Neo-BFHI

The Baby-friendly Hospital Initiative

for Neonatal Wards

Three Guiding Principles and Ten Steps to protect, promote and support *breastfeeding*

Core document with recommended standards and criteria

Neo-BFHI: The Baby-friendly Hospital Initiative for Neonatal Wards.

Three Guiding Principles and Ten Steps to protect, promote and support breastfeeding.
Core document with recommended standards and criteria.

Based on the:
Baby-friendly Hospital Initiative: Revised, Updated and Expanded for Integrated Care.
World Health Organization and UNICEF, 2009 (Original BFHI Guidelines developed 1992)

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The content of this publication does not reflect the opinion of the organisations to which the Working Group members are affiliated. Although the Neo-BFHI is based on the original WHO/UNICEF BFHI, the guidelines in this document have been produced independently from the WHO and the UNICEF and do not represent a formal program of these organisations.

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The expansion of the BFHI to neonatal wards

Background

Breastfeeding is the normal way of providing infants and young children with the nutrients they need for healthy growth and development (1, 2), including those who are born preterm or ill (3, 4). These infants may not be able to breastfeed right from birth but can – with appropriate support – begin breastfeeding when they mature.

The initiation and maintenance of breast milk production is of great importance for enabling mothers to breastfeed preterm or sick infants. Early, systematic and continuing support for mothers to initiate breast milk expression and breastfeeding as soon as their infants are stable is essential for helping them to succeed in overcoming physiological and emotional challenges related to lactation and breastfeeding (5, 6). This is the rationale for expanding the World Health Organization (WHO)/UNICEF Baby-friendly Hospital Initiative (BFHI) to neonatal wards. This world-wide initiative has provided an evidence-based set of standards for the protection, promotion and support of breastfeeding in maternity wards since 1991 (7-9). Compliance with the BFHI "Ten Steps to Successful Breastfeeding" (Ten Steps) has proven effective in increasing breastfeeding duration and exclusivity (10). Evidence for this arises from randomized control trials examining policies and practices outlined in the individual steps as well as a large randomized control trial – the PROBIT trial – that measured effectiveness of the initiative as a whole (10). Furthermore, several observational studies suggest that there is a relationship between the number of steps implemented in a facility and breastfeeding exclusivity (11, 12) and duration(12-17).

WHO/UNICEF have updated in 2009 the BFHI standards to ensure that the health care system and other relevant sectors support the recommendation of exclusive breastfeeding for 6 months and continued breastfeeding for up to 2 years of age or beyond, while providing women with the support that they require to achieve their breastfeeding goals, in the family, community and workplace (18). Breastfeeding is specifically addressed in the WHO Essential Newborn Care (ENC) program, which was developed to reduce neonatal mortality and morbidity, and includes clean cord care, thermal care and the initiation of breastfeeding immediately or within the first hour after birth (19).

It is well known that exclusive and prolonged breastfeeding improves maternal-infant health in both developing and industrialized countries (10, 20-23). Furthermore, breast milk is species-specific, and all substitute feeding preparations differ markedly from it, making breast milk uniquely superior for infant feeding. A survey in low-income and middle-income countries concluded that suboptimum breastfeeding is associated with increased risk for mortality in the first 2 years of life (24).

Breast milk-fed preterm infants receive significant benefits with respect to host protection and improved developmental outcomes compared with those who are formula-fed (4, 25). More specifically, the immunological components of breast milk protect preterm infants from infections and life threatening illnesses such as neonatal sepsis and necrotizing enterocolitis, even in the developed world (3, 25-27). These components also support the development and maturation of infants' own immune systems, which may explain some of the long-term health benefits observed in breastfed children (4, 21, 23).

Premature birth and admission to a neonatal ward may have a negative influence on the mothers' views of themselves. Mothers of preterm infants may feel that they failed when they give birth prematurely and that the only task left to do right is to breastfeed (28). They describe breastfeeding as an action that makes them feel important (29) and that rewards them with feelings of closeness and bonding with their infants (30). For these mothers, breastfeeding becomes even more important. Moreover, it has also been found that the establishment of breastfeeding during the hospital stay is also possible in infants with malformations requiring surgery and those with hormonal conditions such as hyperinsulinism (31-33). Their mothers have a particular need for pre- and postnatal lactation and breastfeeding counselling.

According to the WHO Global Action Report on Preterm Birth "Born too soon" (20) the rate of preterm birth is rising; 15 million infants – more than 1 in 10 – are born prematurely every year around the world. Prematurity is the leading cause of newborn death. Nevertheless, death from prematurity complications can be reduced by over 75% even without neonatal intensive care. In low-income settings half of the infants born before 32 weeks of gestation continue to die due to a lack of feasible, cost-effective evidence-based interventions, such as Kangaroo Mother Care (KMC) and breastfeeding. Implementation of these proven interventions could save an estimated 450,000 infants each year. Education and health promotion are essential to attaining this goal.

Several countries have expanded the BFHI to other settings that care for breastfeeding mothers and babies, such as community health centres and neonatal wards (18). Among the Nordic countries, Norway and Denmark have adapted the BFHI Ten Steps to take into consideration the special context of neonatal wards and the unique needs of premature and sick babies admitted to these wards. Norway has developed a process similar to the one used for maternity wards; most Norwegian neonatal wards have been successfully designated Baby-friendly (34). Denmark has conducted an unpublished pilot study in 2 hospitals and developed the Ten Steps for preterm infants. In the United States, Spatz developed a modified model for sick infants: "Ten steps for promoting and protecting breastfeeding for vulnerable infants" (35).

These adaptations have been supported by an increasing number of publications documenting the effectiveness of lactation and breastfeeding-related best practices in neonatal wards. Three recent systematic reviews have established the importance of professional and peer support, the implementation of hospital practices such as skin-to-skin contact/KMC and rooming-in, as well as the adoption of effective methods to support mothers in initiating and maintaining milk production (5, 6, 36). Early initiation of breastfeeding, with infant stability as the only criterion, is another important issue to be considered (37-39).

In addition, positive effects of implementing the original Baby-friendly standards on breastfeeding rates and exclusivity in neonatal wards have been reported in Brazil (40, 41), Italy (42) and the United States (43), where improvement in breastfeeding initiation and breastfeeding rate continued 10 years after the BFHI designation (44). Nevertheless, comprehensive international guidelines for optimal lactation and breastfeeding support in neonatal intensive care have been lacking - in spite of the considerable disparities between the needs of infants in neonatal and maternity wards.

The main difference is that most neonatal wards separate the mothers from their infants, there is little or no space for the mothers, and a chair or a bed at the infant’s bedside is not always provided. In addition, mothers of premature or sick infants have more need for support from fathers and other family members because of their desire to spend time in the hospital with their infants and the trauma of having given birth to preterm or sick infants (45).

In Estonia, Levin introduced the concept of "Humane neonatal care", including mother-infant non-separation and breastfeeding support in intermediate neonatal wards, in the early 1980s (46). In Sweden, the recommendations of the Ten Steps were studied in the neonatal care setting. The results demonstrated that these mothers need more and, to some extent, different breastfeeding support (47). It is important to raise the awareness among health professionals of mothers' feelings about breastfeeding, and to improve guidance, respect and support for breastfeeding mothers, as well as for non-breastfeeding mothers and mothers who give supplementation. These mothers' and infants' special needs have to be taken into consideration when developing standards for the BFHI in neonatal wards.

Who is doing the adaptation?

The Nordic and Quebec Working Group was formed in Copenhagen, March 2009 by health professionals from Sweden, Norway, Denmark, Finland and Quebec, Canada to address the expansion of the BFHI to neonatal care. The working group has developed this unified expansion of the BFHI to neonatal wards ("Neo-BFHI") based on evidence, expert opinion and experiences implementing Baby-friendly practices in neonatal wards in the Nordic and other countries; they have published 2 papers about the expansion (48, 49).

Objectives of the adaptation

Aim

To expand and adapt the Ten Steps to protect, promote and support breastfeeding in neonatal wards based on the WHO/UNICEF BFHI program (18).

Objectives

1. To examine the evidence in relation to breastfeeding promotion, protection and support in neonatal wards and make appropriate revisions and additions.
2. To develop and adapt standards and criteria focused on neonatal wards.
3. To develop an assessment tool to evaluate whether neonatal wards comply with the criteria.
4. To pilot the new assessment tool.
5. To promote implementation of the adapted standards.
6. To encourage research to assess the effectiveness of the adaptation.

Procedure

For its 2009 update, the WHO/UNICEF presents in the document titled "Section 1: Background and Implementation" the standards (i.e., the "Global Criteria") for measuring adherence to each of the Ten Steps in maternity wards and services that care for full-term, healthy babies and their mothers. These standards represent the minimum criteria for Baby-friendly designation (18). To remain consistent with the original BFHI, it was decided that its expansion to neonatal wards should closely follow the Ten Steps and related Global Criteria. It should be noted that the WHO/UNICEF propose in their document criteria for babies in Special Care that have been also adapted.

To ensure that the recommended practices focus on respect for mothers, a family-centred approach and continuity of care, the working group formulated Three Guiding Principles meant to be basic tenets underpinning the Ten Steps. These guiding principles address all parents with infants admitted to neonatal

wards, whether they breastfeed or not. In agreement with the BFHI, the adaptation also includes compliance with the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions (50). It should be noted that in this adaptation the focus is on neonatal wards that provide various levels of neonatal care, ranging from that for extremely preterm infants and infants with serious medical conditions, to that for late preterm infants, term low birth weight infants, and term infants, who may require episodic or short-term monitoring or medical interventions. For each guiding principle and step as well as for the Code, standards and criteria were developed or adapted to focus on the neonatal ward environment, the staff working in these wards and the mothers of infants being cared for in them. The components of the Neo-BFHI are presented in the table below.

The Baby-friendly Hospital Initiative for Neonatal Wards or Neo-BFHI	
Three Guiding Principles	
Guiding Principle 1	Staff attitudes toward the mother must focus on the individual mother and her situation.
Guiding Principle 2	The facility must provide family-centered care, supported by the environment.
Guiding Principle 3	The health care system must ensure continuity of care from pregnancy to after the infant's discharge.
Expanded Ten Steps to Successful Breastfeeding	
Step 1	Have a written breastfeeding policy that is routinely communicated to all health care staff.
Step 2	Educate and train all staff in the specific knowledge and skills necessary to implement this policy.
Step 3	Inform hospitalized pregnant women at risk for preterm delivery or birth of a sick infant about the benefits of breastfeeding and the management of lactation and breastfeeding.
Step 4	Encourage early, continuous and prolonged mother-infant skin-to-skin contact/ Kangaroo Mother Care.
Step 5	Show mothers how to initiate and maintain lactation, and establish early breastfeeding with infant stability as the only criterion.
Step 6	Give newborn infants no food or drink other than breast milk, unless medically indicated.
Step 7	Enable mothers and infants to remain together 24 hours a day.
Step 8	Encourage demand breastfeeding or, when needed, semi-demand feeding as a transitional strategy for preterm and sick infants.
Step 9	Use alternatives to bottle feeding at least until breastfeeding is well established, and use pacifiers and nipple shields only for justifiable reasons.
Step 10	Prepare parents for continued breastfeeding and ensure access to support services/groups after hospital discharge.
Compliance with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions.	

Links between the BFHI and the Neo-BFHI

The working group decided to follow as closely as possible the BFHI Global Criteria (18). To emphasize this close relationship between both programs, the original formulation of the Ten Steps is presented in each section followed by the expanded version of the recommendation. Some of the expanded steps are the same as in the original version.

With regards to the breastfeeding statistics required for the Baby-friendly designation, the original program requires: "that maternity facility's annual statistics should indicate that at least 75% of the mothers who delivered in the past year are either exclusively breastfeeding or exclusively feeding their babies human milk from birth to discharge or, if not, this is because of acceptable medical reasons. (In settings where HIV status is known, if mothers have made fully informed decisions to replacement feed, these can be considered acceptable medical reasons, and thus counted towards the 75% exclusive breastfeeding goal). An external assessment visit can only be arranged once the facility reaches this goal" (18). For this initial phase of the Neo-BFHI, the working group proposes to leave the same requirement as specified by the BFHI. This means that annual statistics relative only to infants admitted to the neonatal ward are not required; however, it is desirable for monitoring purposes that separate statistics be compiled for the neonatal ward, when possible.

The specific questions included in the 2009 Global Criteria related to the training staff receive to provide support for "non-breastfeeding mothers" and what actual support these mothers receive are also included in the expansion. Like the original Initiative, the Neo-BFHI aims to help ensure that all mothers of infants admitted to neonatal wards, regardless of feeding method, get the support they need. For the Neo-BFHI, the recommendations for non-breastfeeding mothers have been enlarged to also include mothers whose infants are being supplemented with formula.

One particular aspect to the Neo-BFHI is the introduction of a grading system to assess compliance with certain standards. The grading allows different levels of difficulty to be considered when deciding if a criterion for a corresponding standard is achieved. The chosen grading identifies the levels as follows: Gold level is represented by 3 stars (***), Silver by 2 stars (**) and Bronze by 1 star (*). It is used for criteria that measure practices that are impacted by the physical environment of the neonatal ward, like in the case of Guiding Principle 2, Step 4 and Step 7. The levels are to be applied to individual criteria, not to the program overall. Ideally, all hospitals will work towards the optimal 3-star level for each of the graded criteria, but the minimum required for Neo-BFHI designation for these criteria is one star. This means that a neonatal ward could be designated with different numbers of stars for the graded criteria (that is, either 1, 2 or 3 stars). The aim of the levels is to make sure that facilities with settings that have difficulty accommodating the parents' presence for an extended period do not get excluded from working towards Neo-BFHI designation, while also providing recommendations for how practices can be gradually improved over time. This is particularly pertinent when making decisions related to the physical organization and environment of the wards, when renovating or building new facilities. Finally, following the WHO/UNICEF in the original BFHI "Section 1: Background and Implementation" (18), this document only intends to provide guidance on its expansion to neonatal wards. It is understood that countries, regions or facilities that want to use it will need to adapt the proposed standards and criteria to their particular settings. Also, because WHO/UNICEF provide detailed guidance on the assessment process in the same document, it is not addressed here. Decisions will need to be made at the country level as to whether Neo-BFHI assessments should be conducted at the same time as regular BFHI assessments, or if done separately whether it should only be conducted in facilities that are already designated Baby-friendly.

Definitions and Abbreviations

Abbreviations

AFASS	Acceptable, feasible, affordable, sustainable and safe; criteria for infant feeding/nutrition when the mother does not breastfeed.
Code	International Code of Marketing of Breast-milk Substitutes and subsequent World Health Assembly resolutions
KMC	Kangaroo Mother Care
NICU	Neonatal Intensive Care Unit
24h/7d	24 hours a day, 7 days a week

Definitions in this document

Breastfeeding	Breastfeeding means feeding directly at the breast. For statistical purposes, as proposed by the WHO to define infant feeding practices, exclusive breastfeeding means that the infant receives breast milk (including expressed breast milk, donor milk, or breast milk from a wet nurse) and allows infants to receive oral rehydration solutions, drops, syrups (vitamins, minerals, medicines), but nothing else.[1] [1] World Health Organization. *Indicators for assessing infant and young child feeding practices - Part 1, Definitions. Conclusions of a consensus meeting held 6–8 November 2007 in Washington, DC, USA*. 2008. Geneva, Switzerland: World Health Organization.
Breastfeeding or infant feeding policy	Overall policy for feeding, breastfeeding and nutrition including the Three Guiding Principles, the Neo-BFHI Ten Steps and the Code. The policy could address the implementation of the Neo-BFHI alone or in combination with the BFHI or other programs related to infant nutrition.
Breast milk feeding	Providing infants with breast milk by other feeding methods than directly at the breast.
Breastfeeding protocol	Guidelines for the implementation of specific breastfeeding-related practices in the neonatal ward.
Clinical staff	Includes staff members providing clinical care for mothers and their preterm or sick babies who are being cared for in the neonatal ward or related areas, and for pregnant women at risk of giving birth to preterm or sick babies. Clinical staff may include nurses, midwives, doctors and any other staff member providing health care for these women and babies. In the text of the standards and criteria, clinical staff refers to those working in the neonatal ward or related areas.

Father	Includes partner or significant others.
Family	Includes significant others and is defined by the parents.
Gestational age	Time elapsed between the first day of the last menstrual period and the day of delivery.
Head/director of nursing	The professional who has the main responsibility for nursing care in the neonatal ward and related areas.
Infant or baby	Refers to preterm and/or ill infants/babies. Otherwise infants or babies are described as healthy and/or full term infants/babies.
Kangaroo Mother Care (KMC)	The definition of the KMC method is: “"early, prolonged and continuous (as allowed by circumstances) skin-to-skin contact between a mother and her newborn low birthweight infant, both in hospital and after early (depending on circumstances) discharge, until at least the 40th week of post-natal gestational age, with ideally exclusive breastfeeding and proper follow-up”[1] In this document, the term KMC is used for all types of skin-to-skin care (intermittent and continuous) between parents/family members and preterm/low birth weight/ill infants requiring neonatal care. [1] Cattaneo A, Davanzo R, Uxa F, Tamburlini G. *Recommendations for the implementation of Kangaroo Mother Care for low birthweight infants. International Network on Kangaroo Mother Care.* Acta paediatrica, 1998. 87(4): p. 440-05
KMC protocol	Guidelines for the implementation of skin-to-skin/KMC practices in the neonatal ward.
Levels ***, **, *	Levels in meeting criteria for certain standards: *** Gold, ** Silver and * Bronze. Neo-BFHI designation can be given if at least level * is achieved in all the criteria with levels. The long term goal should be to progress to level ***.
Maternal role	See definition below: Parent as primary caregiver
Mothers/Parents	Mothers/parents refer to those with infants admitted to the neonatal ward.
Neo-BFHI	The expansion of the Baby-friendly Hospital Initiative for neonatal wards.
Neonatal ward	“Neonatal ward” covers all levels of neonatal care (levels I-IV) and paediatric wards where infants are admitted, as well as infants in maternity/postpartum wards who require some kind of monitoring and medical/nursing interventions. In the text of the standards and criteria, the term refers to all neonatal wards and related areas in the facility.

Non-clinical staff	These include staff members providing non-clinical care for mothers and their preterm or sick babies who are being cared for in the neonatal ward and related areas, and for pregnant women at risk of giving birth to preterm or sick babies, or who have contact with them in some aspect of their work. In the text of the standards and criteria, non-clinical staff refers to those working in the neonatal ward or related areas.
Nursing supplementer	A method for supplementation by using a feeding tube device with a bag/bottle to hold milk, connected to fine tubing taped to the mother's nipple, delivering supplementation to the baby at the same as he/she suckles the breast.
Pacifier	Also called dummy or soother.
Parent as primary caregiver	Role of the mother, father or significant other who provides an infant with all caregiving except for certain medical-technical procedures which, if performed by individuals without adequate training and knowledge, would be considered a hazard for the infant.
Postmenstrual age	Corresponds to gestational age plus chronological age.
Postnatal age	Corresponds to the chronological age or time elapsed from birth.
Preterm infant	Born alive before 37 weeks of pregnancy are completed. There are sub-categories of preterm birth, based on gestational age: • Extremely preterm (<28 weeks) • Very preterm (28 to <32 weeks) • Moderate preterm (32 to <34 weeks) • Late preterm (34 to <37 weeks).
Printed materials/ information	Includes written, pictorial or other type of formats more easily understood by the families served by the facility.
Skin-to-skin contact	The infant is placed between the mother's breasts in an upright position, chest to chest. The baby is naked, except for the diaper, a warm hat and socks to allow face, chest, abdomen, arms and legs to remain in skin-to-skin contact with the mother's chest and abdomen. Skin-to-skin contact can also be provided by the father or significant others.
Stable infant: Related to breastfeeding	Infants who respond to routine care and handling without experiencing severe apnoea, desaturation and bradycardia.
Stable infant: Related to KMC	Infants for whom there is ample research evidence of safety and positive effects of Kangaroo Mother Care: Infants born at a gestational age of at least 28 weeks without severe physiological instability associated to routine care and handling.
Supplementation	Supplementation means feeding by other means than at the breast and can consist of breast-milk or formula.
Tactile contact	Therapeutic intervention provided to the infant using touch by containment/"hand swaddling", stroking, massage, holding, etc.

Guiding principle 1: Staff attitudes toward the mother must focus on the individual mother and her situation.

Preterm birth is a traumatic event that disrupts parents' expectations of parenthood, above all because of the long period of uncertainty, and hinders attainment of their parental roles (51). Mothers with infants in a neonatal ward may experience delayed development of maternal identity (45). Mothers of preterm infants give birth before they have completed the full prenatal process of preparing for motherhood that is experienced by those who give birth at term (52). For mothers in a neonatal ward, the transition to motherhood can entail a crisis, which takes time to resolve (45). Their feelings can swing between shock, sorrow, emotional exhaustion and hope; they can feel as if they are hovering around the edge of mothering (53). Their traumatic experiences may lead to maternal posttraumatic stress that can cause problems in the development of a dyadic pattern of interaction with their infants and non-balanced attachment representations, with long term consequences for the mother-infant relationship (54-56). This requires early support, especially if mothers report negative birth experiences.

A comparison between mothers of infants born preterm and mothers of full-term infants noted that the former group described more uncertainty, worries about breastfeeding and more obstacles to successful breastfeeding than the latter group (57). These emotions were associated with lower infant birthweight, higher neonatal clinical risk and longer duration of stays in the neonatal intensive care unit (NICU). In short, strategies to enhance the breastfeeding rate in the preterm population have to take into account the mothers' psychological status.

Mothers of hospitalized infants may perceive breastfeeding as mutually pleasurable and reciprocal, or – contrarily – as task-oriented and non-reciprocal. There is a risk that mothers interpret hospital nutrition and feeding practices as a message that breastfeeding is a maternal responsibility (for example, an obligation to transfer a certain volume of milk or a norm to be fulfilled). In this case, a mother’s inability to meet expectations for success in lactation and breastfeeding may lead to feelings of failure and shame (28, 29). This may be particularly difficult for mothers who do not breastfeed or give supplements, for various reasons.

Mothers of preterm infants have described their milk as a connection between themselves and their infants, an integral part of their construction of motherhood (58), and may not feel they are mothers until they can initiate breastfeeding (47). This makes the mother’s own milk highly valued and at the same time it can place pressure on her to produce milk. When the mother considers breastfeeding a marker of “good motherhood”, her inability to produce enough milk can result in feelings of inadequacy and guilt (28, 29). This gives cause for concern, as maternal depressive symptoms, anxiety and problems with early feeding can have a negative impact on the development of her maternal role. A mother’s lack of confidence in feeding has also been associated with maternal perceptions of the infant as vulnerable and with parenting stress (59).

Mothers of infants with serious medical or surgical conditions that require prolonged hospital care face particular challenges. For example, mothers of newborns who required cardiac surgery have described numerous obstacles to breastfeeding success such as fatigue, anxiety, separation from their infants, institutional policy, and lack of support from health care providers (60). If they are given the support and education necessary for initiation and maintenance of lactation, these mothers can successfully breastfeed their infants according to official recommendations (61).

In order to help mothers attain motivation for establishment of lactation and breastfeeding, support should be offered with empathy and in a psychologically and culturally appropriate way (62, 63). Therefore, the mother must be seen as a unique individual, not only as a person who produces breast milk or participates in the infant's care and feeding. She should be supported in a sensitive way in making and implementing informed decisions about milk production, breastfeeding and infant feeding, according to her wishes.

All mothers of preterm infants and sick newborn infants must be recognized as "vulnerable" mothers. Infants born term and small for gestational age constitute a large proportion of infants requiring special attention after birth. Maternal under-nutrition contributes to fetal growth restriction (64). The rates have declined somewhat since the 1990s but rates above 10% persist in Asia and Africa (64). At the same time the rates of obesity and type-2 diabetes in pregnancy are increasing in all regions (24, 65). Obese mothers are at high risk for delayed or failed lactation in the post-partum period (24). Epidemiological studies have consistently found less likelihood of breastfeeding in mothers of preterm infants as well as mothers who are young, have a low level of education and are smokers (66, 67).

Increased attention should be paid to "particularly vulnerable" mothers, a concept that includes first time mothers, mothers with previous breastfeeding difficulties, multiparous mothers with a long interval since the last birth, mothers who have given birth previously to a preterm, sick or stillborn infant or an infant who died in the neonatal period, mothers in resource-deprived settings, mothers with low socio-economic status, teenage mothers, smokers, mothers with substance abuse, illiterate mothers, and mothers belonging to groups with low breastfeeding incidence and duration.

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

GP1 a	Every mother is treated with sensitivity (meaning staff are responsive to what she communicates), empathy and respect for her maternal role.
GP1 b	Mothers are supported in making informed decisions about milk production, breastfeeding and infant feeding. This includes respect for mothers who decide or are advised not to breastfeed, or are supplementing their baby with infant formula. Decisions made by mothers and staff, and the acceptable medical or other justifiable reasons for them, are documented appropriately.
GP1 c	Mothers receive focused individualized support with respect to milk production, breastfeeding and infant feeding.

Criteria GP 1a (mothers)

GP1.1	At least 80% of randomly selected mothers report that they were treated with sensitivity by the clinical staff (meaning staff were responsive to what they communicated).
GP1.2	At least 80% of randomly selected mothers report that they were treated with empathy by the clinical staff.
GP1.3	At least 80% of randomly selected mothers report that they were treated by the clinical staff with respect for their maternal roles.

Criteria GP 1b (mothers, review)

GP1.4	At least 80% of randomly selected mothers report that they were supported by the clinical staff in making informed decisions about milk production, breastfeeding and infant feeding.
GP1.5	The breastfeeding policy states that decisions made by mothers and staff, and the acceptable medical or other justifiable reasons for them, are documented appropriately.

Criterion GP 1c (review)

GP1.6	The breastfeeding policy states the need for focused individualized support with respect to milk production, breastfeeding and infant feeding.

Guiding principle 2: The facility must provide family-centered care, supported by the environment.

The ward should respect the rights, responsibilities, and duties of parents to provide appropriate direction and guidance for their infant according to article 5 in the United Nations Convention on the Rights of the Child (68).

A family-centred, individualized and developmentally supportive environment is characterized by the tenet that parents are the most important persons in their infant's life and that they should be encouraged and supported to act as the infant's primary caregivers as far as this is possible, considering the infant's medical condition and treatment (69, 70). Optimal support of parents as primary caregivers is achieved by offering parents freedom of choice regarding performance of caregiving tasks and when to take on additional tasks. Core concepts of patient- and family-centred care are dignity and respect, information sharing, participation and collaboration(71).

Family-centred care is a concept that must be integrated into the culture and functioning of a neonatal ward. A physical and social environment that supports the presence and involvement of families may enhance family-centred care. Optimal collaboration between staff and families on the ward is more dependent on the attitudes and relationships established than on the physical facilities (72). Training in family-centred care should be arranged on a regular basis and be included in the education of all new staff members. In addition, infants who require neonatal intensive care need an appropriate physical and social environment (73). Caregivers have to adapt care and interaction to each infant's ongoing individual physiological and behavioral signals and needs, as it has been shown that developmental care enhances brain development in preterm infants and supports infants' breastfeeding behavior (73, 74)

Mothers want a family-centred and supportive physical environment, support for the father's presence, and early transfer of their infants' care to the parents (47). Stimuli such as levels of illumination, sound and activity should be modified according to the individual infant's and parents' needs, and measures should be taken for safeguarding privacy for the family as also described in recommended standards for NICU design (75). Providing the mother in the neonatal unit with a comfortable arm chair/recliner/bed enables her to support her infant's behavior during breastfeeding (76).

The parents must be seen as a whole, but also as individuals, as mothers' and fathers' needs may not always be the same. The fathers' role is more than acting as the mothers' supporters. Fathers of preterm infants who experience support, security and happiness feel that they are in control and able to handle their situations (77). Fathers who began sharing their infants' care with their mothers soon after birth stated that this helped them achieve their desired paternal roles and feel in control of their situations (78).

Fathers have also suggested that they could be included in the process of breastfeeding, by providing a favourable environment for the mother and baby and being present during breastfeeding (79). Fathers of preterm infants reported they participated in breastfeeding through monitoring expressed milk volume, transporting milk, helping with electric breast pump mechanics and enjoying watching the baby breastfeeding and progressing towards normal baby-hood; they also contributed by looking after their other children, doing household chores and providing moral support (80, 81).

The unit should be designed, above all, to support the maternal role (82), but also to accommodate both parents' presence as far as possible (83). Both mothers and fathers in a Swedish NICU mentioned the first time their preterm baby latched on and sucked the mother's breast as an important "first-time-event" (84). The parents should also have the option of inviting other family members to be present and participate in the infant's care (85).

Support of parents' presence 24 hours, 7 days a week (24h/7d) is increasing. This practice is possible even during medical rounds and emergency situations (86), and it should be supported. Space and place strongly influence the experience of attuned feeding. The single family room facilitates attuned feeding as it contributes to the mother having a sense of connectedness and a shared awareness with her baby, and helps her to tune in to her baby's emotional and physical needs; it enables a window of opportunity for feeding in correspondence to the baby's cues (87). The parents' ownership of the single family room ratifies the importance of mother's (and father's) presence and their roles as the primary caregivers (87). Moreover, parents have expressed preference for a single care room compared to an open-bay intensive care room (88).

In the Standards and Criteria below, the term "mother/parent" refers to mothers/parents of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

GP2 a	Family-centred care is integrated into the organization and functioning of the neonatal ward.
GP2 b	The presence of the father in the neonatal ward is encouraged at all times, as he is the mother's supporter and the infant's caregiver.
GP2 c	The care of infants admitted to the neonatal ward is transferred gradually by the staff to the parents, beginning as soon as possible after birth.
GP2 d	The neonatal ward provides practical support, such as a place to rest, sleep and eat, that will enable mothers/parents to stay with their babies as long as they want.
GP2 e	The neonatal ward provides an individualized developmentally supportive environment that is appropriate for the infants and the parents and facilitates breastfeeding.

Criterion GP 2 a (clinical staff)

GP2.1	At least 80% of randomly selected clinical staff can describe how family-centered care is integrated in their neonatal ward.

Criteria GP 2 b (review, observation)

GP2.2	The breastfeeding policy states that fathers are welcomed in the neonatal ward 24/7, without restrictions.
GP2.3	Observation of the neonatal ward confirms that all fathers are welcomed in the ward 24/7, without restrictions.

Criteria GP 2 c (review, mothers)

GP2.4	The breastfeeding policy states that the care of infants admitted to the neonatal ward is transferred to the parents as soon possible after the birth.
GP2.5	At least 80% of randomly selected mothers report that parents began participating in their infants' care within the first 24 hours after the birth, unless there were justifiable reasons for not doing so, such as the mothers' and infants' condition or the fathers' availability.

Criteria GP 2 d (observation)

GP2.6	Observation of the neonatal ward confirms that all mothers are able to rest by their infants' bedsides according to the following levels: ☐ Bed/mattress (level ***) ☐ Arm chair-recliner (level **) ☐ Chair without arm rest (level *).
GP2.7	Observation of the neonatal ward confirms that all mothers are able to eat close to the neonatal ward according to the following levels: ☐ Eat in the ward (level ***) ☐ Eat very close to the ward (5 minutes walking distance or less) (level **) ☐ Eat close to the ward (6 to 10 minutes walking distance) (level *).

Criteria GP 2 e (observation, mothers)

GP2.8	Observation of the neonatal ward confirms that the illumination is individualized, preterm infants' eyes are not exposed to direct light and that the sound level is low (conversations are held in a low voice, alarms are set low and silenced promptly, and other sources of noise occur only infrequently).
GP2.9	At least 80% of mothers report that the environment in the neonatal ward (light, sound, activity and privacy) is appropriate for their presence and for breastfeeding.

Guiding principle 3: The health care system must ensure continuity of care from pregnancy to after the infant's discharge.

Continuity of care involves care delivered over time to an individual infant and his/her family (89). The time frame may vary but includes distinct time periods or phases (90):

- A prenatal care phase, when parents anticipate the arrival of an infant who will require hospital care and may be in a critical condition. This period, which is anxiety-provoking and important to parents, is the entry point for the neonatal continuum of care.
- Birth and delivery room stabilization.
- Admission to a neonatal ward in the birth hospital or a neonatal transport before admission to a neonatal ward at another hospital.
- An intensive care phase and an intermediate care phase.
- Transfer back to a local hospital for a phase of continued care in case the infant was initially transferred from place of birth to another hospital.
- A pre-discharge preparatory phase followed by discharge to the home, or early discharge for continued care of the infant at home provided by the parents, supported by staff at the hospital, a home care agency or another health care provider.
- A follow-up phase.
- A continued phase of intensive care at home in case the infant requires continued long term care (for example for treatment with additional oxygen or mechanical ventilation).

The phases in lactation and breastfeeding include initiation of lactation, attainment and maintenance of an adequate milk production, initiation of breastfeeding and the mothers' attainment of their breastfeeding goals (ideally exclusive breastfeeding for the first 6 months) combined with a transition phase using feeding methods and nutrition policies that are supportive of breastfeeding.

In moving through these stages, preterm and ill infants will be cared for by several health care providers who could potentially work at cross purposes (89). Continuity is achieved when providers deliver consistent care that is responsive to the infant's and his/her family's changing needs (89, 91, 92), with a continuity in approach (91). This necessitates shared policies and guidelines for infant care and for parents' role, as well as parent education programs (group activities, individual counselling or printed information) in order to achieve management continuity (89). Continuity of care also refers to parents' perceptions of the process of care (89, 92). During any given encounter, parents should perceive that decisions about their infants are based on policies that are shared by all caregivers and to which all are willing to adhere, without any conflicting information or advice. Parents should feel confident that their caregivers know what has gone before, and that they (the parents) will not have to inform caregivers about their infant's medical history and current care plan (91).

Mothers have described experiences of contradictory advice from different health professionals, frequent change of strategies and hands-on approaches in breastfeeding counselling, judgmental, critical and uncaring attitudes and minimal demonstration of empathy (93). Continuity of care by breastfeeding counsellors with adequate training improves mothers' perception of support (94).

The family-centered care approach, addressed in Guiding Principles 1 and 2, provides a framework to facilitate continuity of care (93) by, for example, promoting parents' presence and participation as primary caregivers (94). As the role of nurses and midwives shift from caregiver to parent educator/coach, and as parents take over several or nearly all components of their infants' care, they will be more informed about their infants conditions and can actively participate in decisions about their care (71). This may act as a safeguard of continuity of care. Furthermore, continuity of care affects parents' confidence in their infants' safety and their own emotional status (70). Frequent staff changes, on the other hand, are perceived as a risk to infant safety and a disregard of the parental role (95). Continuity of care is one of the main desired outcomes in most comprehensive global maternal-infant health initiatives (18, 96-98).

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

GP3 a	Care in regards to lactation and breastfeeding support during each stage of health care delivery (prenatal care, the arrival of a "potentially" critical infant, the acute/critical care phase, the stable-improving phase, the transfer-discharge phase, and the follow-up or continuing care phrase) is consistent.
GP3 b	Information regarding the infants' medical management and families' preferences is shared among the relevant health care providers, institutions, and organizations involved in lactation and breastfeeding support.

Criteria GP 3a (review, head/director of nursing, mothers)

GP3.1	Continuity of care is addressed in the breastfeeding policy.
GP3.2	All clinical protocols or standards in the hospital related to lactation, breastfeeding and feeding support in preterm and sick infants indicate that they are in line with the Neo-BFHI standards and current evidence-based guidelines.
GP3.3	The head/director of nursing of the neonatal ward reports that there is continuity of care related to lactation, breastfeeding and feeding support during each stage of health care delivery.
GP3.4	At least 80% of randomly selected mothers report that they receive consistent information regarding lactation, breastfeeding and feeding support for their infants throughout the continuum of care.

Criteria GP 3 b (mothers, head/director of nursing)

GP3.5	At least 80% of randomly selected mothers report that clinical staff know what went on before with their infants and that they did not have to repeat the history of their infants' medical conditions and current care plans (including current lactation, breastfeeding and feeding support strategy) to the caregivers involved in their care.
GP3.6	The head/director of nursing of the neonatal ward reports that information regarding the current situation and plan for lactation, breastfeeding and feeding support is included in reports provided by the neonatal ward when infants are transferred to the next phase of care.

Step 1: Same for the original BFHI and the Neo-BFHI.

Have a written breastfeeding policy that is routinely communicated to all health care staff.

Hospitals with comprehensive breastfeeding policies are likely to have better breastfeeding support services and better breastfeeding outcomes (10, 17). The introduction of a BFHI policy has been shown to increase breastfeeding rates at 2 days and 2 weeks postpartum in maternity wards (17). The BFHI policy outlines evidence-based breastfeeding-related practices included in steps 3 to 10. Compliance with these Baby-friendly practices has been associated with positive health outcomes (10) and improved breastfeeding duration rates (12).

In the neonatal setting, Baby-friendly accreditation in hospitals with both maternity and neonatal care has also resulted in improvements in several breastfeeding-related outcomes for infants in the neonatal ward (5). Furthermore, the implementation of Baby-friendly policies and practices leading to BFHI designation has been associated with increased breastfeeding initiation and duration rates in NICUs (42, 43). Also, facilities using KMC guidelines as part of their policies have higher breastfeeding rates (67, 99-102)

Clear guidelines have been highlighted as an essential component in the implementation of BFHI in neonatal wards (103, 104).

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term *"staff" refers to staff working in the neonatal ward or related areas.*

Standards

1 a	The health facility has a written breastfeeding or infant feeding policy that addresses the Three Guiding Principles, all Neo-BFHI Ten Steps and the Code in the neonatal wards.
1 b	The policy includes guidance for how each of the Three Guiding Principles, Neo-BFHI Ten Steps, and the Code should be implemented in the neonatal ward and other areas serving pregnant women at risk of having preterm or sick babies, and requires that mothers – regardless of their infant feeding methods – receive the individualized feeding support they need. It also requires that HIV-positive mothers with babies in these wards receive counselling on infant feeding and guidance on selecting options likely to be suitable for their situations. The policy protects breastfeeding in the neonatal ward by adhering to the Code.
1 c	The policy is available so that all clinical staff members can refer to it. Summaries of the policy covering the Three Guiding Principles, the Neo-BFHI Ten Steps, the Code, and support for HIV-positive mothers, are visibly posted or available as written and visual information in the neonatal ward and other areas serving pregnant women at risk of having preterm or sick babies. These areas may include in-patient wards for antenatal care, the labour and delivery area and clinic/consultation rooms. The summaries are displayed in the language(s) and written with wording most commonly understood by mothers and clinical staff.

Criterion step 1 a (review)

1.1	The health facility has a written breastfeeding/infant feeding policy that addresses the Three Guiding Principles, the Neo-BFHI Ten Steps and the Code for neonatal wards.

Criteria step 1 b (review)

1.2	The breastfeeding policy includes guidance for how the Three Guiding Principles, the Neo-BFHI Ten Steps and the Code should be implemented in neonatal wards and other areas serving pregnant women at risk of having preterm or sick babies. It also requires that HIV-positive mothers with babies in these wards receive counselling on infant feeding and guidance on selecting options likely to be suitable for their situations.
1.3	The breastfeeding policy confirms that all mothers, regardless of the way they feed their infants, get the support they need in the neonatal ward.

Criteria step 1 c (observation)

1.4	Observation confirms that a copy of the summary of the breastfeeding policy or visual images are displayed in the neonatal wards and in all other areas serving pregnant women at risk of having preterm or sick babies.
1.5	Observation confirms that summaries of the breastfeeding policy are displayed in the language(s) and written with wording most commonly understood by mothers and clinical staff.

Step 2: Train all health care staff in skills necessary to implement this policy.

Expansion: Educate and train all staff in the specific knowledge and skills necessary to implement this policy.

Education and training are necessary for the successful implementation of a breastfeeding policy. Health workers who have not been trained in breastfeeding management cannot be expected to give mothers effective guidance and provide skilled counselling, yet the subject is frequently omitted from curricula in the basic training of health care professionals. Hence, staff working in a neonatal ward should receive basic education and training on breastfeeding as well as specific training to ensure a successful breastfeeding experience for mothers and infants admitted to the ward.

Analysis of research on introduction and advancement of oral feeding (breast and bottle) demonstrated several common misconceptions and a lack of knowledge about preterm infants' early capacity for nutritive sucking at the breast, and measures for supporting mothers in establishment of breastfeeding without unjustified delays (105). Gaps in knowledge among managers, educators, and clinical leaders were highlighted as a barrier for implementing the BFHI in Canadian NICUs (106). The respondents recognized the potential value of expanding the original BFHI to the NICU setting.

In "non-Baby-friendly/Baby-friendly Intent" settings, nurses' knowledge was often not in accordance with current best practices in breastfeeding initiation, and the reported hospital policies were not based on evidence-based practices (107).

An educational intervention designed to improve lactation knowledge, attitudes and beliefs of NICU nurses, and to improve their intentions to provide mothers with lactation support, showed positive results: the nurses' knowledge and attitudes improved, and the improvements were maintained over time (108). This study concluded that intermittent, short educational programs which include practical how-to's and motivational encouragement empower nurses in the provision of lactation and breastfeeding counselling.

Jones et al. (2004) showed that training of the NICU staff in breastfeeding resulted in mothers attaining higher milk production, more time spent in mother-infant skin-to-skin, more cup-feeding and higher frequency of feeding at the breast (109). After an intervention including breastfeeding education for nurses, complementary breastfeeding materials to mothers with very low birth weight infants, and addition of a breastfeeding pathway to the individualized care plans, significant improvement in rates of breastfeeding (defined as infants being put directly to the breast 1 or more times) in the NICU were noted after the intervention was implemented (110). In the pre-intervention group, 26% of mothers breastfed their infants in the hospital, whereas in the post-intervention group 44% of mothers breastfed their infants in the hospital at least once.

When offering basic training in current best practices, it is essential to scrutinize and update the existing practices (47, 111). Training needs to target both knowledge and skills; otherwise the knowledge may not affect practice (112). There is also a need to change attitudes that create barriers to breastfeeding promotion. These include: the assumption that health workers know enough already; a belief that there is no important difference between breastfeeding and bottle feeding; a reluctance to allocate staff time to breastfeeding support; and a failure to recognize the impact of inconsistent or inaccurate information. Health workers may undermine mothers' confidence, for example by implying criticism, or doubt about a mother's milk supply. Ekstrom et al. (2005) showed how process-oriented training of health staff on breastfeeding can alter attitudes to breastfeeding and to breastfeeding mothers (113) (14).

For in-service training to be successful it must be mandatory and supported by supervisory personnel, which requires a strong policy supported by senior staff. If training is voluntary and senior staff uncommitted, attendance is likely to be poor, and only those whose attitudes are already favorable will participate (114, 115). In a comprehensive review, Renfrew et al. (2009) concluded that both training of multidisciplinary staff and Baby-friendly accreditation have been effective for improvement of breastfeeding counselling practices and that skilled support from trained staff is potentially cost-effective in the neonatal ward (5).

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term *"staff" refers to staff working in the neonatal ward or related areas.*

Standards

2 a	All clinical staff are aware of the existence of the breastfeeding/infant feeding policy. They have basic knowledge in breastfeeding as well as of the special needs of preterm and sick infants, and of how to support their mothers to enable early initiation of breast milk production and breastfeeding.
2 b	The neonatal ward has a plan in place for education and training of various types of staff members. Continuing education in the field should be provided on a regular basis.
2 c	All clinical staff who have been on working in the neonatal ward 6 months or more have acquired knowledge corresponding to the breastfeeding and lactation content in the Three Guiding Principles, the Neo-BFHI Ten Steps and the Code, including supervised clinical experience in the neonatal ward. In addition to this, they receive continuing breastfeeding education on these topics on a regular basis.
2 d	Training on how to provide support for non-breastfeeding mothers is provided to staff. A copy of the course session outlines for training on how to support non-breastfeeding mothers is also available for review. The training covers key topics such as: • the risks and benefits of various feeding options; • helping the mother choose feeding that is acceptable, feasible, affordable, sustainable and safe (AFASS) in her circumstances; • the safe and hygienic preparation, feeding and storage of breast-milk substitutes; • how to teach the preparation of various feeding options; • and how to minimize the likelihood that breastfeeding mothers will be influenced to use formula.

2 e	Non-clinical staff members have received training that is adequate, given their roles, to provide them with the skills and knowledge needed to support mothers in successfully feeding their infants in the neonatal ward.

Criteria step 2 a (head/director of nursing, review, clinical staff)

2.1	The head/director of nursing of the neonatal ward reports that all health care staff members who have any contact with pregnant women at risk of having preterm or sick babies, and/or mothers and their babies cared for in the neonatal wards, have received orientation on the breastfeeding/infant feeding policy. The orientation that is provided is sufficient to implement the policy in the neonatal ward.
2.2	The breastfeeding policy states training for clinical staff includes breastfeeding and lactation management and feeding the infant who is not breastfed. It should also include the special needs of infants admitted to the neonatal ward and supporting mothers to enable early initiation of breast milk production and breastfeeding.
2.3	At least 80% of randomly selected clinical staff can adequately answer at least 4 out of 5 questions (related to breastfeeding support and promotion).
2.4	At least 80% of randomly selected clinical staff can describe the importance of breastfeeding/breast milk feeding for preterm/ill infants, including psychological benefits to the mothers.

Criteria Step 2 b (review)

2.5	A copy of the curricula or course session outlines for training various types of staff in breastfeeding promotion and support in the neonatal ward is available for review.

Criteria Step 2 c (review, clinical staff)

2.6	The training documentation indicates that at least 80% of the clinical staff who are responsible for the care of mothers and/or infants in the neonatal ward and have been working in the ward for 6 months or more have received training at the hospital or prior to arrival, through a course, well-supervised self-studies or on-line courses. (It is likely that at least 20 hours of targeted training will be needed to develop the knowledge and skills necessary to adequately support mothers; the required hours may vary according to the type of clinical work).
2.7	The training documentation indicates that 80% or more of the clinical staff members who are responsible for the care of mothers and/or infants in the neonatal ward have received at least 3 hours of supervised clinical experience in the neonatal ward as part of this training.
2.8	The training material covers the Three Guiding Principles, the Neo-BFHI Ten Steps and the Code.
2.9	At least 80% of randomly selected clinical staff confirm they have received the described training or, if on the job less than 6 months, have at least received orientation on the breastfeeding/infant feeding policy and their roles in implementing it in the neonatal ward.

Criteria Step 2 d (review)

2.10	The training on how to provide support for non-breastfeeding mothers is provided to the staff. A copy of the course session outlines for training on how to support non-breastfeeding mothers is also available for review.
2.11	The training covers key topics such as: the risks and benefits of various feeding options; helping the non-breastfeeding mother choose what is acceptable, feasible, affordable, sustainable and safe (AFASS) in her circumstances; the safe and hygienic preparation, feeding and storage of breast milk substitutes; how to teach the preparation of various feeding options, and how to minimize the likelihood that breastfeeding mothers will be influenced to use formula.
2.12	The type and percentage of staff receiving training on supporting non-breastfeeding mothers is adequate, given the facility's needs.

Criteria Step 2 e (review, non-clinical staff)

2.13	Documentation of training indicates that non-clinical staff have received training that is adequate, given their roles, to provide them with the skills and knowledge needed to support mothers in successfully feeding their infants while they are cared for in the neonatal ward.
2.14	At least 70% of randomly selected non-clinical staff confirm that they have received orientation and/or training concerning the promotion and support of breastfeeding since they started working at the neonatal ward.
2.15	At least 70% of randomly selected non-clinical staff are able to describe at least 1 reason why breastfeeding is important for mothers or babies cared for in the neonatal ward.
2.16	At least 70% of randomly selected non-clinical staff are able to mention 1 possible practice in the neonatal ward that would support breastfeeding.
2.17	At least 70% of randomly selected non-clinical staff are able to me mention at least 1 thing they can do to support women so they can feed their babies well while they are cared for in the neonatal ward.

Step 3: Inform all pregnant women about the benefits and management of breastfeeding.

Expansion: Inform hospitalized pregnant women at risk for preterm delivery or birth of a sick infant about the benefits of breastfeeding and the management of lactation and breastfeeding.

"Common sense suggests that it must be important to talk to all pregnant women about infant feeding, to prepare them for this aspect of motherhood" (116). These discussions ideally take place during antenatal consultations or classes but in the case of an impending premature birth or the birth of sick infants they may happen in the hospital setting before the delivery takes place.

Mothers in India who reported having received antenatal information about breastfeeding were more likely to feed colostrum and were also more likely to initiate early breastfeeding (117). Prenatal consultations which include information on the benefits and importance of breastfeeding and practical information regarding the support systems for breast milk expression and storage have been associated with significantly longer breastfeeding in preterm infants, both in hospital and after discharge. Therefore, the hours and days immediately before a preterm delivery may be of critical importance in influencing maternal planning regarding the feeding of her soon-to-be-born infant (118).

A study of lying-in women staying in Polish maternity wards concluded that antenatal lactation information should be particularly directed to primiparas and women who did not attend antenatal classes (119). Higher risk of delayed initiation of milk expression and low pumping frequency have been noted among mothers who gave birth prematurely by cesarean delivery (120). This highlights the importance of offering these women adequate antenatal information and intensified lactation and breastfeeding counselling after the birth.

Mothers of infants hospitalized in an NICU may feel discouraged from providing their milk due to their own health problems, lack of information, worries about their infants' conditions and concern about the adequacy of their milk supplies (121). Mothers of preterm infants have recommended that information in connection with a premature delivery should include what their responsibilities would be, what would be expected of them, and when they would be allowed to touch or hold their babies. The authors also mentioned the importance of discussions about breastfeeding and feeding strategies (122). In a study of mothers' suggestions regarding modification of the original Ten Steps, mothers of very preterm infants emphasized the importance of early basic information about lactation and breastfeeding (47). They also suggested that antenatal classes should cover the special benefits of breast milk for these infants, breastfeeding techniques and potential problems, establishment of lactation by using a breast pump, and the fact that it may take some time before breastfeeding is possible. Individual information on breastfeeding a sick newborn infant, given by a health care professional, has been associated with higher likelihood that the mother chooses breastfeeding instead of bottle feeding (123).

A systematic review of professional support interventions for breastfeeding concluded that interventions stretching from pregnancy to the intra-partum period and throughout the postnatal period were more effective than interventions concentrating on a shorter period (112).

In the Standards and Criteria below, the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

3 a	Hospitalized pregnant women who are at risk of having infants admitted to the neonatal ward are visited by the clinical staff from that ward to discuss breastfeeding, and how lactation and breastfeeding/breast milk feeding may be established, depending on the infants' conditions. The discussion reflects the needs of the family and include the following: • The neonatal ward open access policy and the importance of the parents' presence for the infant's well-being. • The fact that milk production begins after the birth of a preterm infant (irrespective of gestational age) in the same way as after the birth of a full term infant. • The significance of early stimulation of milk production to provide the infant with colostrum as early as possible, and practical information about how to do it. • The particular benefits of breastfeeding/breast milk feeding for preterm/ill infants and their mothers. • The importance of skin-to-skin contact with the infant after birth, as early as possible. • The importance of letting the infant begin breastfeeding early. • The fact that very and extremely preterm infants also have the capacity for nutritive sucking at the breast; however, this may be affected by their medical conditions. • The importance of expressing frequently (at least 7 times a day). Information is given, taking into consideration the individual woman's knowledge and whatever previous experience she may have with breastfeeding, and the woman's indication (if this is the case) that she intends to give her baby something other than breast milk.
3 b	A written description of the information about breastfeeding, breast milk feeding, milk expression, and skin-to-skin contact, and any printed material provided to hospitalized pregnant women who are at risk of having an infant admitted to the neonatal ward is available.

Criteria step (head/director of nursing, review)

3.1	The head/director of nursing of the neonatal ward can confirm that hospitalized pregnant women who are at risk of having infants admitted to the neonatal ward are visited by the clinical staff from that ward to offer them information about breastfeeding and lactation specific to their situations.
3.2	The neonatal ward breastfeeding protocol states that hospitalized pregnant women who are at risk of having infants admitted to the ward are visited by the clinical staff to discuss breastfeeding and how lactation and breastfeeding/breast milk feeding may be established, depending on the infants' conditions.
3.3	A written description of the minimum content of the breastfeeding information and any printed materials provided to hospitalized pregnant women who are at risk of having infants admitted to the neonatal ward, cover adequately 6 out of the 8 items in Standard 3 a.

Criterion step 3 b (head/director of nursing, review)

3.4	The head/director of nursing of the neonatal ward or the review of documentation confirms there is a written description of the information about breastfeeding, breast milk feeding, milk expression and skin-to-skin contact provided to hospitalized pregnant women who are at risk of having infants admitted to the neonatal ward. Confirmation is also provided of any printed material with this information that is distributed to these women.

Step 4: Place babies in skin-to-skin contact with their mothers immediately following birth for at least one hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.

Expansion: Encourage early, continuous and prolonged mother-infant skin-to-skin contact/Kangaroo Mother Care.

This step applies to all infants admitted to the neonatal ward, whether they are breastfed or not.

The core concepts in Kangaroo Mother Care (KMC) are: warmth, breast milk and love (124). It consists of skin-to-skin contact between the mother and her low birth weight infant in hospital and after discharge with exclusive breastfeeding (ideally), early discharge and adequate follow-up. The KMC method is defined as early, continuous and prolonged skin-to-skin contact, where early means as soon as possible after birth, and continuous means ideally 24 hours/day. Skin-to-skin contact should be used during the infant's whole hospital stay (prolonged), usually to about term age or beyond, or for as long as the benefits of skin-to-skin contact are needed. Depending on the circumstances, KMC can be practiced continuously (24 hours/day) or intermittently, as skin-to-skin contact for variable periods of time. Prolonged intermittent or continuous skin-to-skin contact has been found to support infant development (125), accelerate breastfeeding establishment (126), and prevent hypothermia (127, 128). The kangaroo position means that the infant is cared for skin-to-skin in an upright prone position on the mother's chest; the infant is positioned with flexed arms and legs and the head turned sideways, supported by the mother's clothing. KMC contact is also recommended for sick full term infants (111). In addition to the mother, the father and significant others can also participate as KMC providers.

Tactile contact enhances the development of maternal identity after preterm birth (129). Increased milk production was demonstrated in mothers of infants in a neonatal ward who had daily skin-to-skin contact with their infants for an average of 4 times/week, for a mean duration of 60 minutes (130). Higher milk volumes were noted when mothers expressed their milk in proximity to their infants, particularly during and immediately after KMC (131).

In a review of 310 studies of the effect of pre- and post-discharge interventions on breastfeeding, skin-to-skin care was identified as one of the interventions that improved breastfeeding outcomes and weight gain among preterm infants (132). A Cochrane review concluded that, in comparison with mothers with infants who received conventional care, mothers of infants treated with KMC were more likely to be breastfed (exclusively and non-exclusively) at discharge, at 40-41 weeks postmenstrual age, and at 1-3 months (128). A randomized controlled study in Ethiopia, Indonesia, and Mexico found that exclusive breastfeeding was more common at discharge in infants treated with KMC (101). In Iran, a 4-fold increase in exclusive breastfeeding at discharge was found after the introduction of KMC (133). Mothers in the United States who held their preterm infants (gestational age 32-36 weeks) skin-to-skin in hospital breastfed longer than a control group without skin-to-skin contact (5 months versus 2 months) (101). In India, better growth and a higher rate of exclusive breastfeeding at 3 months of age were noted in infants who received KMC (134), and better growth was also observed in very low birth weight infants who were treated in a KMC ward, compared to infants with conventional care (135). Duration of skin-to-skin contact may also have an impact on breastfeeding. A Swedish study showed that very preterm infants who were breastfed at age 1, 2, 5 and 6 months experienced longer daily mean duration of skin-to-skin

contact (136). A Danish cohort study found that, once the infant did not require incubator care, the continuation of daily intermittent skin-to-skin contact was associated with earlier establishment of exclusive breastfeeding (126). In 2003, the WHO issued a Practical Guide for KMC (137). In settings with optimal health and medical care resources, initiation of KMC is recommended for stable infants from a postmenstrual age of 28 weeks, from a birth weight of 600 g. Clinical guidelines for KMC have also been published by the Kangaroo Foundation in Bogotá (138). Training in the WHO Essential Newborn Care (ENC) course includes the KMC method (139). Because of the massive evidence of benefits with KMC, including enhanced establishment of lactation and breastfeeding, experts have recommended universal promotion of the method in both high-tech and low income settings (140), and have agreed on recommendations for implementation of the method in a high-tech environment (141).

In the Standards and Criteria below, the term "mother/parent" refers to mothers/parents of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

4 a	The neonatal ward has a written KMC protocol.
4 b	Parents of preterm or sick infants are informed about and encouraged to initiate skin-to-skin contact as early as possible, ideally from birth, unless there are medically justifiable reasons.
4 c	Parents of preterm or sick infants are encouraged to provide skin-to-skin contact/KMC in the neonatal ward continuously or for as long and as many periods per day as they are able and willing to, without unjustified restrictions.
4 d	Parents of preterm or sick infants are encouraged to continue providing skin-to-skin contact/KMC for the remainder of the hospital stay and also after early discharge.

Criteria step 4 a (review)

4.1	The breastfeeding policy states that the neonatal ward has a protocol guiding the practice of skin-to-skin/KMC.
4.2	The neonatal ward has a KMC protocol confirming that: - A stable preterm or sick infant born vaginally or by cesarean section without general anesthesia should be placed in skin-to-skin contact/kangaroo position on the mother in the delivery or operating room as early as possible, ideally from birth, unless there are medically justifiable reasons not to do so. - A stable preterm or sick infant born by cesarean section under general anesthesia should be placed in skin-to-skin contact/kangaroo position on the mother as soon as the mother is responsive and alert (when appropriate considering the mother's condition). - An initially unstable preterm or sick infant should be placed in skin-to-skin contact/kangaroo position as soon as the infant tolerates transfer back and forth from the mother. - The father and significant others of a preterm or sick infant are encouraged to provide skin-to-skin contact/KMC as a substitute for the mother. - Transport of a stable preterm or sick infant from the labour and delivery wards to the neonatal ward in skin-to-skin/kangaroo position on a parent's chest is promoted. - Skin-to-skin contact/KMC is important for all preterm and sick infants, whether they are breastfed or not.

Criteria step 4 b (mothers, clinical staff)

4.3	At least 80% of randomly selected mothers report that they were adequately informed about benefits of early initiation of skin-to-skin contact/KMC.
4.4	At least 80% of randomly selected mothers of stable preterm and sick infants with vaginal delivery or cesarean section without general anesthesia confirm that their babies were placed in skin-to-skin contact/kangaroo position on them as early as possible, ideally from birth, unless there were medically justifiable reasons not to do so, according to the following levels: ☐ Skin-to-skin contact/KMC initiated immediately or within 5 minutes after birth (level ***) ☐ Skin-to-skin contact/KMC initiated during the first hour after birth (after the first 5 minutes but during the first hour) (level **) ☐ Skin-to-skin contact/KMC initiated during the 2nd to 24th hour of life (later than 1 hour after the birth, but during the first day of life) (level *).
4.5	At least 80% of randomly selected mothers of stable preterm and sick infants born with cesarean section under general anesthesia confirm that their babies were placed in skin-to-skin contact/kangaroo position on them as early as possible, without unjustified delay, according to the following levels: ☐ Skin-to-skin contact/KMC initiated immediately or within 5 minutes after the mothers were responsive and alert (level ***) ☐ Skin-to-skin contact/KMC initiated during the first hour after the mothers were responsive and alert (after the first 5 minutes but during the first hour) (level **) ☐ Skin-to-skin contact/KMC initiated during the 2nd – 24th hour after the mothers were responsive and alert (later than 1 hour, but during the first day) (level *).
4.6	At least 80% of randomly selected clinical staff confirm that skin-to-skin contact/kangaroo position is initiated in the neonatal ward as soon as the infant tolerates transfer back and forth from the mother.

Criteria step 4 c (mothers, clinical staff)

4.7	At least 80% of randomly selected mothers of infants who are stable enough for skin-to-skin contact/KMC confirm that their infants are allowed to remain in skin-to-skin contact/kangaroo position in the neonatal ward continuously, or for as long and as often every day as the parents are able and willing to, without unjustified restrictions.
4.8	At least 80% of randomly selected clinical staff report that they encourage skin-to-skin/KMC continuously, or for as long and as often every day as the parents are able and willing, without unjustified restrictions.

Criterion step 4 d (mothers)

4.9	At least 80% of randomly selected mothers confirm that they were informed and encouraged to continue providing skin-to-skin contact/KMC for the remainder of the hospital stay and also after early discharge.

Step 5: Show mothers how to breastfeed and how to maintain lactation, even if they should be separated from their infants.

Expansion: Show mothers how to initiate and maintain lactation, and establish early breastfeeding with infant stability as the only criterion.

The initiation and maintenance of breast milk production is of great importance for facilitating mothers' abilities to breastfeed preterm or ill infants. Early, systematic and continuing support for mothers is necessary to ensure their success in the establishment of lactation and breastfeeding and to overcome physiological and emotional challenges (142-145). According to the parents' perspectives, successful breast milk supply in the NICU depends on coherent and accurate knowledge about techniques and benefits, reinforcement of mothers' motivation, and alignment between the NICU's routines and parents' needs (146). Furthermore, a qualitative study found that mothers have faith in the healing properties of their milk and felt they were "giving life" to their infants when providing it (147). Many studies have found consistent positive effects of mother-infant skin-to-skin contact on milk production and successful breastfeeding (99, 101, 126, 130, 132, 134, 136). These aspects are covered in step 4.

Several studies have shown lower rates of breastfeeding among preterm infants in comparison to those born at term, probably due to delayed initiation of lactation and lower milk volume among the mothers of these infants (148-151). Mothers giving a high proportion of breast milk feeds at discharge are more likely to succeed in the establishment of breastfeeding, whereas mothers who face the challenge of breastfeeding establishment at home are likely to encounter problems. These findings support the importance of assisting mothers in the attainment of an adequate milk supply before discharge (151).

If the baby is unable to suck sufficiently directly from birth to receive the colostrum he needs and stimulate his mother's milk production, the mother should initiate milk expression as soon as possible, preferably within 6 hours, if permitted by the mother's condition (126, 152-158). Initiation of breast milk expression within 1 to 2 hours has also shown positive effects (157, 158). In a large cohort study of 1221 mothers of preterm infants, a dose response effect was documented between initiation of breast milk expression later than 6 hours after delivery and a higher risk of not breastfeeding exclusively, or of a delay in its establishment (126, 156). A study of 81 mothers of non-breastfeeding preterm infants who initiated lactation with a breast pump reported an association between the milk volume at day 4 post-partum and an adequate milk volume at week 6 post-partum; these results emphasize the importance of supporting mothers in early initiation of lactation (153). Expression by hand or pump should be encouraged at least 7 times a day, especially first days after birth, to simulate the normal physiological stimulation of lactation of healthy babies (159, 160). Frequency of milk expression is closely correlated to milk volume (152, 154, 161, 162). An observational study showed that pumping 7 or more times a day resulted in increasing milk volumes at 2 weeks, compared to pumping less than 7 times per day (163). According to a Cochrane review, interventions including early initiation of milk expression, relaxation, hand expression and low cost pumps are effective in increasing milk production in pump dependent mothers (164). Gentle breast massage during pumping is associated with higher milk production (163, 165).

For mothers with infants in a neonatal ward, breast milk expression initiated 2 hours after birth by double electric pumping resulted in more milk than single hand expression, but both methods produced adequate feeding volumes for the infants' needs (158). Hand expression of colostrum in addition to breast milk pumping in the first 3 days resulted in higher milk volumes over the first 8 weeks (163). Mothers should be offered to learn how to express their milk by hand and pump, when available. Hand expression is also useful for stimulating the milk ejection reflex and milk flow before pumping, and for making it easier for the infant to latch on, if needed.

Infant stability, independent of gestational age, postnatal age, postmenstrual age or weight, should be the only criterion for initiation of breastfeeding, as preterm infants have very early competence for breastfeeding (37-39). (Here stability means absence of severe apnea, desaturation and bradycardia.) Behavioral studies have shown that preterm infants are able to root, latch on and suck from 27 weeks (the lowest postmenstrual age reported at breast) and are able to ingest milk from about 29 weeks (39). Observational studies have found that preterm, and even very preterm, infants with free access to the breast, frequent small feedings and early start of breastfeeding, and whose mothers received adequate breastfeeding support, are able to attain exclusive breastfeeding from 32 weeks postmenstrual age, with a median of 35 weeks (37, 39). Late preterm infants are in need of special attention related to breastfeeding; they more often have jaundice, hypoglycemia and feeding difficulties than full term infants, and their ability to breastfed and regulate their intake may be overestimated (166, 167). A large cohort study found that exclusive breastfeeding in preterm infants was not established at a fixed postmenstrual age, but influenced by factors related to the infants, the mothers and clinical practices (126). Mothers evoke feelings of anger and frustration when they turn up to breastfeed their infants in the neonatal ward and find that the nurses had already tube or bottle fed their babies (168).

Qualitative studies report that mothers of preterm infants may have negative or ambivalent feelings about pumping, breastfeeding and mothering success, and therefore need extra support and attention (29, 58, 144, 167, 169). Hands-off techniques are preferable when supporting mothers and babies with positioning and attachment, as mothers have reported that hands-on helping techniques felt unpleasant and were not helpful (145).

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

5 a	Mothers are supported by staff - using hands-off techniques (unless the mother explicitly asks for hands-on assistance) - to correctly position and attach their babies for the first breastfeed and continue to have access to breastfeeding support by staff during the whole hospital stay.
5 b	Mothers of infants who are able to breastfeed are encouraged and supported to do so.
5 c	Mothers who are not exclusively breastfeeding and want to breastfeed/breastmilk feed receive information, support and practical help with initiation and maintenance of milk production within 6 hours of the infants' births. They are shown how to express their milk by hand and pump (when available) and told the importance of frequent expression to initiate lactation (at least 7 times every 24 hours, including during the night). The information is given orally or in printed form.
5 d	Mothers who have difficulties in establishing and maintaining milk production get focused, individualized support.
5 e	Infant stability is the only criterion for early initiation of breastfeeding (i.e., sucking at the breast) in preterm and sick infants, rather than gestational/postnatal/postmenstrual age or current weight.

5 f	Mothers of late preterm infants are offered the same breastfeeding support as mothers of other preterm infants.
5 g	Mothers who do not breastfeed or who use breast-milk substitutes receive support on how to safely prepare and give feeds to their babies.

Criterion step 5 a (review, mothers, clinical staff)

5.1	The neonatal ward breastfeeding protocol states that staff should be using a hands-off technique when supporting mothers with positioning and attaching their infants for breastfeeding, unless mothers explicitly ask for hands-on assistance.
5.2	At least 80% of randomly selected breastfeeding mothers report that the staff offered them support with positioning and attaching their infants for the first breastfeeding.
5.3	At least 80% of randomly selected breastfeeding mothers report that they had access to breastfeeding support in the neonatal ward whenever needed.
5.4	At least 80% of randomly selected clinical staff report they teach mothers how to position and attach their babies for breastfeeding and are able to describe or demonstrate correct techniques for both or, if they do not teach, describe to whom to refer mothers.
5.5	At least 80% of randomly selected breastfeeding mothers are able to describe signs that indicate that their infants are well positioned, and that they are latched and sucking well.

Criteria step 5 b (review, clinical staff)

5.6	The breastfeeding policy states that the staff encourages and supports mothers to feed at the breast whenever their infants are able to do so.
5.7	At least 80% of randomly selected clinical staff report that they encourage and support mothers to feed at the breast whenever their infants are able to do so.

Criteria step 5 c (mothers, clinical staff)

5.8	At least 80% of randomly selected mothers who are not exclusively breastfeeding and want to breastfeed/breastmilk feed, report that they have received information, support and practical help with initiation and maintenance of milk production within 6 hours of their infants' births.
5.9	At least 80% of randomly selected mothers who need to initiate lactation by expression report that they were told to express their milk at least 7 times every 24 hours.
5.10	At least 80% of randomly selected mothers who are breastfeeding or intending to do so report that they were shown how to express their milk by hand or given printed information and told where they could get help if needed.
5.11	At least 80% of randomly selected mothers who are not exclusively breastfeeding and want to breastfeed/breastmilk feed were shown how to express their milk by pump if readily available in their settings. The information was given orally or in printed form.

5.12	At least 80% of randomly selected clinical staff can describe or demonstrate how they teach mothers an appropriate technique for hand expression, or describe to whom they refer mothers for this instruction.
5.13	At least 80% of randomly selected clinical staff –in settings where breast pumps are available– can describe or demonstrate how they teach an appropriate technique to mothers who need or want to express milk by pumping, or describe to whom they refer mothers for this instruction.
5.14	At least 80% of randomly selected clinical staff report that they discuss with mothers how to initiate and maintain a sufficient milk supply.

Criteria step 5 d (review, clinical staff)

5.15	The neonatal ward provides documentation describing routines for following up mothers' milk production and for counselling mothers with decreasing or insufficient milk supply.

Criteria step 5 e (clinical staff, review)

5.16	At least 80% of randomly selected clinical staff describe infant stability as the only criterion for early initiation of breastfeeding (i.e., sucking at the breast).
5.17	The breastfeeding policy describes infant stability as the only criterion for early initiation of breastfeeding (i.e., sucking at the breast), rather than gestational/postnatal/postmenstrual age, current weight, any test of sucking strength, or requirement of suck training.

Criterion step 5 f (review)

5.18	The neonatal ward breastfeeding protocol recognizes late preterm infants as preterm, and states that their mothers should be offered the same support in the establishment of lactation and breastfeeding as those of more immature infants.

Criteria step 5 g (observation, mothers, clinical staff)

5.19	Observation of the neonatal ward confirms that staff demonstrations on how to safely prepare and feed breastmilk substitutes for mothers who have decided on this feeding option are accurate, complete and include a return demonstration.
5.20	At least 80% of randomly selected clinical staff can describe how non-breastfeeding mothers can be assisted to safely prepare their feeds, or can describe to whom they refer mothers for this advice.
5.21	At least 80% of randomly selected mothers whose infants are given formula at hospital discharge report that the clinical staff offered help in preparing and giving their infants feeds and can describe the advice they were given.
5.22	At least 80% of randomly selected mothers whose infants are given formula at hospital discharge report that the clinical staff verified their capacity to prepare their infants' feeds by asking them to prepare feeds themselves, after being shown how.

Step 6: Same for the original BFHI and the Neo-BFHI.

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

Breast milk is species-specific, and all substitute feeding preparations differ markedly from it, making breast milk uniquely superior for infant feeding. Breastfeeding is the normal way of providing young infants with the nutrients they need for healthy growth and development (1, 2), including preterm and ill newborns (3, 27, 170). Breast milk-fed preterm infants receive significant benefits with respect to host protection and improved developmental outcomes compared with formula-fed preterm infants (3, 171). For example, the risk of septicaemia in extremely preterm infants was reduced in those who received very early full human milk feeding (27). Formula feeding has been shown to increase the incidence of necrotizing enterocolitis (172) that entails substantial costs. One study noted considerable net savings when a 100% human milk-based diet that included mother's milk fortified with donor human milk-based HMF was used for feeding extremely preterm infants, an effect attributed to a reduced incidence of necrotizing enterocolitis (25).

In situations where mother's own milk is not available, provision of screened human donor milk is the next best option particularly for ill or high-risk infants (3, 171, 172). In situations where human donor milk is not available, provision of commercial formula is the best option (3). Whenever possible, preterm formula is recommended for the nonhuman-milk fed infant with a body weight of less than 2000 g, followed by iron-fortified standard infant formula (3). The WHO revised the acceptable medical reasons for use of breast milk substitutes in 2009 (173).

A common opinion is that maternal milk has insufficient quantities of certain nutrients to meet preterm infants' estimated needs (174). On the other hand, supplementation of human milk with multicomponent fortifiers has only been associated with short term increases in weight gain, linear and head growth. This finding was also reported in a Cochrane review comparing effects of feeding with donor breast milk or formula feeding. The authors concluded formula feeding results in a higher rate of short-term growth, but it is also associated with a higher risk of necrotising enterocolitis (175).

Use of fortifiers varies between and within countries, and indications remain controversial. Since low birth weight infants may cope well with large milk volumes, increasing volumes of milk intake as early as possible to volumes of (or above) 200 mL/kg/day - a proactive feeding strategy - may be an alternative to the addition of fortifiers as an intervention to promote infant growth (176). In extremely preterm infants, high volume intake of mother's milk fortified with individualized supplementation of protein and minerals has been associated with attainment of adequate infant growth (177). It has been suggested that a feasible nutrition strategy for very preterm and extremely preterm infants in low resources settings is to use expressed mother's own milk with or without pasteurization from women with or without HIV infection, respectively (178). This can be complemented with pasteurized donor milk. Furthermore, a high total daily volume should be strived for by means of frequent feedings.

For the purpose of this expansion, a fortifier could be considered an acceptable medication (the same way that vitamins, mineral supplements, medicines and intravenous solutions are allowed). Thus, an infant receiving a fortifier could be considered exclusively breastfed for the purpose of statistics, if a powdered fortifier is mixed with breast milk or the infant receives a liquid fortifier (18). When fortification of mother's own milk is prescribed, the mother should be informed about the reason for this supplementation and that her milk remains the optimal nutrition for her baby, in order to protect her intention to continue lactation/breastfeeding (47). Powdered fortifier, when compared to liquid fortifier, appears to be preferred by parents and has a positive effect on the duration of breastfeeding (179). Nevertheless, because of the logistical difficulties of systematic provision of fortified mother's milk to breastfed babies, this strategy may interfere with breastfeeding when practiced post-discharge (180).

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

6 a	The breastfeeding policy states that the normal breastfeeding pattern is not to be interrupted: all newborns, including those admitted to the neonatal ward, are to be breastfed. If this is not possible or sufficient, they are given their mother's own expressed milk using appropriate alternative feeding methods. They are not given anything else unless there are acceptable medical reasons or unless the mother has made an informed decision not to express milk/breastfeed. AFASS guidelines are used when appropriate.
6 b	When there are acceptable medical reasons as stated in Standard 6 a, mothers who do not provide all the breast milk required by their infants are informed about and have the option of using banked human milk (when available) or infant formula for feeding their infants - in this order of priority. Their informed decisions about feeding method are supported.
6 c	When feasible, considering infants' feeding tolerances, appropriate feeding strategies for increasing the milk intake of infants cared for in the neonatal ward are applied before the introduction of fortifiers.
6 d	In accordance with the Code, no materials that recommend feeding breast milk substitutes or other inappropriate feeding practices are distributed to mothers.
6 e	Clinical staff discuss the various feeding options available and their risks and benefits with mothers who have decided not to breastfeed or whose infants are given formula, to help them decide what is suitable in their situations.

Criteria step 6 a (review, observation, mothers)

6.1	The breastfeeding policy indicates that newborns cared for in the neonatal ward are given no food or drink other than their mothers' breast milk (at breast or expressed) unless there are acceptable medical reasons, and that AFASS guidelines are used when appropriate.
6.2	Observation of the neonatal ward confirms that at least 80% of the infants are being fed only breast milk (at breast or expressed) or banked human milk or, if they had received anything else, that it was for acceptable medical reasons.
6.3	At least 80% of randomly selected mothers report that their infants received only breast milk (at breast or expressed) or banked human milk or, if they received anything else, that it was for acceptable medical reasons.

Criteria step 6 b (review)

6.4	The breastfeeding policy states that when there are acceptable medical reasons, mothers are informed about and have the option of using banked human milk (when available) or infant formula, for feeding their preterm infants – in this order of priority.

Criterion step 6 c (review)

6.5	The neonatal ward breastfeeding protocol states that - when feasible and considering infants' feeding tolerances - appropriate feeding strategies for increasing infants' milk intake are applied before the introduction of fortifiers.

Criteria step 6 d (observation)

6.6	Observation of the neonatal ward confirms that no materials that recommend feeding breast milk substitutes or other inappropriate practices are distributed to mothers.
6.7	Observation confirms that the hospital has an adequate facility/space and the necessary equipment for giving demonstrations of how to prepare formula and other feeding options away from breastfeeding mothers.

Criterion step 6 e (mothers)

6. 8	At least 80% of randomly selected mothers who have decided not to breastfeed or whose infants are given formula report that the clinical staff discussed with them the various feeding options available and their risks and benefits, and helped them to decide what was suitable in their situations.

Step 7: Practice rooming-in – allow mothers and infants to remain together – 24 hours a day.

Expansion: Enable mothers and infants to remain together 24 hours a day.

This step applies to all infants admitted to the neonatal ward, whether they are breastfed or not. It addresses the importance of mothers' presence in the ward. The importance of fathers' presence is covered in Guiding Principle 2.

The United Nations Convention on the Rights of the Child states that infants shall not be separated from their parents against their will. This covers all children "irrespective of the child's… disability, birth or other status" (68). One encompassing aspect of mothers' presence in the neonatal ward is to welcome them at all times of the day and also during emergency situations and medical rounds. This may require changes in staff-driven policies and routines but does not require modifications of the physical environment (86). A different approach is to give all mothers the opportunity for rooming-in, irrespective of how their infants are fed, which in many wards may require extensive physical reorganization. A hospital cannot be considered friendly to the baby if mother and baby are separated when the baby is admitted to the neonatal ward (82). As rooming-in is beneficial for both the mother-infant relationship and breastfeeding, mothers and babies in the neonatal ward should ideally stay together in the same room day and night, right from birth. This may not be possible, however, because of mothers' various personal and medical situations.

Rooming-in promotes breastfeeding in preterm infants (126, 181-183), as well as bonding/attachment and parent empowerment (83). With this practice, mothers can observe and react to their babies' first feeding cues (87). Preterm infants, who are commonly separated from their mothers for a longer time, achieve exclusive breastfeeding at a later postnatal and postmenstrual age (184). Neonatal wards with integrated maternity care, where mothers can be admitted together with their infants into the neonatal ward right from birth, facilitate earlier establishment of exclusive breastfeeding (126). Rebuilding NICUs with single family rooms resulted in improved breastfeeding rates at discharge and 3 months post discharge (126, 181, 183). If the facilities can only provide limited opportunities for rooming-in right after birth, it should be offered to mothers as soon as possible and for at least the last days before being discharged home in order to enhance mothers' opportunities for successful breastfeeding establishment.

Since the 1980's it has become more common in some countries for infants and children in paediatric wards to be together with their parents day and night, but this practice is not yet common in neonatal wards (185). However, single-room care with parents rooming-in is being introduced in many settings and has been associated with shorter infant hospital stays (186). Newborn preterm or ill infants have at least as much need of being together with their mothers as older children. Preterm and ill infants cared for by their mothers 24h/7d gained significantly more weight in the first month (46). Mothers separated from their newborns experience emotional strain and anxiety; they feel like outsiders and experience lack of control when their infants are admitted to neonatal intensive care (187). Provision of opportunities for rooming-in can help parents in a neonatal ward feel like a family and not like they are just visiting their own babies (83, 87). Rooming-in promotes higher maternal attachment scores, and there is an association between mother-infant separation in the newborn period and parental violence, abuse or neglect of the child in later childhood (188-190). It is essential not to restrict the mothers' presence in the wards, even if the wards do not yet have the possibility to offer a maternal bed beside every incubator.

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

7 a	The breastfeeding policy states that there are no restrictions on the mothers' presence in the neonatal ward.
7 b	Mothers and infants are allowed to be together in the neonatal ward without restrictions, unless there are justifiable reasons for being separated.
7 c	The neonatal ward provides practical opportunities for mothers' unrestricted presence day and night.

Criteria Step 7 a (review, observation)

7.1	The breastfeeding policy confirms that: - the neonatal ward is open to mothers 24h/7d; - the mothers' presence beside their infants is unrestricted, even during emergency situations and medical rounds.
7.2	Observation of the neonatal ward confirms that: - the ward is open to mothers 24h/7d ; - the mothers' presence beside their infants is unrestricted, even during emergency situations and medical rounds.
7.3	Observation of the neonatal ward confirms that there are no signs or posters conveying that there are restrictions for mothers' presence beside their infants.

Criteria step 7 b (mothers, observation)

7.4	At least 80% of randomly selected mothers report that they had the possibility of being in the same room as – and without separation from – their infants admitted to the neonatal ward or, if not, that there were justifiable reasons (procedures where a mother cannot be present such as infant surgery or MRI, maternal illness/surgery/treatment, a mother needing to temporarily leave her bed or room and asking another person to supervise the baby, family reasons, etc.).
7.5	Observation of the neonatal ward shows that at least 80% of the mothers and infants are together or, if not, have justifiable reasons for being separated.

Criteria step 7 c (mothers)

7.6	At least 80% of randomly selected mothers of infants who are discharged home confirm that they had the possibility to sleep close to their infants admitted to the neonatal ward, according to the following levels: ☐ Bed in the same room as the infant (level ***) ☐ Bed in another room in the neonatal ward (level **) ☐ Bed in another area in the hospital (10 minutes walking distance from infant or less) (level *)
7.7	At least 80% of the randomly selected mothers of infants who are discharged home confirm that they had the possibility to sleep close to their infants for a part of their infants' hospital stays, according to the following levels: ☐ Infant's whole hospital stay (level ***) ☐ At least 50% of the infant's hospital stay (level **) ☐ At least 1 night just before the infant's discharge to home (level *)

Step 8: Encourage breastfeeding on demand.

Expansion: Encourage demand breastfeeding or, when needed, semi-demand feeding as a transitional strategy for preterm and sick infants.

Demand feeding means that the infant is breastfed based on the mother's observation of infant behavioral cues showing interest in sucking/rooting (baby-led feeding) (191). This more permissive, infant-led approach is associated in term infants with higher likelihood of breastfeeding and longer breastfeeding duration (192). This feeding strategy is appropriate once the infant has reached sufficient neurological maturity, evidenced by co-ordination between hunger and satiety, and sleep-awake state regulation (also called ad-libitum feeding), a competence that emerges around term age (193).

Sensitivity to behavioral cues is also important in preterm infants (including very preterm and extremely preterm). These infants are able to latch on to the breast, suck and swallow as soon as they no longer require support to breathe on their own, and are able to attain exclusive breastfeeding while still preterm (37, 39). In spite of this early capacity, neonatal ward protocols commonly include restrictions in the timing of introduction and encouragement of breastfeeding in preterm infants, causing unnecessary delays in the transition to feeding at the breast (105). Conversely, a cue-based oral feeding policy may result in earlier attainment of full oral feeding in these infants (193, 194).

During the establishment of breastfeeding, preterm and sick infants often require supplementation by another feeding method in order to consume the milk needed for adequate growth. These infants can benefit from a semi-demand breastfeeding strategy, where the mother observes to her infant's signs of interest in sucking (rooting) and behavioral state shifts, and breastfeeds when her infant shows such signs, with the feed ending when the infant stops sucking (195). Supplementation is given by another feeding method as required. In case the infant still does not show feeding cues when a long time has passed since the last feed, the mother actively offers the breast in order to reach a breastfeeding frequency per 24 hours that is sufficient for adequate milk intake. The mother is guided in protecting the infant's deep sleep by recognizing discrete signs of transition from deep to active sleep and waking up. At discharge, exclusively breastfed infants (born at a gestational age ranging from 33 to 38 weeks) demonstrated a wide variation in feeding patterns, ranging from 6 to 28 sessions a day (median of 13), including 1 to 10 sessions during the night (median of 4). Wide variations were also noted in duration of sessions and intervals between sessions (195).

Before the infant has attained exclusive breastfeeding, the daily milk volume to be given by another feeding method is prescribed, and supplementation is reduced in pace with the increase in the infant's oral milk intake, based on assessment of the infant's growth/weight gain. Two alternatives strategies are test-weighing before and after breastfeeding, and gradual reduction of the volume of supplementation (195). Mothers' opinions about test-weighing to assess the need for supplementation range between finding it supportive (196) to stressful (29). But, in comparison with test-weighing, observation of an infant sucking and swallowing during breastfeeding to assess the infant's milk intake volume (so called "clinical indices") is unreliable (197). Infants at a neonatal ward where test-weighing was used attained exclusive breastfeeding sooner and were discharged at a lower postmenstrual age, when compared with infants in a ward that applied clinical indices, but there was no difference between the wards in rates of exclusive breastfeeding (198). A large cohort study found that mothers who test-weighed their preterm infant for most breastfeeding sessions during transition were twice as likely to breastfeed exclusively at infant discharge, but did not establish breastfeeding earlier (126, 156). Other studies found a positive effect of

test-weighing preterm infants on exclusive breastfeeding at discharge (199), but no effect on breastfeeding duration (156, 200). Based on these inconclusive results, mothers should participate in the decisions about strategies for their infants' feeding and use the strategy they prefer. This empowerment will favorably impact the development of their maternal role (47).

In Italy, a detailed protocol for the application of semi-demand feeding was developed, based on existing evidence-based knowledge of preterm infants' early capacity for nutritive sucking at the breast. The aim of the policy was to limit unnecessary delays and restrictions in the infants' process of acquiring feeding autonomy (201).

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

8 a	The breastfeeding process is guided by the preterm and ill infant's competence and stability rather than a certain gestational/postnatal/postmenstrual age or weight. Transition from scheduled feeding with set volumes and frequencies to semi-demand feeding is introduced when there are no medical indications for scheduled feeding and the infant is able to obtain some milk at the breast.
8 b	Mothers are offered alternative strategies for establishment of exclusive breastfeeding and reduction of daily volume of milk given by other feeding methods, and are supported in participating in decisions about selection of strategies.
8 c	Mothers are guided in observing and responding to their infants' signs of feeding cues and behavioral state shifts (transition between sleep and alertness).
8 d	Medications are administered and procedures are scheduled so as to cause the least possible disturbance of breastfeeding in infants admitted to the neonatal ward.

Criterion step 8 a (review)

8.1	The neonatal ward breastfeeding protocol states that the individual infant's ability and stability – not a certain gestational/postnatal/postmenstrual age or weight – indicates when it is possible to discontinue scheduled feedings and tube feedings
8.2	The breastfeeding policy states that infants who are able to obtain some milk intake at the breast are breastfed on demand or with a semi-demand strategy (depending on the infants' ability).
8.3	The neonatal ward breastfeeding protocol includes strategies for transition from scheduled feedings to semi-demand feeding.
8.4	The neonatal ward breastfeeding protocol states that routine administration of milk after each nutritive sucking at the breast (to attain a certain milk volume) is only performed for acceptable medical reasons.

Criterion step 8 c (mothers)

8.5	At least 80% of randomly selected mothers state that they have received guidance from staff in observing their infants' signs of feeding cues and behavioral state shifts to help determine when it is appropriate to breastfeed.

Criterion step 8 d (review)

8.6	The neonatal ward breastfeeding protocol confirms that medications are administered and procedures are scheduled so as to cause the least possible disturbance to breastfeeding.

Step 9: Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.

Expansion: Use alternatives to bottle feeding at least until breastfeeding is well established, and use pacifiers and nipple shields only for justifiable reasons.

Many preterm infants are not able to fully feed at the breast from birth. Therefore supplementation methods are crucial to facilitate the establishment of breastfeeding.

Comparisons between cup feeding and bottle feeding in preterm infants indicate that cup feeding is associated with higher breastfeeding rates at discharge (202), whereas the use of bottles has been shown to negatively impact breastfeeding success in both full term (116, 203) and preterm infants (204-207). A comparison between late preterm infants who received supplementation with bottles and infants who were cup fed, showed that the rate of breastfeeding was higher in the cup fed group with no increase in duration of hospital stay (208). Bottle feeding is associated with lower temperature, lower oxygen saturation, lower transcutaneous pO2, and higher frequency of desaturations in preterm infants and infants with congenital heart disease, compared to cup feeding and breastfeeding (207, 209-212). Contrary to bottle feeding where jaw and throat feeding movements differ from breastfeeding (213), the same oral muscles are involved in cup feeding and breastfeeding (209).

Cup feeding can be introduced from around 29 weeks postmenstrual age (214). Supplementation by tube feeding during the transition from exclusive tube feeding to exclusive breastfeeding has been shown to increase the amount of preterm infants breastfeeding at hospital discharge (215). Other oral feeding methods, for which evidence of efficacy and safety is lacking, are the use of spoon, paladai, finger-feeding, dropper, syringe feeding and “nursing supplementer”.

It is possible that regimens with frequent feeding of small milk volumes and the use of semi-demand feeding - instead of regulated feeding with fixed volumes and intervals - is the optimal feeding pattern for all preterm and ill term infants. It is also likely that it will reduce the need for supplementation and facilitate the transition to exclusive breastfeeding.

A Cochrane review of randomized control trials found that pacifiers have no impact on breastfeeding in term healthy infants (216), but the use of a pacifier may disturb the normal physiology during breastfeeding establishment if it delays feeds, or decreases time, at the breast. Although the relationship may not be causal, the theoretical strong potential for harm is behind the advice to avoid pacifier use in healthy term infants (217). Nevertheless, the use of pacifiers for infants who require neonatal care can be advocated for several reasons. Non-nutritive sucking gives relief from pain during procedures, reduces stress and anxiety and makes the infant less fussy and more relaxed during tube feeding. A pacifier should therefore be offered when breastfeeding is not possible and when the mother is not available for breastfeeding (217-223). That said, it has been shown that, when establishing breastfeeding in preterm infants, minimizing the use of a pacifier was positively associated with earlier attainment of exclusive breastfeeding (126) and of being exclusively breastfed at discharge (126, 156).

Regarding nipple shields, a Swedish study found shorter duration of breastfeeding (exclusive and non-exclusive) and lower weight gain in infants when they were used, but also found that when the mother was cared for by health professionals that had gone through process-oriented training in breastfeeding counselling, the significant difference in breastfeeding duration and infants' weight gain was eliminated (224).

Two small non-randomized studies have shown that an ultra-thin nipple shield can be helpful for preterm infants as it probably compensates for a weak intra oral pressure, gives a continuous negative pressure that supports milk transfer and stimulates sucking (225, 226). The use of nipple shields did not affect the duration of breastfeeding (defined in this article as giving any breast milk at breast or by other methods, and could include formula in addition to breast milk), although no comparable statistical analyses were done for breastfeeding duration in mother-infant-pairs with or without nipple shield use (226). On the other hand, a large cohort study did not find that mothers' use of ultra-thin nipple shields lead to earlier establishment of exclusive breastfeeding in preterm infants; furthermore, the same study found nipple shield use was associated with a more than double risk of not being exclusively fed at the breast at discharge (126, 156). Whether nipple shield use is negatively associated with breastfeeding may depend on the definitions: exclusively feeding at the breast could be more sensitive to the adverse effects of nipple shield use than non-exclusive feeding at the breast (that is, supplementing with expressed breastmilk/formula) because the nipple shield may not affect the mother's ability to express milk whereas it may affect the infant's ability to continue to breastfeed.

In the Standards and Criteria below, the term "mother/parent" refers to mothers/parents of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

9 a	Bottles are not introduced in the neonatal ward to breastfeeding infants and to infants whose mothers intend to exclusively breastfeed unless the mother explicitly asks for them and has been informed of the risks.
9 b	For preterm and ill infants of mothers who intend to breastfeed, the first nutritive sucking experience should be at the breast.
9 c	Clinical staff use, recommend and teach parents to use oral feeding methods other than bottles**,** until breastfeeding can be established.
9 d	Pacifiers are used in infants admitted to the neonatal ward for justifiable reasons, such as for comforting infants when their mothers are unavailable, or during stressful events, and giving pain relief when the infant cannot suck at the breast.
9 e	Parents are informed about justifiable reasons for use of pacifiers in the neonatal ward, about alternative ways of soothing the infant, and how to minimize pacifier use during breastfeeding establishment.
9 f	Nipple shields should not be used routinely in the neonatal ward. They should only be used after the mother has received skilled support in solving the underlying breastfeeding problem, and after the mother's repeated attempts to breastfeed her infant without the shield. If a nipple shield is introduced, the mother is counselled on how to attempt to discontinue its use.

Criteria step 9 a (observation, mother, clinical staff)

9.1	Observation of the neonatal ward indicates that at least 80% of the infants of mothers who are breastfeeding, or intending to do so, are not using bottles or teats or, if they are, have been informed of the risks.
9.2	At least 80% of randomly selected mothers who are breastfeeding, or intending to do so, report that, as far as they know, their infants have not been fed using bottles with artificial teats (nipples) while cared for in the neonatal ward, unless they explicitly asked for it.
9.3	At least 80% of randomly selected clinical staff report that they do not introduce bottles to breastfeeding infants unless there are justifiable reasons, and when a mother wants to introduce a bottle, they inform her of the risks.

Criterion step 9 b (review)

9.4	The breastfeeding policy states that the first nutritive sucking experience for infants of mothers who intend to breastfeed should be at the breast.

Criteria step 9 c (review, mothers)

9.5	The neonatal ward breastfeeding protocol includes alternative methods to bottle feeding and describe appropriate and safe ways of using these methods.
9.6	At least 80% of randomly selected mothers who are breastfeeding, or intending to do so, report that they were taught how to feed their infants with tube feeding, cup feeding or other oral feeding methods than bottles, if supplementation was required.

Criteria step 9 d (review, clinical staff)

9.7	The neonatal ward breastfeeding protocol describes justifiable reasons for using pacifiers.
9.8	At least 80% of randomly selected clinical staff can describe at least 2 justifiable reasons for using pacifiers in the neonatal ward (pain relief, stimulation of sucking, comforting, helping infants to go to sleep).

Criteria step 9 e (mothers)

9.9	At least 80% of randomly selected breastfeeding mothers report that they were informed about justifiable reasons for use of pacifiers in the neonatal ward and how to minimize the use of pacifiers during breastfeeding establishment.
9.10	At least 80% of randomly selected breastfeeding mothers report that they were informed about alternative ways, other than pacifiers, of soothing their infants.

Criteria step 9 f (review)

9.11	The breastfeeding policy states that nipple shields should not be used routinely in the neonatal ward.
9.12	The neonatal ward breastfeeding protocol describes what conditions should be met before recommending use of a nipple shield: - The mothers have received skilled breastfeeding support in solving the underlying breastfeeding problems. - The breastfeeding problems persist after the mothers' repeated attempts at helping their infants at the breast without a nipple shield. - The mothers have been informed about the risks of using a nipple shield. - The mothers have been informed how to clean the nipple shield. - If the nipple shield is introduced, mothers are counselled on how to attempt to discontinue its use.

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

Expansion: Prepare parents for continued breastfeeding and ensure access to support services/groups after hospital discharge.

All mothers of infants receiving neonatal care, who initiate breastfeeding and/or are expressing their milk, need skilled support and follow-up for lactation and breastfeeding after discharge. The most vulnerable period for breastfeeding preterm/sick infants is the first month after discharge (67). Continued breastfeeding is dependent on many factors: the infant's medical condition, the mother's emotional state and milk production, breastfeeding techniques, and the use of other feeding methods (227). A positive association has been found between mothers' success with feeding their infants directly at the breast in the neonatal ward and provision of breast milk at discharge (102). One way to facilitate lactation for mothers of infants in these wards is through the use of breastfeeding peer counsellors. These counsellors are considered peers by virtue of the shared experience of providing milk for their infants admitted to neonatal wards (228). One Finnish study reported that mothers of preterm infants who participated in breastfeeding support group discussions on social media realized after their infants' discharge that they had overly-optimistic expectations for how successfully they could breastfeed and lacked sufficient knowledge and skills to manage breastfeeding at home (229).

Shorter duration of hospitalization has been found in wards applying family-centered care where parents could stay 24 hours/day from admission to discharge (186) and those using KMC (128). The WHO Practical Guidelines for KMC defines "early infant discharge" as sending the infant home for continued skin-to-skin care by the mother and family members. The recommended timing varies depending on the infant's size, the home environment and access to adequate follow-up (137). Early discharge of infants who are being cared for with continuous skin-to-skin contact according to the KMC method has been associated with shorter duration of hospital stay (with a typical mean difference of 2 days) mainly in resource-limited settings (230). Nevertheless, this model for early discharge should be applied with caution in settings where mothers/substitutes are unable to provide KMC at all hours of the day (137). Furthermore, early discharge of an infant who still needs some tube feeding reduces infant-family separation and may reduce costs, but can also be a burden to the family and render the transition to full oral feeding more complicated (231).

Lack of a program or plan for follow-up and continued support may constitute a serious hazard for infants discharged from an NICU (232). When the infant of a mother who intends to breastfeed exclusively is discharged before this goal is established, support for the attainment of exclusive breastfeeding given by an experienced nurse/professional has been associated with longer breastfeeding and breast milk feeding (233).

There should be a plan, to be adhered to by all professionals involved in an infant's care, for how to make the transition from tube to oral feeding after discharge while promoting and protecting feeding directly at the breast (5). Case reports have demonstrated that access to continued expert lactation and breastfeeding support after discharge gives mothers of infants with complicated surgical conditions opportunities for attaining and maintaining sufficient milk production and for meeting their breastfeeding goals (33).

Preparation of parents for continued breastfeeding after the discharge of their infants from the NICU by professionals in cooperation with peer counsellors has enhanced mothers' motivation to breastfeed their infants (5, 142, 234, 235). A higher prevalence of exclusive breastfeeding in low-weight infants was observed when mothers were supported by peer counsellors following discharge (234). Careful selection and adequate training of peer counsellors and lay volunteers is important so they adhere to defined roles. In addition, effective collaboration between the counsellors or volunteers and the NICU is essential for supporting mothers in achieving their lactation and breastfeeding goals both in the NICU and after discharge (142, 235)

New technologies offer several possibilities for support, such as video-conferences, contact via cell phones, etc., to facilitate early discharge and for follow-up after discharge (236). Support from hospitals by providing mothers of preterm infants with telephone numbers for breastfeeding help can have a positive effect on their continuation of breastfeeding (237).

In the Standards and Criteria below, the term "mother" refers to mothers of infants who are cared for in the neonatal ward, and the term "staff" refers to staff working in the neonatal ward or related areas.

Standards

10 a	Mothers are given information on how and where they can get support if they need help with feeding their babies after returning home.
10 b	The facility fosters the establishment of, and/or coordinates with, mother support groups and other community services that provide breastfeeding/infant feeding support to mothers.
10 c	Hospital discharge for infants who have been cared for in the neonatal ward is planned in collaboration with the family and the community health services.
10 d	When infants of mothers who intend to breastfeed are discharged from the hospital before breastfeeding is established, parents and staff should develop an individuliazed plan as to how mothers can attain their breastfeeding goals.
10 e	The staff encourages mothers and their babies to be seen soon after discharge (individualized according to the infants' conditions) at the facility or in the community by skilled breastfeeding support persons who can assess feeding and give any support needed.

Criteria step10 a (mothers, review, head/director of nursing)

10.1	At least 80% of randomly selected mothers report that they have been given information on how to get help from the facility or how to contact support groups, peer counsellors or other community health services if they have questions about feeding their babies after return home and can describe at least 1 type of help that is available.
10.2	A review of documents indicates that printed information is distributed to mothers before discharge, if appropriate, on how and where they can find help on feeding their infants after returning home and includes information on at least 1 type of help available.
10.3	The head/director of nursing of the neonatal ward states that mothers are given information on where they can get support if they need help with feeding their babies after returning home, and the head/director can also mention at least 1 source of information.

Criterion step 10 b (head/director of nursing)

10.4	The head/director of nursing of the neonatal ward states that the facility fosters the establishment of, and/or coordinates with, mother support groups and other community services that provide breastfeeding/infant feeding support to mothers, and can describe at least 1 way this is done.

Criteria step 10 c (head/director of nursing, mothers)

10.5	The head/director of nursing of the neonatal ward states that hospital discharge for infants who have been cared for in the neonatal ward is planned in collaboration with the community health services and describes how this is done.
10.6	At least 80% of randomly selected mothers report that their infants' hospital discharge is planned in collaboration with their families.

Criterion step 10 d (head/director of nursing)

10.7	The head/director of nursing of the neonatal ward states that there are plans for mothers' establishment of breastfeeding when their infants are discharged from the hospital before they have attained their breastfeeding goals.

Criteria step 10 e (head/director of nursing)

10.8	The head/director of nursing of the neonatal ward states that the staff encourages mothers and their babies to be seen soon after discharge (with plans individualized according to the infants' conditions) at the facility or in the community by skilled breastfeeding support persons who can assess feeding and give any support needed. The head/director can describe an appropriate referral system and adequate timing for the visits.

Compliance with the International Code of Marketing of Breast-milk Substitutes and relevant World Health Assembly resolutions.

The Baby-friendly Hospital Initiative for Neonatal Wards or Neo-BFHI has been formulated in accordance with the WHO International Code of Marketing of Breast-milk Substitutes (50) and the subsequent World Health Assembly resolutions (Code). Hence, in addition to the assessment of the Three General Principles and the Neo-BFHI Ten Steps, compliance with the Code should be assessed as outlined in the 2009 Global Criteria (18).

In neonatal wards extra vigilance regarding violations of the Code may be needed due to a higher level of commercial presence in the ward environment compared to maternity/postpartum units. This can be attributed to preterm and ill infants' special requirement of various types of nutrition and the use of different methods for provision of enteral and oral feeding.

The presence of parents and other family members in the neonatal ward may also constitute a risk for direct information, marketing and gifts by commercial representatives to family members of breast milk substitutes, bottles and other feeding utensils, etc.

The Criteria below refer to the Code as it applies to the neonatal ward and related areas.

The head/director of nursing of the neonatal ward reports that:	
Code 1	No employees of manufacturers or distributors of breast-milk substitutes, bottles, teats or pacifiers have any direct or indirect contact with pregnant women or mothers with infants in neonatal ward.
Code 2	The hospital, including the neonatal ward, does not receive free gifts, non-scientific literature, materials or equipment, money, or support for in-service education or events from manufacturers or distributors of breast-milk substitutes, bottles, teats or pacifiers.
Code 3	No pregnant women at risk of having a preterm or ill infant, mothers or families who have infants who are cared for in the neonatal ward are given marketing materials or samples or gift packs by the facility that include breast-milk substitutes, bottles/teats, pacifiers, other infant feeding equipment or coupons.

A review of the breastfeeding or infant feeding policy indicates that it upholds the Code by prohibiting in the neonatal ward:	
Code 4	The display of posters or other materials provided by manufacturers or distributors of breast-milk substitutes, bottles, teats and dummies or any other materials that promote the use of these products.

Code 5	Any direct or indirect contact between employees of these manufacturers or distributors and pregnant women or mothers.
Code 6	Distribution of samples or gift packs with breast-milk substitutes, bottles or teats, or of marketing materials for these products to pregnant women or mothers or members of their families.
Code 7	Acceptance of free gifts including food, literature, materials or equipment, money or support for in-service education or events from these manufacturers or distributors by the hospital.
Code 8	Demonstrations of preparation of infant formula for anyone who does not need them.
Code 9	Acceptance of free or low cost breast-milk substitutes or supplies.

A review of records and receipts indicates that:	
Code 10	Any breast-milk substitutes, including special formulas and other supplies used for preterm and ill infants cared for in the neonatal ward are purchased by the health care facility for the wholesale price or more.

Observation of the neonatal ward indicates that:	
Code 11	No materials that promote breast-milk substitutes, bottles, teats or dummies, or other designated products as per national laws, are displayed or distributed to pregnant women, mothers, members of their families or staff.

Observation of the neonatal ward indicates that:	
Code 12	Infant formula cans and pre-prepared bottles of formula are kept out of view unless in use.

At least 80% of the randomly selected clinical staff members can give 2 reasons why:	
Code 13	It is important not to give free samples from formula companies to mothers.

At least 80% of the randomly selected mothers report that:	
Code 14	They were not given any marketing materials or samples or gift packs by the facility that include breast-milk substitutes, bottles/teats, pacifiers, other infant feeding equipment or coupons.

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