Step 6

Give breastfed newborn infants no food or drink other than breastmilk unless medically indicated.

Objectives

1. Ensure—to the extent possible—that only breastmilk is given to breastfeeding babies unless:
   - There is a recognized clinical indication, the baby is unable to breastfeed or there is not breastmilk available.
   - The mother has made a fully informed choice to feed her infant other than by direct breastfeeding and other than with breastmilk.
2. Protect parents against display, distribution or promotion of infant food or drink other than breastmilk.

Step 6

Goal: to assure that breastfed infants are fed only breastmilk during the entire hospital stay, receiving no other food or drink unless medical indications for supplementation exist. Further, to assure that parents are protected against display, distribution or promotion of infant food or drink besides breastmilk.

Background

Many maternity units routinely offer formula, water or glucose water to newborns, either prior to the first breastfeed (prelacteal feeds) or in addition to breastfeeding (supplemental feeds). One reason for this practice has been the perception that it reduces jaundice or prevents hypoglycemia. However, scientific literature and professional healthcare guidelines do not support supplementation, as these practices are associated with early breastfeeding cessation.

Recommended strategies to avoid hypoglycemia, jaundice and dehydration include:

- Encouraging early and continuous skin-to-skin contact.
- Encouraging early and frequent breastfeeding.
- Rooming-in to facilitate frequent feeding.
- Encouraging milk expression and cup-feeding as an expressed-breastmilk supplement after direct breastfeeding for weak or sleepy babies.
- Assessing babies frequently in the first few days to ensure that they are learning to suckle well.

Other reasons given for supplementing breastmilk in the early days of a baby's life are to help settle a baby, to ensure adequate feeding for a particularly sleepy baby or a baby who is having difficulty with latching, to address perceptions that a baby's thirst or hunger is not relieved by breastfeeding, or because a mother is ill or needs rest.

In addition, some communities have cultural beliefs that colostrum is bad or insufficient for their infants or that ritual prelacteal feeds are needed to condition the infant's gut. However, prelacteal and supplemental feeds interfere with establishment of milk supply, increase the risk of breast engorgement and lactation failure and increase the infant's risk of infection.

In addition to offering inappropriate or unnecessary prelacteal or supplemental feeds, facilities sometimes offer families commercial samples of and literature about breastmilk substitutes during pregnancy or upon discharge from the hospital. Giving these free samples—which may contain bottles, formula samples, artificial nipples or pacifiers and formula advertisements and coupons—increases the likelihood that families will use

these products. This practice is neither in keeping with the *Code* nor does it support the goals of *Step 6*.

As the American Academy of Pediatrics states, "exclusive breastfeeding is the reference or normative model against which all alternative feeding methods must be measured with regard to growth, health, development, and all other short- and long-term outcomes."[1] Exclusive breastfeeding means the infant receives no supplementary feedings—that is, no foods, fluids or nutrients other than breastmilk, with the exception of vitamins, minerals and medications that have been prescribed for medical reasons. Human milk provides all the nutrients and fluids necessary to promote optimal development and growth for human infants for the first six months of life.[1–4]

- No food or drink other than breastmilk should be given to breastfed babies unless one or more of the following is the case:
  - There in an acceptable clinical reason the baby is unable to receive breastmilk or requires a supplement to breastmilk, and an appropriately trained physician or advanced practice nurse has made this determination, fully discussed reasons for supplementation with the infant's parents and documented the reasons in the medical record.
  - The mother has been encouraged to express breastmilk.
  - There is no (or insufficient amounts of) expressed breastmilk or banked donor milk available for supplementation.
  - Parents who request supplementation are made aware of risks of formula-feeding and the impact that supplementation may have on subsequent breastfeeding, and the discussion is documented in the medical record.
  - The mother has made a fully informed choice to feed her baby through methods other than directly from the breast and with sustenance other than breastmilk.
- No promotion for infant food or drink other than breastmilk should be displayed or distributed to families or staff in the facility. The facility purchases infant formula and feeding devices in the same manner in which other food and supplies are purchased.

Why Step 6?

Extensive research and global professional consensus conclude that breastfeeding provides optimal infant nutrition and that no food or drink other than human breastmilk is required or should be provided for the first six months of life. Appropriate iron-rich foods should be added to the infant's diet to complement breastfeeding (complementary foods) at six months, with breastmilk continuing to provide the primary source of nutrition for the first one to two years of life and beyond, for as long as desired by mother and infant.[5–24] There is no terminal age at which breastfeeding ceases to benefit the child.[6, 11]

It is expected that healthcare professionals will promote exclusive breastfeeding for the first six months of life and will not recommend supplementary or replacement feedings unless there is a recognized medical indication, as determined and ordered by a trained medical professional. Supplementary feedings, for medical indication or upon parental request, should only occur within the context of a fully informed decision by the mother.

Carrying out *Step 6* benefits your facility by enhancing:

1. **Safety:** Unless a medical indication exists for supplemental feedings, breastfeeding is the safest form of infant feeding. Breastfeeding provides species-specific nutrition that contains nutrients and immune factors specific to the needs of each infant. When feeding occurs on-demand and is infant-led, it occurs at the right time and in the right amount for the infant.

   Exclusive breastfeeding conveys significant health benefits[25–27] and ensures avoidance of alternate forms of nutrition, which are documented to pose significant health risks.[28–36] Breastmilk substitutes also may be impacted by manufacturing errors,[37] contamination by bacteria or environmental pollutants,[38–41] and unsafe handling and misuse.[42–46]

   In a natural or man-made emergency, supplies of infant formula may be diminished or inaccessible. Safe water for reconstitution of infant formula may be scarce or completely unavailable, and methods to sterilize water, bottles and artificial nipples may also be inadequate. Mother's milk may be the only safe food available for infants during emergencies and may be life-saving in dire situations.[47, 48]

2. **Effectiveness:** The adequacy, sufficiency and optimal duration of exclusive breastfeeding is well established.[11, 24, 49, 50] Additional fluids are not needed, even in hot climates.[51–54] Studies have shown that infants who are allowed to regulate their own intake receive gradually increasing amounts of colostrum, and then mature milk, to meet their needs.[55–57] Exclusive breastmilk feeding during the newborn's entire hospital stay is a National Quality Forum-endorsed voluntary consensus standard for hospital care and has been adopted by the Joint Commission as one of five core measures for perinatal care. Eliminating non-medically indicated supplemental feedings for the breastfed infant increases the frequency and effectiveness of breastfeeding, ensures timely establishment of an abundant milk supply, reduces the risk of engorgement, and improves maternal and infant health outcomes.

3. **Patient-centeredness:** Promoting and supporting exclusive breastfeeding in the context of informed decision-making helps women to confidently work toward achieving their own breastfeeding goals. Eliminating non-medically indicated supplemental feedings removes unnecessary barriers to the establishment and continuation of breastfeeding.

4. **Timeliness:** Use of artificial feedings requires delays in responding to an infant's early hunger cues. The feeding product and feeding system have to be obtained, distributed, and delivered. Additionally, handling and preparation are required prior to the feeding. In contrast, exclusive breastfeeding ensures timely infant feeding as long as mothers and infants are kept together in continuous close proximity (e.g., rooming-in, *Step 7*) and mothers are instructed in the principles of feeding on-demand (*Step 8*).

5. **Efficiency:** Avoiding supplemental feedings for newborns and eliminating distribution of formula sample packs frees up facility resources and reduces:
   - Staff time spent stocking, logging, maintaining and distributing breastmilk substitutes and feeding supplies.
   - Expenditures on bottles, nipples, breastmilk substitutes, sterile water and/or glucose water.
   - Space required for storage of formula, nipples, bottles and discharge packs.
   - Amount of waste generated.
   - Conflict of interest, ethical and liability concerns related to accepting, maintaining or distributing commercial discharge packs, or other commercial marketing materials.

6. **Equity:** Promoting exclusive breastfeeding can help to significantly reduce disparities in health outcomes. Breastfeeding allows all infants access to the same quality of nutrition and immune protection, regardless of social and economic resources. In addition, the risk for diseases and conditions disproportionally impacting low-income and minority populations is greatly reduced by exclusive breastfeeding.

Evidence for Efficacy

Supports Duration and Exclusivity of Breastfeeding and Avoids Early Weaning

- Supplementation negatively impacts breastfeeding duration and subsequent exclusivity, regardless of what method (cup or bottle) is used to deliver the supplemental feedings.[58]
- Prelacteal feeds are associated with a greater likelihood of never breastfeeding, delayed breastfeeding initiation, higher rates of subsequent supplementation and early weaning.[59, 60]
- Routine formula supplementation in the hospital decreases duration and subsequent exclusivity of breastfeeding.[61–73] Hospital routines significantly impact the rate of formula supplementation. For example, a recent study demonstrated that the time infants are most likely to receive a supplement is between 7 p.m. and 9 a.m., regardless of the time of birth.[74]
- In-hospital supplementation is a risk factor for early weaning, independent of maternal intentions, with breastfeeding ending before mothers are able to achieve their own breastfeeding goals.[66, 75, 76]
- One large study in a low-income urban population in the United Kingdom found that supplementary feedings during the hospital stay were associated with a tenfold increase in the odds of giving up breastfeeding by time of discharge. Further, the study found that infants not breastfeeding at hospital discharge had 50 percent more family doctor contacts up to four months of age.[77]
- Commercial discharge packs provided by hospitals shorten the duration of exclusive breastfeeding.[78, 79]

Reduces the Risk of Developing Breastfeeding Problems

- One study found that infants who receive formula or pacifiers in the first days of life, regardless of how well they nursed, were three times more likely to have problems breastfeeding by the third through seventh days.[80]
- The "supply and demand" mechanism of milk production can be disrupted when babies receive supplemental feeds, ultimately reducing milk production overall.[81, 82]
- The sharpest decline in breastfeeding rates occurs within the first couple of weeks postpartum, with insufficient milk production and problems with latch and attachment the most commonly cited reasons for early weaning.[83–85]

Supports Optimal Health Outcomes for Mother and Baby

- Exclusive and continued breastfeeding is associated with improved short- and long-term health outcomes for infants and their mothers.[23, 26, 86]
- One control study found that infants who were exclusively breastfed in the hospital lost more birth weight (6.4 percent vs. 4.6 percent) initially but took in greater volumes of breastmilk and regained birth weight more quickly than breastfed infants who received routine supplementation in the hospital. In addition, exclusively breastfed infants were breastfed significantly longer than infants who received routine in-hospital formula supplementation.[62]
- There are significant risks associated with the use of breastmilk substitutes,[87] including increased risk of diabetes,[88] cow's milk intolerance and allergy,[89–91] and infection,[25, 26, 92–103] including diarrhea, neonatal sepsis and meningitis. Supplemental feedings can also cause reactive hypoglycemia.[31] Additional risks associated with the use of infant formula include manufacturing errors, mixing mistakes and contamination during preparation. [42-46, 103-105]
- For newborns, providing any supplementation disrupts a major benefit of breastfeeding—the development of immunological mechanisms through intake of the mother's colostrum.[34, 106–127]

Empowers Mothers to Breastfeed Confidently

- One research study indicates that the reason for supplementation may impact subsequent outcomes, with better long-term success of breastfeeding occurring if supplementation was for a medical indication. This finding suggests that routine supplementation in the hospital for non-medical reasons may impact maternal confidence.[65]
- Supplementation by hospital staff to settle a crying baby may reduce the mother's breastfeeding confidence. Furthermore, supplementation by hospital staff can establish a precedent for continued supplementation for settling the baby when the mother is discharged home.[128]
- A mother's lack of confidence in her ability to breastfeed at day one or two postpartum is significantly associated with breastfeeding cessation by two weeks postpartum.[83]

Saves Money, Resources and Lives

- If the U.S. six-month exclusive breastfeeding rate could increase from current levels to 90 percent, the U.S. would annually save $13 billion and prevent more than 900 excess deaths, nearly all of which would be in infants ($10.5 billion and 741 deaths per year at 80 percent compliance).[28]

Implementation Strategy

Preparation: Getting Ready to Support Exclusive Breastfeeding

Action steps for implementing *Step 6* include:

1. Collecting and examining a variety of data in your facility about the incidence and context of supplementation:
   - When, why and how is supplementation being used? What are the patterns and trends over time? What might be the contributing factors?
   - Assess staff and patient attitudes and beliefs related to infant feeding in general and exclusive breastmilk-feeding specifically.
   - Examine your physical environment for the display and marketing of breastmilk substitutes (e.g., the California Perinatal Quality Care Collaborative scavenger hunt available in the Resource section of this Step) or other physical constraints to the promotion of exclusive breastfeeding.

2. Assembling a literature review committee. Include medical staff and staff from your hospital ethics committee. Address issues such as risk management and quality improvement. Review and collect information about the following:
   - The sufficiency and benefits of exclusive breastfeeding.
   - The properties of human milk.
   - The risks of breastmilk substitutes.
   - Contraindications to breastfeeding and indications for supplementary feedings.
   - WHO International Code of Marketing for Breastmilk Substitutes.
   - The impact of formula promotion or formula discharge packs by healthcare providers.

3. Examining policies concerning the use of breastmilk substitutes, including hypoglycemia, jaundice and "reluctant feeder" policies or protocols. Be sure that policies align with the WHO/UNICEF list of "acceptable medical reasons for supplementation."

4. Verifying that your facility has put into place the steps that support exclusive breastfeeding, including steps that:
   - Reduce separation of mother and baby and support responsiveness to the infant's hunger cues (*Steps 4, 7, 8* and *9*) so that breastfeeding frequency and effectiveness are maximized.
   - Increase competency with breastfeeding skills for staff and parents (*Steps 2, 3* and *5*).

   To build support for the establishment of an abundant milk supply, educate staff about how these steps work together.

5. Allocating budget and staff time for training.

6. Promoting and marketing the training of knowledge and skills as well as their application. This initiative should be carried out by using key staff members and a hospital-wide communications strategy (e.g., Star Achiever posters promoting your facility's implementation of the *Ten Steps).*

The American Academy of Pediatrics and American College of Obstetricians and Gynecologists *Guidelines for Perinatal Care*[129] and the Academy for Breastfeeding Medicine *Guidelines for Supplementing Feedings in Healthy*[130] *and Hypoglycemic*[131] neonates each recommend against routine supplementation with formula, glucose water or water.

Implementation: Best Practices for Success

Put Breastfeeding Support in Place Before Eliminating Supplements

The success of promoting exclusive breastfeeding and avoiding supplementation is interdependent with the success of most of the other steps outlined in this program. If the other steps are not fully and successfully implemented, there is a much greater likelihood that inappropriate supplementation will occur.

It is tempting to make *Step 6* the first step to tackle, both because it is among the most highly visible and measured hospital breastfeeding indicator and because it is the only measure assessed by the Joint Commission. However, neglecting other steps and addressing only *Step 6* would pose critical risks to mothers and babies. To avoid compromising infant safety, policies and training must first be in place to adequately support breastfeeding, thereby reducing reliance on and need for supplemental feedings.

Step 1: A written and communicated breastfeeding policy that addresses all of the *Ten Steps* and the *Code* provide the foundation for all other actions, including implementation of *Step 6*.

Step 2: The importance of staff training cannot be overstated. Staff should have confidence and some experience with supporting normal infant feeding. It is essential that staff have the necessary skills to help families prevent or resolve breastfeeding difficulties without resorting to supplementation. Staff education should include information on the health implications of inappropriate supplementation and training on how to support optimal breastfeeding.

Step 3: Parents who receive prenatal education about the risks of supplemental feedings and the importance of exclusive breastfeeding are less likely to expect or request formula in the hospital and are better equipped to successfully breastfeed. For example, one study found that babies of mothers who received no prenatal breastfeeding instruction were nearly five times more likely to be given formula than babies whose mothers had attended a breastfeeding class.[132]

Step 4: Placing and keeping infants in skin-to-skin contact with their mothers immediately after birth ensures that the majority of babies have an early, effective breastfeeding, paving the way for successful breastfeeding throughout the hospital stay. One study found that infants who were breastfed in the first hour of life were "protected" from the use of a formula supplement for up to ten hours of age.[74]

Step 5: Staff who are trained and highly skilled in teaching mothers positioning, attachment and hand expression will increase the odds that breastfeeding will be effective, reducing the need for supplements.

Steps 7 and 8: When rooming-in and demand-feeding are encouraged and facilitated, timely breastfeeding occurs in response to infant needs, and supplemental feedings are less likely to occur.

Step 9: When artificial nipples and pacifiers are discouraged, frequent and effective breastfeeding is more likely to occur, and supplemental feedings are more likely to be avoided.

Inform Families of the Risks of Formula Supplementation —Especially in the Early Days Before Milk Supply Is Established—and Suggest Alternatives to Supplementation

It is not uncommon for mothers to ask for supplements to soothe a fussy newborn, either because they believe their milk supply is inadequate or because they are having difficulty breastfeeding. While staff must be responsive to the mother's requests, it is also the responsibility of facility staff to thoroughly inform her and her family about the risks of and alternatives to supplementation. Families will be best prepared to make informed decisions about infant feeding—thus avoiding unnecessary supplementation—if they receive reassurance about what to expect in the first days of their baby's life and assistance with breastfeeding positioning and technique.

DISPENSING FORMULA SAFELY

Tracking the dispensing of formula is a significant safety issue. Records should be maintained documenting lot numbers for all formula distributed so that there is adequate documentation in the event of a recall. This includes formula used on the ward and any formula distributed to patients for their use after discharge.

Counsel mothers who plan to feed their infants both breastmilk and infant formula to delay the introduction of formula until the breastfeeding process is well-established. Inform the breastfeeding mother that even if she chooses to use supplementation, her breastmilk will continue to benefit her infant and will enhance her own health during the period of complementary feeding and for as long as she and her baby want to continue breastfeeding. Inform all mothers that solid foods and other drinks should not be introduced before age six months.

Protect At-Risk Babies from Unnecessary Supplementation

Sound policies and clear protocols for "infants of concern" (e.g., preterm or early-term infants, infants with hypoglycemia, jaundice or excessive weight loss, and other "reluctant feeders") are necessary in order to determine appropriate indications for supplemental feedings and appropriate management for maximizing breastfeeding and minimizing risk. Proactive management, including teaching all mothers hand expression, can be very effective in reducing supplementation rates.

Provide Supplementation Only When Medically Indicated

Breastfed infants should be given only breastmilk unless specifically ordered by a healthcare provider because of a medical indication and only with the mother's informed consent.

- Educate staff about the short- and long-term risks of supplementation and about how to educate parents about supplemental feeding so they can make an informed choice before consenting. Consent given for a supplemental feeding does not imply consent for use of bottles or artificial nipples.
- When supplemental feedings are given, the feeding volume should not exceed the physiologic capacity of the newborn stomach. In the first few days of life, volumes of under 20cc should be given at each feeding.[132, 135] (See *Newborns' Stomach Capacity* in this Step's Resources section.)
- When supplementation is medically indicated, the infant's nutritional status should be continually assessed, and breastmilk should be used whenever possible.
- Be sure that staff understand it is important both to avoid supplementing breastmilk with any other food (e.g., formula) and to avoid using a pacifier to soothe the baby during the infant's hospital stay. All of a healthy newborn's sucking needs should be met at the breast.

If a Supplement Is Indicated, What Type of Supplement Should Be Used?

The first choice for infant feeding is always the mother's own milk directly from the breast. If this choice is not possible, the following list presents choices for supplementation, from the most desirable choice to the least:

- The baby's own mother's milk expressed and fed to the baby by cup, tube or bottle.
- Breastmilk from a milk bank. In the U.S., milk banks meeting the standards of the Human Milk Banking

Association of North America carefully and extensively screen donors, and the milk is pasteurized and tested for microorganisms. It is made available by prescription for ill or at-risk babies.

- If no banked donor milk is available, formula is the next choice. Infant formula is another animal's milk or a soy-bean based formulation that has been processed for consumption by human babies. All infant formulas are similar to each other and must meet the same minimal nutritional standards set by the U.S. Food and Drug Administration.

Also see *WHO/UNICEF Acceptable Medical Reasons for Use of Breastmilk Substitutes and the Academy of Breastfeeding Medicine's Clinical Protocol #3: ABM Clinical Protocol Number 3—Hospital Guidelines for the Use of Supplementary Feedings in the Healthy Term Breastfed Neonate.* Both are listed in the Resources section of this Step.

Overcoming Barriers: Strategies for Success

The most common concerns related to implementing *Step 6* are detailed below, along with strategies for overcoming them (adapted, in part, from the documents listed as *General References* after the Notes section at the end of this Step).

1. **Hospital routinely gives supplemental feedings, regardless of acceptable medical indication.** Whether out of convenience or routine, it is common for facilities to give breastfeeding newborns supplemental feedings—even when supplementation is not medically indicated. Misinformation and incomplete knowledge about breastfeeding and lactation physiology may result in staff hesitance to fully back a policy that supports exclusive breastfeeding. In addition, some personnel may believe that the resources required to support exclusive breastfeeding are too expensive and time-consuming.

   To mitigate these concerns:

   - Create a team to review and assess current and new professional policy and position statements about breastmilk supplements.
   - Ensure that the other steps, which support exclusive breastfeeding, on-demand-feeding and rooming-in, are successfully in place.
   - Provide focused trainings on breastfeeding-specific issues such as lactation physiology, how to support breastfeeding in the first 24 hours, understanding proper use of supplements, etc.
   - Emphasize the cost-savings associated with minimizing the supplies and resources dedicated to supplementation.
   - Highlight health benefits to neonates and the associated savings to facilities that support exclusive breastfeeding.

2. **Misconceptions about when breastfeeding is not possible or indicated.** Often staff and families misunderstand the relatively rare circumstances in which a mother who wishes to breastfeed her infant cannot do so. To overcome this barrier, facility staff should both understand these circumstances and be skilled in helping families to manage the feeding plans for their infants.

   Sometimes an infant's mother cannot or should not breastfeed or provide her own breastmilk. If this is a possibility, it should first be confirmed with a physician, advanced practice nurse or pharmacist that the mother's milk should not be used or could not be expressed for her baby and fed with an alternate method. If so, donor breastmilk should be sought before considering breastmilk substitutes. Consider also whether a replacement for the mother's own milk may be only temporary. If this is the case, be sure to support the mother who wants to produce milk and maintain her milk supply.

   To help support breastfeeding mothers who may require medication, it is good practice to have the facility pharmacist compile a resource list of drugs known to be compatible and incompatible with breastfeeding.

POTENTIAL BARRIERS TO BREASTFEEDING AND RECOMMENDED SOLUTIONS

If the mother	Then
Is deceased or away from baby	• Seek banked donor human milk.
Is weak or ill	• Explain the benefits of continuing to breastfeed during illness. • Maintain close contact through skin-to-skin and rooming-in. • Assist mother with comfortable positioning. • Provide extra breastfeeding support as needed during and after the mother's illness to ensure establishment and maintenance of milk supply.
Is ill with infections such as flu, GI infection, respiratory infection, bacterial infection, mastitis, Hepatitis B, etc.	• Encourage her to breastfeed as usual and to consume extra fluids to stay hydrated. These illnesses are not contraindications for breastfeeding. • MOST medications are safe for nursing mothers. However, a small number of medications are not compatible with breastfeeding. Check medications in a current lactational pharmacology drug reference manual, and select the medication with the lowest-risk profile. Observe the infant for side effects such as drowsiness and adjust medications as necessary to allow breastfeeding to continue. • Facility staff should have knowledge and resources to determine medications and treatments compatible with breastfeeding.
Has been using tobacco or alcohol	• Encourage her to breastfeed as usual while educating and supporting her to minimize any substance use that will harm her baby.
Is infected with HIV	• She should avoid all breastfeeding. HIV is considered a contraindication to breastfeeding in the U.S. Seek donor breastmilk for her infant.
Is an IV drug user	• Breastfeeding is not indicated. Seek donor breastmilk for her infant.
If the infant	**Then**
Is weak, premature, ill, has low birth weight, sucking difficulties or oral anomalies	• Give the baby expressed breastmilk if nursing at the mothers' breast is not an option. Feeding by cup, spoon or tube may be helpful. • Feedings that include calorie-rich hindmilk are particularly valuable for premature and low-birth-weight babies.
Is dehydrated	• Assess the reason for dehydration. • If the infant is otherwise healthy, assess feeding to assure adequate milk exchange. If additional feedings are needed, use expressed breastmilk. • Dehydration can be avoided with twice-daily assessments of feedings and the provision of skilled lactation support.
Has a metabolic disorder such as galactosemia or phenylketonuria	• The baby will need an individualized feeding plan, which may require partial supplementation or full replacement of breastmilk with formulas made specifically for the baby's needs.

3. **Belief that the mother's milk is not sufficient or that prelacteal feedings are necessary.** Some families and healthcare providers believe that newborns need prelacteal feedings or supplements before the mother's milk "comes in." This practice displaces species-specific nutrition and immune protection and potentially exposes infants to pathogens and allergens. Providing prelacteal feedings or non-indicated supplements also puts mother-baby dyads on a path toward failure to breastfeed. Unnecessary use of supplements not only deemphasizes the value of colostrum and reduces a mother's confidence in her body's ability to meet her infant's nutritional needs through exclusive breastfeeding but also misleads families with inaccurate information about what their babies' nutritional needs are.

   Families and staff should be taught that:

   - Effective breastfeeding leads to sufficient milk production.
   - Even malnourished mothers produce enough milk for their infants, provided that feeding is available on-demand.
   - Newborns need colostrum in the early hours of life, rather than supplements or other milk. (Provide information about the benefits of colostrum and about normal infant weight changes in the first week of life.)
   - Infant stomach capacity is very small.
   - Supplements are only indicated in a few circumstances, and many common challenges, such as a baby's fussiness, do not indicate the need for supplementation.

   Promote the importance of colostrum, and ensure that mothers receive breastfeeding support and instruction to recognize effective feeding so that they do not feel a need to provide supplemental feedings. Provide staff with training, role-playing opportunities, case studies and scripts to help them in counseling mothers who request supplements. Even when cultural preferences exist, effective policies and training can address cultural constraints and significantly increase exclusive breastmilk-feeding in the hospital.

4. **Concern that exclusive breastfeeding may lead to dehydration or hypoglycemia.** In healthy neonates, hypernatremic dehydration or hypoglycemia typically result from underfeeding. Assessment by trained staff twice daily for the first 48 hours will detect feeding difficulties and prevent healthy babies from developing these conditions. Increasing staff knowledge (through training and/or staff-conducted literature reviews) about the adequacy and sufficiency of exclusive

SUPPLEMENTAL "TOP-OFFS": HELPFUL OR NOT?

A supplemental "top-off" to help settle a baby undermines the mother's confidence in nursing and caring for her baby. Help her to distinguish between hunger cues and fussiness for other reasons. Teach her ways to calm a fussy baby, such as skin-to-skin contact and rocking.

REASONS TO AVOID SUPPLEMENTS

Supplements may:

- Replace optimal species-specific nutrition and immune protection.
- Introduce harmful microbes or allergens to the infant.
- Create nipple confusion or flow if received via bottles.
- Result in engorgement of the mother's breasts.
- Interfere with establishing milk supply.
- Reduce milk supply.
- Reduce breastfeeding duration.
- Add unnecessary cost to infant feeding.
- Undermine the mother's confidence in breastfeeding and in her infant-care skills.

breastfeeding and increasing staff skills for providing effective breastfeeding support and assessment can increase staff confidence and reduce reliance on supplements. Staff should also be aware that if additional feeding is indicated for a baby at risk for dehydration or hypoglycemia, direct breastfeeding can be supplemented with expressed milk.

5. **Commercial influences and perceived high value of formula samples and discharge packs**. Facility staff, patients and their families may be influenced by commercial marketing or may feel that patients will be denied an expected gift if a commercial discharge pack or other samples are not available.
   - Consider offering a facility-sponsored discharge pack that contains items promoting breastfeeding that are in compliance with the *Code*, such as free breastfeeding materials from the Texas Department of State Health Services. Note that a discharge pack is not required.
   - Unless indicated, keep breastmilk substitutes out of patient rooms as well as out of patient-care and public areas.
   - Assess your facility for marketing materials and displays of formula.
   - Limit the physical access that sales representatives and vendor educators have to patient-care areas.
   - Implement policies to bring the facility and staff into compliance with the *Code*.

BREASTFEEDING FOR ILL MOTHERS

An ill or weak mother can typically continue breastfeeding, which benefits both herself and her baby in the following ways:

- The antibodies she produces in response to illness are provided to her baby through the breastmilk.
- She will avoid side effects of abrupt weaning, such as possible sore breasts or a fever.
- She will avoid the baby's signs of distress (e.g. crying) that may develop if breastfeeding ceases abruptly.
- Milk production will be maintained.
- The baby will not be exposed to the health risks associated with supplemental feedings.
- Breastfeeding is easier for the mother to maintain than supplemental feedings since she can remain in bed and does not need to clean and prepare bottles.
- Mother and baby may maintain skin-to-skin contact and rooming-in.

Some mothers, especially those with a chronic illness or recovering from a complicated delivery, may need additional support to establish and maintain breastfeeding.

6. **Mothers request supplements for their infants**. A mother's request for supplements is often tied to difficulties with breastfeeding or with adjusting to the new baby. Strong support and education practices by facility staff can help families avoid supplementing their infants' diets.

   Due to the established risks and downsides of supplementation discussed elsewhere in this Step, it is well worth the staff's time to help mothers overcome difficulties with breastfeeding. Furthermore, prenatal breastfeeding education *(Step 3)* gives parents an early start on preventing breastfeeding challenges and prepares them to make fully informed decisions about infant nutrition.

Evaluating Success

Use the information in this section and the additional tools provided in the Additional Resource Documents section at the back of this toolkit as checkpoints to verify that you are successfully implementing *Step 6*. Assign one or two staff members with the best perspective on day-to-day operations to complete these checkpoints.

- **Process changes.** When evaluating your facility's success in implementing *Step 6*, consider the following:
  - Number of policy changes related to supplemental feedings.
  - Number of physical changes to display or distribution of formula.
  - Number of other steps that are known to impact exclusive breastfeeding that have already been implemented.

  Facility management should use the included *Step 6* Action Plan to assess progress on this Step.
- **Impact on patient experience.** Your facility should track data about exclusive breastfeeding and supplementation of breastfed babies. Data to track include:
  - Exclusive breastfeeding rate during hospital stay.
  - Proportion of breastfed babies receiving supplemental feedings.
  - Proportion of babies receiving prelacteal feedings.
  - Differences in exclusive breastfeeding, supplementation and prelacteal feeding rates among different sub-populations (e.g., race/ethnicity, age, income, Cesarean vs. vaginal delivery).
- **Assessing value to the facility**. Use the Facility Impact chart to assess how the recommended measures have affected your facility and to assess cost savings that may be attributed to the changes made.

Resources

Staff Handout

- WHO/UNICEF Acceptable Medical Reasons for Use of Breastmilk Substitutes: www.who.int/maternal_child_adolescent/documents/WHO_FCH_CAH_09.01/en/index.html
- California Perinatal Quality Care Collaborative. Office and Hospital Marketing Materials Scavenger Hunt. Appendix 4I of Nutritional Care of the VLBW Infant Toolkit (Revised 2008): www.cpqcc.org/quality_improvement/qi_toolkits/nutritional_support_of_the_vlbw_infant_rev_december_2008
- Relevant resources from the California Department of Public Health Model Hospital Policy Recommendations Online Toolkit:
  - Multiple resources related to *Step 6*, including educational handouts and informed consent forms for supplementation: www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Pages/BFP-MdlHospToolkitPolicy8.aspx
  - Additional resources, including patient handouts: www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Pages/BFP-MdlHospToolkitPolicy4.aspx
- Scripts for mothers who have decided to combination feed and mothers who are supplementing for medical reasons, from Stanford School of Medicine: newborns.stanford.edu/Breastfeeding/PMGs.html#supplemented

- Outcomes of Breastfeeding vs. Formula Feeding (literature review), by Ginna Wall, MN, IBCLC : www.llli.org/cbi/Biospec.htm
- Fact Sheet: "Just One Bottle Won't Hurt"—or Will It? : Supplementation of the Breastfed Baby by Marsha Walker: www.health-e-learning.com/articles/JustOneBottle.pdf
- Breastfeeding: Baby's First Immunization Poster, American Academy of Pediatrics Childhood Immunization Support Program and Breastfeeding Promotion in Physicians' Office Practices Program, Phase III, 2007 (available from the AAP Curriculum Resource Guide: www.aap.org/breastfeeding/curriculum/references_resources.html): www.aap.org/breastfeeding/curriculum/documents/pdf/BFIZPoster.pdf

Patient Handouts

- From TX Department of State Health Services WIC—Colostrum fact sheet:
  English: www.onlineordersff.com/images/pdfs/6557.pdf
  Spanish: www.onlineordersff.com/images/pdfs/7836.pdf
  To order copies free of charge, visit: www.dshs.state.tx.us/wichd/WICCatalog/contents.shtm
- From California Department of State Health Services WIC—How does formula compare to breastmilk?: www.cdph.ca.gov/programs/breastfeeding/Documents/MO-HowDoesForWAFBF-Eng.pdf
- Flyers and Brochures from the Breastfeeding Task Force of Greater Los Angeles: http://www.breastfeedingtaskforla.org/resources/for-parents/91-flyers-and-brochures
- From Massachusetts Breastfeeding Coalition ("Both Breast and Bottle? No!"): massbreastfeeding.org/index.php/handouts/

Implementing TJC Core Measure on Exclusive Breastmilk Feeding

- The United States Breastfeeding Committee's guidance on implementing the Joint Commission measure: www.usbreastfeeding.org/AboutUs/PublicationsPositionStatements/tabid/70/Default.aspx

Lactational Pharmacology References

- Infant Risk Center, Texas Tech University: www.infantrisk.com/
- Hale T. (2012) *Medications and Mother's Milk*. Hale Publishing, L.P.: Amarillo, TX.
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- National Library of Medicine. LactMed: Drugs and Lactation Database: www.toxnet.nlm.nih.gov

Newborns' Stomach Capacity

- The Size of a Newborn's Belly, Texas Department of State Health Services: www.dshs.state.tx.us/wichd/lactate/TTSteppercent20Newsletter/pdf/BellyBalls.pdf
- Stomach capacity references from the California Department of Public Health: www.cdph.ca.gov/programs/breastfeeding/Documents/MO-StomachCapacityReferences.doc

Human Milk Banking

- Human Milk Banking Association of North America: www.hmbana.org/
- Mothers' Milk Bank at Austin: www.milkbank.org
- Mothers' Milk Bank of North Texas: www.texasmilkbank.org

Position Statements and Protocols

- Academy of Breastfeeding Medicine: *Clinical Protocol #1: Guidelines for Glucose Monitoring and Treatment of*

Hypoglycemia in Term Breastfeeding Neonates. Lenexa, KS: The Academy of Breastfeeding Medicine Protocol Committee, 2006.

- Academy of Breastfeeding Medicine: *Clinical Protocol #3: ABM Clinical Protocol Number 3—Hospital Guidelines for the Use of Supplementary Feedings in the Healthy Term Breastfed Neonate*. Lenexa, KS: The Academy of Breastfeeding Medicine Protocol Committee, 2009.
- American Academy of Pediatrics. Breastfeeding and the use of human milk. *Pediatrics* 100 (6): 1035–39, 1997.
- American Academy of Pediatrics: Management of Hyperbilirubinemia in the Newborn Infant 35 or More Weeks of Gestation. *Pediatrics* 114 (1) :297–316, 2004.
- World Health Organization. *Hypoglycemia of the Newborn: Review of the Literature*. Geneva: World Health Organization: WHO/CHD 97.1,1997.
- World Health Organization. International Code of Marketing of Breast-milk Substitutes Frequently Asked Questions: www.who.int/nutrition/publications/infantfeeding/9789241594295/en/index.html
- Ban the Bags, a national campaign to stop formula company marketing in maternity hospitals: www.banthebags.org

Commercial Discharge Packs, Further Reading

- Bergevin Y, Dougherty C, Kramer MS. Do Infant Formula Samples Shorten the Duration of Breastfeeding?, *The Lancet*. 1983; 1(8334): 1148–1151.
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- Walker M. *Selling Out Mothers and Babies: Marketing of breast milk substitutes in the USA*. Weston, MA: National Alliance for Breastfeeding Advocacy, Research, Education and Legal Branch, 2001.
- Ban the Bags Campaign: http://banthebags.org/
- Feldman-Winter L, Grossman X, Palaniappan A, Kadokura E, Hunter K, Milcarek B, Merewood A. Removal of industry-sponsored formula sample packs from the hospital: does it make a difference? J Hum Lact. 2012 Aug;28(3):380-8.
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The Following Documents Can Be Found In the Additional Resources Section

- Action Plan
- Facility Impact

Notes

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Step 6
Action Plan

Step 6 Implementation Owner: _____

Start date: _____ **Target completion date:** _____

Primary Goals of Step 6:

❒ Ensure that—to the extent possible—only breastmilk is given to breastfeeding babies unless:

- There is a recognized clinical indication, the baby is unable to breastfeed and there is not breastmilk available.
- The mother has made a fully informed choice to feed her infant other than by direct breastfeeding and other than with breastmilk.

❒ Protect parents against display, distribution or promotion of food or drink other than breastmilk.

Budget/Resources for implementation:

Resources area and description	Planned actions	Budgeted amount
Training: Train staff on acceptable medical indications for supplemental feedings and how to assess and support exclusive breastfeeding. Set aside time for discussing information gathered by literature review committee.		$
Materials development: Set up documentation tools for documenting maternal consent for supplementation and for dispensing formula when needed. Purchase and make available current lactational pharmacology resources.		$
Marketing: Consider developing a facility discharge pack that supports breastfeeding and does not include formula samples and products. Note that a discharge pack is not a required element.		$
Equipment: Consider stocking formula in point-of-care medication dispensing devices (e.g., Pyxis system.) Provide adequate space and supplies to support breastmilk expression and storage. (Consider a private, no-visitors space for nursing and pumping; provide refrigerator space for expressed milk.)		$
Other costs related to implementation of *Step 6*.		$
Total expected costs		$

Implementation

Do facility policies:

- ❒ Promote exclusive breastfeeding whenever possible?
- ❒ Outline appropriate use of breastmilk substitutes, including policies or protocols for addressing infant hypoglycemia and jaundice, "reluctant feeders" and infants delivered by C-section or with very low birth weight?
- ❒ Allow time and resources for facility staff to educate families about the risks—both short- and long-term—of supplementation?
- ❒ Require documented informed consent for supplemental feedings?
- ❒ Provide sufficient resources and facilities to support breastfeeding, including the ability of mothers to pump or express and store breastmilk?
- ❒ Require documentation of distribution and use of formula and of supplementation trends?
- ❒ Prohibit practices that fall within the scope of the International Code of Marketing for Breastmilk Substitutes, including distribution of commercial discharge packs or infant formula samples?

Do staff trainings and competencies support:

- ❒ Staff breastfeeding knowledge and support and evaluation skills to promote exclusive breastfeeding when clinically feasible?
- ❒ Staff knowledge of the short- and long-term risks of supplementation?
- ❒ Staff knowledge of acceptable medical indications for use of breastmilk substitutes and evidence-based management of hypoglycemia, jaundice and dehydration. (See handout: *Maternal and Infant Contraindications for Breastfeeding.*)

Notes

Step 6 Implementation Tracking

Use the table below as a checkpoint for your unit and facility planning and for assessing your progress on *Step 6*. Set unit goals in terms of the month at which you plan to achieve each goal below, and assign each goal to be monitored a specific person on staff.

Each goal below should be documented and archived so that your facility can verify progress and assess future goals.

At month		Person Responsible	Initials	Date Completed
	Related Steps have been implemented successfully, enabling your facility to begin putting *Step 6* into place. (See the Implementation section, **Put breastfeeding support in place before eliminating supplements.)**			
	Data are being collected and assessed for: supplemental and prelacteal feedings, rates of breastfeeding exclusivity, staff and family knowledge and attitude toward breastfeeding exclusivity, and formula usage and promotion.			
	The facility is documenting exclusive breastfeeding rates among different sub-populations (e.g., race/ethnicity, age, income, cesarean vs. vaginal delivery).			
	A literature review committee has been established.			
	Relevant literature is being reviewed and shared with staff (and patients) appropriately.			
	Policies regarding breastfeeding supplementation have been reviewed and revised as necessary.			
	Staff have been trained in policy and procedure for supplementation, and current policies are clearly posted and available for staff reference.			
	Facilities have been updated to allow for breastmilk pumping and storage.			
	Stocks of formula and related supplies are managed in a manner consistent with other medical supplies, and a system is in place to manage and track supplement usage.			
	Distribution of commercial discharge packs and promotional materials has been discontinued.			

Step 6
Facility Impact

	Details	Person Responsible	Initials	Date Completed
Cost to purchase formula prior to implementation compared to cost after implementation Net loss or gain: _____				
Patient satisfaction scores: Track and analyze patient satisfaction quarterly. Has patient satisfaction improved since implementing *Step 6*? _____				
Joint Commission Measure: Assess facility performance on Joint Commission Measure. Document performance, noting new gains or any new losses.				
What can be improved upon next year?				