health facilities. Geneva: World Health Organization; 2016 (http://apps.who.int/iris/bitstream/10665/249155/1/9789241511216-eng.pdf?ua=1, accessed 20 September 2017).
38. Framework on integrated people-centered health services. In: Sixty-ninth World Health Assembly, Geneva, 23–28 May 2016. Provisional agenda item 16.1. Geneva: World Health Organization; 2016 (http://apps.who.int/gb/ebwha/pdf_files/WHA69/A69_39-en.pdf?ua=1&ua=1, accessed 20 September 2017).
39. US Department of Health and Human Services National Institutes of Health. What are the risk factors for preterm labor and birth? (https://www.nichd.nih.gov/health/topics/preterm/conditioninfo/Pages/who_risk.aspx accessed 6 October 2017).

40. NEOVITA Study Group. Timing of initiation, patterns of breastfeeding, and infant survival: prospective analysis of pooled data from three randomised trials. Lancet 2016:4(4),e266–e275. DOI: http://dx.doi.org/10.1016/S2214-109X(16)00040-1.
41. Stevens J, Schmied V, Burns E, Dahlen H. Immediate or early skin-to-skin contact after a Caesarean section: a review of the literature. Matern Child Nutr. 2014;10:456-73. doi:10.1111/mcn.12128.
42. Implications of cesarean delivery for breastfeeding outcomes and strategies to support breastfeeding. Washington, DC: Alive & Thrive; 2014 (A&T Technical Brief Issue 8, February 2014; http://aliveandthrive.org/wp-content/uploads/2014/11/Insight-Issue-8-Cesarean-Delivery-English.pdf, accessed 20 September 2017).
43. Kangaroo mother care: a practical guide. Geneva: World Health Organization; 2003 (http://apps.who.int/iris/bitstream/10665/42587/1/9241590351.pdf, accessed 20 September 2017).
44. Nyqvist KH, Sjoden PO, Ewald U. The development of preterm infants' breastfeeding behavior. Early Hum Dev. 1999;55(3):247–64.
45. Nyqvist KH, Maastrup R, Hansen MN, Haggkvist AP, Hannula L, Ezeonodo A et al. Neo-BFHI: the Baby-friendly Hospital Initiative for neonatal wards. Three guiding principles to protect, promote and support breastfeeding. Core document with recommended standards and criteria. Nordic and Quebec Working Group; 2015 (http://epilegothilasmo.gr/wp-content/uploads/2017/04/Neo_BFHI_Core_document_2015_Edition.pdf, accessed 20 September 2017).
46. Meier PP, Furman LM, Degenhardt M. Increased lactation risk for late preterm infants and mothers: evidence and management strategies to protect breastfeeding. Journal of midwifery & women's health, 2007. 52(6):579-87.
47. Becker GE, Smith HA, Cooney F. Methods of milk expression for lactating women. Cochrane Database Syst Rev. 2016;(9):CD006170. doi:10.1002/14651858.CD006170.pub5.
47a. Salvatori G, Guaraldi F. Effect of Breast and Formula Feeding on Gut Microbiota Shaping in Newborns. Front Cell Infect Microbiol 2012;2:94. doi: 10.3389/fcimb.2012.00094.
48. World Health Organization, United Nations Children's Fund. Acceptable medical reasons for use of breast-milk substitutes. Geneva: World Health Organization; 2009. (http://apps.who.int/iris/bitstream/10665/69938/1/WHO_FCH_CAH_09.01_eng.pdf, accessed 20 September 2017).
49. Kellams A, Harrel C, Omage S, Gregory C, Rosen-Carole C, Academy of Breastfeeding Medicine. ABM Clinical Protocol #3: Supplementary feedings in the healthy term breastfed neonate, revised 2017. Breastfeed Med. 2017;12)188–98. doi:10.1089/bfm.2017.29038.ajk.
50. World Health Organization. Guidelines on optimal feeding of low birth-weight infants in low- and middle-income countries. Geneva: World Health Organization; 2011 (http://www.who.int/maternal_child_adolescent/documents/9789241548366.pdf?ua=1, accessed 20 September 2017).
51. DeMarchis A, Israel-Ballard K, Mansen KA, Engmann C. Establishing an integrated human milk banking approach to strengthen newborn care. J Perinatol. 2017;37(5):469–74. doi:10.1038/jp.2016.198.
52. Piwoz E Huffmann S. The impact of marketing of breast-milk substitutes on WHO-recommended breastfeeding practices. Food Nutr Bull. 2015;36:373–86. doi:10.1177/0379572115602174.
53. Breaking the rules stretching the rules 2014. Penang: International Baby Food Action Network International Code Documentation Centre; 2014.

54. Rollins NC, Bhandari N, Hajeebhoy N, Horton S, Lutter CK, Martines JC et al., *The Lancet* Breastfeeding Series Group. Why invest, and what it will take to improve breastfeeding practices? Lancet. 2016;387:491–504. doi:10.1016/S0140-6736(15)01044-2.
55. Baker P, Smith J, Salmon L, Friel S, Kent G, Iellamo A et al. Global trends and patterns of commercial milk-based formula sales: is an unprecedented infant and young child feeding transition underway? Public Health Nutr. 2016;19(14):2540–50. doi:10.1017/S1368980016001117.
56. Resolution 39.28. Infant and young child feeding. In: Thirty-ninth World Health Assembly, Geneva, 5–16 May 1986. Resolutions and decisions, annexes. Geneva: World Health Organization; 1986 (http://www.who.int/nutrition/topics/WHA39.28_iycn_en.pdf?ua=1, accessed 27 September 2017).
57. Improving the quality of hospital care for mothers and newborns: coaching manual. POCQI: point-of-care quality improvement. New Delhi: World Health Organization Regional Office for South-East Asia; 2017 (http://apps.who.int/iris/bitstream/10665/255876/1/9789290225485-eng.pdf, accessed 27 September 2017).
58. US Department of Health and Human Services. Health Resources and Service Administration: Quality Improvement Toolbox (https://www.hrsa.gov/quality/toolbox/508pdfs/qualityimprovement.pdf).
59. Improving the quality of hospital care for mothers and newborns: learner manual. POCQI: point-of-care quality improvement. New Delhi: World Health Organization Regional Office for South-East Asia; 2017 (https://www.newbornwhocc.org/POCQI-Learner-Manual.pdf, accessed 27 September 2017).
60. Institute for Healthcare Improvement. How to improve (http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx, accessed 27 September 2017).
61. Institute for Healthcare Improvement. Quality Improvement Essentials Toolkit (http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx, accessed 27 September 2017).
62. Quality, Equity, Dignity. A network for improving quality of care for maternal, newborn and child health. Quality of care (http://www.qualityofcarenetwork.org/network-improve-qoc, accessed 27 September 2017).
63. Baird C. Top healthcare stories for 2016: pay-for-performance. Committee for Economic Development March 8 2016 (https://www.ced.org/blog/entry/top-healthcare-stories-for-2016-pay-for-performance, accessed 27 September 2017).
64. United Nations Children's Fund, World Health Organization, 1000 Days, Alive & Thrive. Nurturing the health and wealth of nations: the investment case for breastfeeding. New York and Geneva: United Nations Children's Fund and World Health Organization; 2017 (http://www.who.int/nutrition/publications/infantfeeding/global-bf-collective-investmentcase.pdf?ua=1, accessed 27 September 2017).UNICEF/Global Breastfeeding Collective. www.unicef.org/breastfeeding
65. The Breakthrough Series: IHI's collaborative model for achieving breakthrough improvement. IHI Innovation Series white paper. Boston: Institute for Healthcare Improvement; 2003 (http://www.ihi.org/resources/Pages/IHIWhitePapers/TheBreakthroughSeriesIHIsCollaborativeModelforAchievingBreakthroughImprovement.aspx, accessed 27 September 2017).
66. United Nations Children's Fund. Breastfeeding (www.unicef.org/breastfeeding, accessed 27 September 2017).