Step 9

Give no artificial nipples or pacifiers to breastfeeding infants.

Objectives

1. Avoid using pacifiers and artificial nipples during the maternity stay.

2. Reduce interference with establishment of maximal milk supply.

3. Maximize opportunities for babies to learn to suckle at the breast.

4. Use alternative infant-feeding methods (finger- or cup-feeding, etc.) when supplemental feeding is necessary.

5. Support and promote parents' understanding of and responsiveness to babies' cues.

Step 9

Goal: To maximize opportunities for babies to learn to suckle at the breast and to reduce interference with the establishment of a maximal milk supply.

Background

Images of baby bottles and pacifiers, pervasive and deeply embedded in our culture, are nearly synonymous with the concept of "new baby." Pacifiers (also known as "dummies" or "soothers") are used worldwide, and many healthcare professionals and parents consider their use to be normal, useful and even necessary. Likewise, bottles with artificial nipples (or "teats") are widely considered to be the normal way to feed infants.

Even in the context of breastmilk-feeding, bottles are often considered to be the only way to feed infants when direct breastfeeding is not possible. However, the use of either pacifiers or artificial nipples in the early weeks postpartum may come with risks, including reduced suckling at the breast and interference with demand-feeding *(Step 8)*. In addition, the use of artificial nipples (bottle-feeding) during the postpartum stay does not allow for full implementation of exclusive breastfeeding *(Step 6)* and is not compliant with the *Code (Step 1),* which restricts promotion of artificial nipples to the public.

Why Step 9?

Use of pacifiers and artificial nipples with neonates can interrupt or reduce the frequency of breastfeeding sessions, can indicate that the mother or baby is having problems with nursing and can interfere with establishing the mother's milk supply. Therefore, research and clinical experience support avoidance of pacifiers and artificial nipples or bottles for breastfeeding infants until after nursing and the milk supply are well-established, typically around four to six weeks after birth. In addition, avoidance of pacifiers and artificial nipples supports babies' efforts to communicate their hunger, need for oral stimulation and bonding. It also encourages parents' understanding of their baby's "language" and promotes responsiveness to their baby's needs.

Carrying out *Step 9* benefits your facility by enhancing:

1. **Safety:** Instituting policies to eliminate routine, non-medical use of pacifiers and artificial nipples during the hospital stay increases your patients' safety. Early use of pacifiers and artificial nipples has been associated with ineffective breastfeeding, nipple pain and trauma, reduced feeding intensity, insufficient weight gain, reduced establishment of milk supply, and early weaning.

   Pacifier use has been associated with reduced feeding intensity. When an infant suckles, the hormone cholecystokinin is released in the baby's gut, signaling satiety and causing drowsiness. Babies who have

their suckling needs met with a pacifier rather than at the mother's breast may be less likely to demand feedings at the breast.[1] This may negatively impact infant weight gain as well as a solid establishment of milk supply. In addition, poor emptying of the breasts associated with pacifier use has been implicated as a risk factor for mastitis.[2]

To reduce risk of infection and to optimize breastfeeding outcomes, routine use of pacifiers and artificial nipples should be avoided during the maternity stay. If an infant requires supplementation, give the parents instructions on the appropriate use of alternate feeding methods that do not require artificial nipples, such as cup-feeding.

A statement by the American Academy of Pediatrics (AAP) Task Force on sudden infant death syndrome (SIDS) recommends considering pacifier use when placing the infant down for sleep as a possible risk-reduction strategy for sudden infant death syndrome. It recommends, however, that pacifier introduction be delayed for breastfeeding infants until 1 month of age to ensure that breastfeeding is well established.[3] This is consistent with the WHO/UNICEF recommendation, which advises limiting the use of pacifiers and artificial nipples during the maternity stay. It is important to inform families that breastfeeding significantly reduces the risk of SIDS.[4, 5]

Because pacifiers can be detrimental to the establishment of breastfeeding, use should be limited to infants for whom the benefit of use outweighs the risk. For example, the use of pacifiers with premature infants may facilitate gastrointestinal development. It may also be appropriate to use pacifiers during painful procedures in which skin-to-skin contact or breastfeeding cannot be feasibly used for pain management. In these instances, pacifier use is appropriate, and policies restricting pacifier use should incorporate this information. When used for procedural pain relief, pacifiers should be promptly discarded immediately following the procedure.

> "Pacifier use in the neonatal period should be avoided. Research shows that pacifier use in the neonatal period was detrimental to exclusive and overall breastfeeding. These findings support recommendations to avoid exposing breastfed infants to artificial nipples in the neonatal period." [10]
>
> Academy of Breastfeeding Medicine

2. **Effectiveness:** Insufficient milk supply[6] is the most commonly cited reason that Texas women report for early weaning. Frequent demand-based feeding ensures establishment and maintenance of a good milk supply. This type of feeding has been shown to decrease with the use of pacifiers or artificial nipples. Thus, it is important to avoid the routine use of pacifiers and artificial nipples, an evidence-based strategy to encourage feeding on demand.

3. **Patient-centeredness:** Though it is not recommended or supported by research, frequent use of pacifiers and bottles is often a part of infant care. When systems are not set up to promote family-centered care, it may seem expedient and convenient for staff to use artificial means to pacify a baby. However, use of pacifiers and artificial nipples can negatively impact the care experience for both parents and infants.

   Use of pacifiers during the maternity stay may interfere with the parents' ability to learn to recognize infant hunger cues, causing delays in parental responsiveness and demand-feeding.[7, 8]

- If a hungry baby is given a pacifier instead of a feeding, the baby may take less milk and not grow as well.[9]
- If pacifiers or artificial nipples and bottle-feeding are used to placate a baby who is fussy for reasons other than hunger, the infant's true need (e.g., need to be held, gassiness, wet or dirty diaper, etc.) may not be addressed in a timely manner.
- The use of pacifiers, artificial nipples and bottles has been shown to significantly reduce the likelihood that women will achieve their own breastfeeding goals.[11]
- In addition to interfering with normal establishment of breastfeeding, the use of pacifiers may also be a marker for problem breastfeeding, a lack of confidence with breastfeeding or an attempt to space and delay feedings.[7, 12–14] Early lack of breastfeeding confidence is associated with early weaning.[15] In the context of family-centered care, hospital staff can explore pacifier use with families, assess feeding efficacy and sufficiency, and provide anticipatory guidance and support.

CLINICAL NOTES

"Pacifier use is best avoided during the initiation of breastfeeding and used only after breastfeeding is well-established.

- In some infants, early pacifier use may interfere with establishment of good breastfeeding practices, whereas in others it may indicate the presence of a breastfeeding problem that requires intervention.
- This recommendation does not contraindicate pacifier use for non-nutritive sucking and oral training of premature infants and other special care infants." [18]

American Academy of Pediatrics

4. **Timeliness:** Timeliness for fulfilling an infant's need to suckle on demand at the breast can be facilitated by practices such as skin-to-skin contact and rooming-in. Pacifiers and artificial nipples should not be used to delay an infant's need to suckle at the breast.

   Establishing successful feeding and learning social interaction with their primary caregivers are critical to an infant's primary tasks of survival and growth.[16] Often, pacifiers or artificial nipples are used by healthcare staff to placate an infant who is demanding to suckle or to be fed but is separated from the mother (e.g., in the nursery) or to free the staff member to prioritize other tasks (e.g., assessment, hearing screen, etc.) over the infant's need to breastfeed. Routine use of pacifiers and artificial nipples interferes with demand-feeding and with the establishment of optimal milk supply. Timeliness for fulfillment of an infant's need to suckle on demand at the breast can be facilitated by skin-to-skin contact and rooming-in care.

5. **Efficiency:** Pacifier and artificial nipple use results in inefficiencies:
   - Pacifiers and bottle-feeding supplies require more storage space than other alternate feeding systems, such as cups, syringes and tubing.
   - Excess staff time is spent correcting disordered feeding that results from pacifier and artificial nipple use.
   - Interrupting or reducing breastfeeding increases the need for infant formula, which is costly to families (even when it is provided by formula manufacturers at no direct cost to the hospital), as are the potential health risks associated with its use.

6. **Equity:** Socially disadvantaged groups appear to use pacifiers more frequently than other groups. Pacifier use is associated with increased morbidity and shortened breastfeeding duration, even when controlling for socioeconomic status.[17] Use of artificial nipples also reduces breastfeeding exclusivity and duration across socioeconomic groups. Through reduced risk for illness, increased breastfeeding has the potential to equalize health status across the range of socioeconomic groups.[19]

Evidence for Efficacy

Studies demonstrate that the sucking and feeding that occur with pacifiers and artificial nipples can be detrimental to the establishment of a breastfeeding practice and that reducing or eliminating their use with healthy term infants in the hospital setting can improve breastfeeding outcomes.

Pacifier Use

- The mechanics involved in sucking on a pacifier differ from the way in which a baby suckles at the breast.[20–21]
- The use of pacifiers during the maternity stay is associated with breastfeeding problems such as poor suckling technique, sore nipples and nipple trauma.[22–25]
- Infants who use pacifiers may feed less often and for shorter periods in a 24-hour period than infants who do not.[26]
- Use of pacifiers during the period in which milk supply is being established may reduce suckling at the breast and interfere with the body's adjustment of milk supply to the baby's requirements, resulting in insufficient milk supply.[24, 26, 27]
- Use of pacifiers during the period in which milk supply is being established is associated with shorter duration of breastfeeding and reduced exclusivity of breastfeeding.[8, 9, 11, 26–37]

Artificial Nipple and Bottle Use for Infant Feeding

Although most available research has failed to differentiate between feeding types (e.g., breastmilk vs. formula) and feeding delivery methods (e.g., breast vs. bottle), some evidence demonstrates that the use of artificial nipples while establishing milk supply may negatively impact breastfeeding outcomes.

- The mechanical and dynamic sucking processes of an infant feeding from an artificial nipple differ from suckling that occurs during breastfeeding.[20, 21, 38–41]
- Use of artificial nipples and bottles during the time that breastfeeding is being established may interfere with a baby's ability to learn to effectively suckle at the breast and is associated with shorter duration of breastfeeding.[24, 31, 42]
- A Cochrane review of the literature examining cup-feeding versus bottle-feeding found that cup-fed infants were more likely to leave the hospital exclusively breastfed, and it found no difference in weight gain between the two groups.[43]

The Cochrane review examining cup-feeding versus bottle-feeding found there was poor compliance with the cup-feeding regime, with a large percentage of the randomized cup-feeding group also receiving bottles. One study included in the review reported longer hospital stays for the cup-feeding group due to policies that infants were not allowed to be discharged until cup-feeding was discontinued. Therefore, policies should be developed to support successful cup-feeding and facilitate timely discharge from the hospital.

Health Outcomes Associated with Pacifier or Artificial Nipple Use

Infections

Pacifiers are a potential medium for transmission of nosocomial infections in the hospital setting.[44–46] The use of artificial nipples and bottle-feeding is associated with increased risk of otitis media,[47] and pacifier use is associated with the increased risk of otitis media, gastrointestinal infection, infection with Candida species and other morbidities.[17, 44–56]

Dental Problems

The use of pacifiers and other artificial nipples is associated with malocclusion[57–62] and the development of dental caries.[63, 64]

Feeding and Nutrition Problems

Bottle-feeding may interfere with the baby's ability to self-regulate nutritional intake. This may negatively impact appetite regulation, eating habits and appropriate weight maintenance later in life.[65]

Developmental Problems

Some research suggests an association between pacifier use and poor intellectual development.[66, 67] Research also indicates that bottle-feeding early in life may interfere with the physiologic coordination of suck-swallow-breathe and be associated with prolonged expiration, uncoordinated swallowing, reduced breathing frequency and reduced oxygenation.[68–71]

Safety Concerns

Unsafe handling and poor hygiene practices of artificial nipples and bottles are common,[72] increasing the risk of contamination.

Bottle nipples and pacifiers can pose a choking hazard when not used correctly or when not properly disposed of, and both have been subject to consumer recalls for a variety of reasons.[73, 74]

Maternal Health Concerns

Their use can result in early return of menstruation in the mother, resulting in decreased iron stores and increased risk of a closely spaced subsequent pregnancy.[75]

Implementation Strategy

Preparation: Eliminating Non-Indicated Use of Pacifiers and Artificial Nipples

Action steps for implementing *Step 9* include:

Assessing

1. Assessing your facility's policies, which should define:

- Alternative infant-feeding methods other than bottles and artificial nipples.
- Staff use of bottles or artificial nipples and pacifiers.
- Informed consent for use of bottles or artificial nipples and pacifiers.
- How to discourage families from bringing pacifiers or feeding bottles with artificial nipples to the hospital.

- How nipple shields should be initiated by and used only under the care of skilled practitioners (e.g., IBCLCs or nurses specially trained in the use of nipple shields) in conjunction with a feeding plan — and then only when clinically indicated and in an environment of informed consent.

2. Developing staff training and competencies that support:
   - Exclusive breastfeeding when clinically feasible.
   - Knowledge of the impact of pacifiers and artificial nipples on breastfeeding.
   - Skills development in using alternate feeding methods (e.g., cup-, tube- or syringe-feeding).

Planning

3. Secure high-level administrative support for implementation of *Step 9*.
4. Develop systems to track and address lapses in policy and evaluate impact.
5. Review and adapt or develop educational materials for patients to reinforce teaching about pacifier and bottle or artificial nipple use.
6. Determine protocol and develop materials for documenting both patient education and informed consent related to *Step 9*.
7. Purchase any needed alternate-feeding supplies (e.g., cups, tubing and/or syringes) for cases in which supplemental feedings are medically indicated.

Implementing

8. Ensure that staff training needs related to implementation of *Step 9* are met.
9. Inform all staff of the importance of *Step 9* for accomplishing quality improvement goals.
10. Reposition supply bins for bottles or artificial nipples and pacifiers.
11. Post reminders about policies related to *Step 9* in high-traffic areas.
12. Work with prenatal care professionals and childbirth educators and with those responsible for prenatal hospital tours to inform patients about policies related to pacifier and bottle or artificial nipple use.
13. Implement systems for monitoring policy adherence and addressing policy lapses.
14. Evaluate impact of *Step 9*.

"Because introduction of a pacifier or bottle has the potential to disrupt the development of effective breastfeeding behavior, their use should be minimized until breastfeeding is well established. It is important to help mothers understand that substituting for or delaying breastfeedings may ultimately reduce milk supply because of the reduction in stimulation derived from infant suckling. Encouraging good breastfeeding practices should be the primary focus of counseling along with increasing the mother's understanding that the use of pacifiers and bottles often has been associated with reduced breastfeeding."[76]

American College of Obstetricians and Gynecologists

Implementation: Best Practices for Success

Breastfeeding mothers should be counseled regarding the reasons to avoid using pacifiers and bottles during the time they and their babies are learning to breastfeed and at least until the time breastfeeding is well-established. Hospital staff should not give a breastfed infant a pacifier or a bottle unless there is a clinical indication and then should do so only after parents have been counseled, have made a fully informed choice and have given their informed consent for each instance of use.

Use of Feeding Bottles and Artificial Nipples

Legitimate uses of alternative feeding methods include a clinically indicated need for a supplementary feeding or a request by a mother who has made an informed choice.

Staff should be aware that a request for use of a bottle often signals need for support. The mother may be having difficulties with feeding or with other aspects of her or her infant's care. Support provided by trained staff *(Step 2)* can help mothers address their underlying needs and avoid the use of alternative feeding methods.

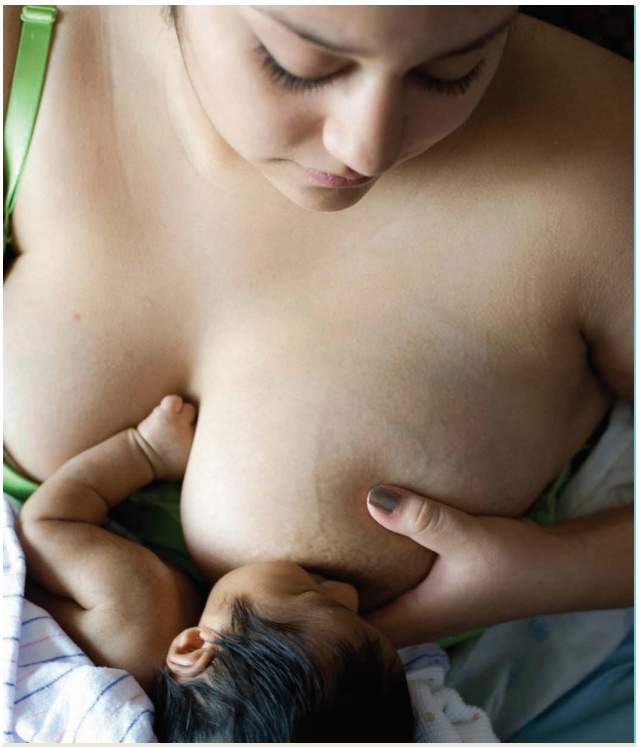
Mothers who request that their baby be given a bottle should be counseled not only about the potential risks of formula and the benefits of exclusive breastfeeding *(Step 6)* but also should be separately counseled about the potential risks related to the use of a bottle and artificial nipple, including flow preference and "nipple confusion." They should also be presented with recommended alternative feeding methods such as cup-feeding.

Alternatives to bottle or artificial nipple use for supplementary feedings in the hospital include:

- Direct expression of breastmilk into the baby's mouth.
- Tube- or finger-feeding.
- Use of syringe or dropper.
- Spoon-feeding.
- Cup-feeding.

Mothers should also be counseled that while bottles and artificial nipples may interfere with some babies learning how to breastfeed during the time breastfeeding is being established, the use of artificial nipples and pacifiers does not appear to be problematic once breastfeeding is well-established. For most infants, this is after four to six weeks. Once breastfeeding is established, the use of bottles or artificial nipples is appropriate for use during periods of separation, such as after return to work.

Only staff members who have been sufficiently trained in their use should implement alternative feeding techniques. If a bottle is used, pacing bottle-feeds may



The AAFP recommends that physicians "educate mothers about the risks of unnecessary supplementation and pacifier use," and "encourages that hospital staff respect the decision of the mother who chooses to breastfeed exclusively by not offering formula, water or pacifiers to an infant unless there is a specific physician order." [77]
—American Academy of Family Physicians

help the baby control the flow of the feed, reducing both the flow preference and overfeeding. Full consent should be separately obtained for use of the bottle or artificial nipple and the use of formula — and the discussion should be documented. If the bottle will be used for feeding expressed breastmilk, only consent for use of the bottle or artificial nipple is needed.

No alternative feeding method should be undertaken until proper training in the safe use of the method has occurred.

The use of artificial nipples or pacifiers may:

- Interfere with the baby learning to breastfeed.
- Reduce number of breastfeeds.
- Negatively affect milk production.
- Negatively affect maternal and infant health.
- Indicate the mother or healthcare professional finds it difficult to care for the baby and needs assistance.

See the Resources section at the end of this Step for more information on alternate feeding methods.

Use of Pacifiers

Facility staff should use pacifiers only when it is clinically indicated and only after informed consent has been obtained. Just as a request for a bottle may indicate a problem with breastfeeding or other aspects of infant care, so might the use of a pacifier. Pacifiers are often used to settle a baby who is experiencing discomfort, including discomfort due to ineffective feeding. Their use, however, may mask hunger cues and reduce the frequency of feedings that would normally occur. For optimal breastfeeding outcomes, all of an infant's suckling needs should be satisfied at the breast during the time that breastfeeding is being established.

Support from trained staff is needed to assess and address any underlying difficulties and to ensure that parents are comfortable with breastfeeding management and have been informed of the risks of routine pacifier use prior to the establishment of breastfeeding. As part of informed decision-making, parents should be notified that, while there are some clinical indications for short-term, temporary use of pacifiers (e.g., pain relief during a painful procedure), sustained use has the potential to interfere with breastfeeding. Pacifiers should be disposed of once clinical indications have resolved. The mother's ability to provide comfort to the infant, including through breastfeeding, should be reinforced. Parents should also be told about alternatives to the use of pacifiers during procedures when feasible (e.g., direct breastfeeding or skin-to-skin contact) and that their use should be restricted to times when other alternatives do not exist.

The American Academy of Pediatrics (AAP) recommends pacifier use when placing an infant down to sleep, once breastfeeding is well established (after four to six weeks), because of possible risk reduction for sudden infant death syndrome (SIDS). For more information, see "Later pacifier use is recommended for prevention of sudden infant death syndrome (SIDS)," addressed later in *Step 9*. See the Resources section at the end of this Step for more information on pacifier use.

How Is *Step 9* Related to the Other Steps?

The breast both pacifies and nourishes the baby. All of baby's suckling needs can and should be satisfied at the breast.

***Step 1*:** A written policy standardizes care. Staff members are expected to follow the policy, which includes limiting the use of artificial nipples and establishing a process for informed consent.

***Step 2*:** Staff members who are trained to support breastfeeding mothers are equipped to implement *Step 9* because they are knowledgeable about:

- The potential negative effects of the use of artificial nipples and pacifiers on breastfeeding. This knowledge helps ensure that parents are fully informed.
- Breastfeeding management and supporting families with breastfeeding, thereby decreasing reliance on alternatives to breastfeeding.
- Alternatives to the use of pacifiers and bottles or artificial nipples in cases in which their use may be clinically indicated.

***Step 3*:** Prenatal education that includes information about *Step 9* prepares parents to examine expectations about the use of pacifiers and artificial nipples in the early postpartum period and facilitates informed decision-making.

***Step 4*:** Early contact and early breastfeeding increases bonding, infant stability, infant state organization and breastfeeding success and reduces dependence on supplemental feedings or settling of the infant with a pacifier.

***Step 5*:** Reliance on pacifier and artificial nipple use is reduced when mothers are supported in basic breastfeeding management, including in recognizing their babies' hunger cues and effectively positioning and attaching their infants at the breast.

***Step 6*:** Elimination of non-medically indicated routine supplements reduces the use of artificial nipples.

***Step 7*:** Rooming-in increases breastfeeding success and parental confidence, reduces infant distress, and facilitates frequent, effective baby-led breastfeedings. This reduces the use of supplemental feedings and the need to pacify fussy babies.

***Step 8*:** When baby-led feeding is taught and supported, infants' suckling needs are met at the breast each time they have a need to suckle. This reduces dependence on supplemental feedings or settling of the infant with a pacifier.

***Step 10*:** Follow-up care and ongoing support helps to address concerns or difficulties with breastfeeding that may otherwise result in reliance on the use of artificial nipples or pacifiers.

Overcoming Barriers: Strategies for Success

The most common concerns related to implementing *Step 9* are detailed below, along with strategies for overcoming the (adapted, in part, from the documents listed as *General References* after the Notes section at the end of this Step).

1. **Concern that pacifiers are needed to soothe babies.** Pacifiers are widely used to comfort fussy babies and are also used as a tool to help space feedings in the mother's absence or to enforce a feeding schedule. Without learning the basics of infant state organization and principles of baby-led feeding, parents and other caregivers—including healthcare professionals—may feel ill equipped to care for a fussy baby without a pacifier. Without systems in place that support family-centered responsive care, healthcare professionals may use pacifiers as a substitute for maternal care.

To support the successful implementation of *Step 9*, policies and staff trainings should:

- Enable skin-to-skin contact, rooming-in and on-demand infant feeding.
- Teach parents about the many ways their infant communicates with them and how to explore the reasons their infant may be fussy.
- Inform parents of alternative ways to comfort a baby, including offering the breast and skin-to-skin contact, adjusting the level and type of stimulation, changing dirty diapers, etc.
- Educate parents about the importance of frequent suckling to maximize milk supply, the range of infant needs met through suckling, the normalcy of cluster-feeding and the importance of encouraging frequent suckling.

2. **Disbelief that pacifiers are problematic.** Pacifier use is so pervasive in our culture that it is difficult for many to believe that it can be harmful in the early weeks. Families may have to adjust their perceptions that pacifier use is a normal part of new parenthood. Personnel who have become reliant on pacifier use as part of their routine care may have a difficult time adjusting their habits and may benefit from completing a literature review about pacifier use during the maternity stay and presenting it to other members of the healthcare team.

   To support the implementation of *Step 9* and encourage avoidance of pacifiers, staff training should include information about:

   - The impact of pacifier use on breastfeeding.
   - Problems with oro-facial development.
   - Oral-motor coordination.
   - Risk of infection related to pacifier use.

   Facility policies could be enhanced by:

   - Signs in highly visible places stating the policy regarding the limiting of pacifier use, along with rationale.
   - Scripts for staff discussing risks of pacifier use with breastfeeding mothers as well as written informed consent forms.

3. **Later pacifier use is recommended for possible prevention of sudden infant death syndrome (SIDS).**[3] Parents and healthcare professionals may feel conflicted about limiting pacifier use in the hospital when aware that the use of pacifiers may be associated with risk reduction of SIDS. Educating both staff and parents about the recommendation, as appropriate, can assist with overcoming this conflict. The AAP recommendation states that pacifier use should be delayed until breastfeeding is well-established. The risk of SIDS is greatest between two to three months, after breastfeeding is established. Once initiated, pacifier use is recommended ***only*** when placing the infant down for sleep and should not be reinserted once the infant falls asleep.

   Regardless of the feeding method, it is also important to inform the family that:

   - Breastfeeding is greatly associated with reduced risk of SIDS.
   - Use of pacifiers is not indicated with babies who are awake.
   - It is important to respond to hunger cues and not to use pacifiers to space feedings.
   - There is never an indication to force a baby to take a pacifier if the baby refuses to take it.

   For further information on safe sleep and SIDS resources, refer to the Texas Department of State Health Services information on safe sleep for babies at: www.dshs.state.tx.us/mch/#safesleep2.

4. **Alternative supplemental feeding methods are cumbersome.** Staff and parents may feel comfortable with bottle-feeding because it is familiar. Other supplemental feeding methods may feel foreign, unsafe and cumbersome because they are unfamiliar. Any supplemental feeding methods, including bottle-feeding, can be unsafe or detrimental if they are not used correctly.
   - Risks of bottle and artificial nipple use should be discussed and reinforced.
   - Staff should be offered hands-on training, and their skills should be assessed for use of alternate feeding methods, including bottles.
   - The ability of staff to teach alternate feeding methods to families should also be assessed.
   - Regular skills review and reinforcement with a variety of teaching techniques (videos, demonstration and return-demonstration, photos, case studies, etc.) should be implemented to increase comfort, competency and familiarity.

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 9*. Assign one or two staff members who have the best perspective on day-to-day operations to complete these checkpoints.

Facility management should use the included *Step 9* Action Plan to assess progress on this Step.

- **Process changes.** When evaluating your facility's success in implementing *Step 9*, consider the following:
  - What policies and resource materials about pacifier and artificial nipple use have been developed?
  - Have patient education materials and strategies been developed to address the risks of pacifiers and artificial nipples?
  - Can you document through chart audits and other documentation that the risks of pacifiers and artificial nipples have been discussed with breastfeeding families?
  - How knowledgeable are personnel about the risks of pacifiers and artificial nipples and the appropriate use of alternatives?
- **Impact on patient experience.** Your facility should track data about the use of pacifiers and artificial nipples as well as that of other alternative feeding methods. Data to track include:
  - Number of infants—observed through room checks—who have a hospital-provided or patient-owned pacifier in use or at the bedside.
  - Number of supplements—checked through chart audit—given via bottles and artificial nipples.
  - Use of nipple shields (number used, initiated appropriately, plan established, etc.).

- Number, type and acuity of breastfeeding difficulties.
- Average number of breastfeedings in a 24-hour period.
- Exclusive breastfeeding rates at hospital discharge.

- **Assessing value to the facility.** Use the Facility Impact chart included in the Additional Resources section to track your facility's time and money spent on the measures recommended and to assess cost savings that may be attributed to the changes made.
  - Track expense of supplies (pacifiers, bottles, nipples, cups, feeding syringes and feeding tubing).
  - Track space used for storage of supplies.
- **Handout on pacing a bottle-feeding:** https://www.breastfeeding.asn.au/bfinfo/caregivers.html

Resources

- A document, *Suitable Indications for Dummy / Soother or bottle and teat use,* is available from the UNICEF UK Baby Friendly Initiative's website: http://www.unicef.org.uk/Documents/Baby_Friendly/Research/dummy_teat_use.pdf?epslanguage=en
- Documents from the World Health Organization that include information on alternative feeding procedures: World Health Organization, Department of Reproductive Health and Research. (2003) *Managing newborn problems: a guide for doctors, nurses, and midwives.* World Health Organization: Hong Kong. www.searo.who.int/LinkFiles/Making_Pregnancy_Safer_MNP.pdf
- Handout on pacing bottle-feeds: www.breastfeeding.asn.au/bfinfo/CaregiverGuide06.pdf
- Webpages by Kelly Bonyata, BS, IBCLC:
  - *What should I know about giving my breastfed baby a pacifier?*: www.kellymom.com/bf/start/concerns/pacifier.html
  - Alternative Feeding Methods www.kellymom.com/bf/pumping/alternative-feeding.html
- Handouts for parents, including *How to Handle a Fussy Baby*: http://www.breastfeedingtaskforla.org/resources/for-parents/91-flyers-and-brochures
- Ban the Bags: banthebags.org

The Following Documents Can Be Found In the Additional Resources Section

- Action Plan
- Facility Impact

Notes

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Step 9
Action Plan

Step 9 Implementation Owner: _____

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

Primary Goals of Step 9:

- ❒ Avoid using pacifiers and artificial nipples during the maternity stay.
- ❒ Reduce interference with establishment of maximal milk supply.
- ❒ Maximize opportunities for babies to learn to suckle at the breast.
- ❒ Utilize alternative infant-feeding methods (finger- or cup-feeding, etc.), when supplemental feeding is necessary.

Resources for implementation:

	Description	Budgeted amount
Materials purchased for alternate feeding methods (cups, syringes, tubing, etc.)		$
Staffing and training: May include management of resources, training of support group leaders, etc.		$
Materials development: Resources for clinicians, handouts for families, talking points for prenatal care professionals.		$
Other costs related to implementation of *Step 9*.		$
Total		$

Implementation

Do facility policies:

- ❒ Promote use of alternative infant-feeding methods other than bottles and artificial nipples?
- ❒ Discuss appropriate staff use of bottles/artificial nipples and pacifiers?
- ❒ Require informed consent for use of bottles/artificial nipples and pacifiers?
- ❒ Help personnel discourage families from bringing pacifiers or feeding bottles with artificial nipples with them to the hospital?
- ❒ Clarify that nipple shields should only be initiated by and used under the care of skilled practitioners (e.g., IBCLCs or nurses specially trained in the use of nipple shields) in conjunction with a feeding plan, and then only when clinically indicated and in an environment of informed consent?

Do staff trainings and competencies support:

- ❒ Exclusive breastfeeding when clinically feasible?
- ❒ Staff knowledge of the impact of pacifiers and artificial nipples on breastfeeding?
- ❒ Skills development in using alternate feeding methods (e.g., cup-, tube-, or syringe-feeding)?

Have you:

- ❒ Secured high-level support for implementation of *Step 9*?
- ❒ Developed systems to track and address lapses in policy and evaluate impact?
- ❒ Reviewed and adapted or developed educational materials for patients to reinforce teaching about pacifier and bottle/artificial nipple use?
- ❒ Determined a protocol and developed materials to document both patient education and informed consent related to *Step 9*?
- ❒ Purchased any supplies (e.g., cups, tubing and/or syringes) for alternate feeding in instances when supplemental feedings are medically indicated?

Notes

Step 9 Implementation Tracking

Use the table below as a checkpoint for your unit and facility planning and for assessing your progress on *Step 9*. 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.

Process changes

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
	All personnel have been informed of the importance of *Step 9* for accomplishing quality improvement goals.			
	Alternate feeding supplies are stocked and available to personnel for use with any necessary supplemental infant feedings.			
	Prenatal care professionals and childbirth educators have been educated and provided resources to inform patients about policies related to pacifier and bottle/artificial nipple use.			
	A system of documentation, audit or interview (perhaps through periodic staff reviews) has been developed to monitor policy adherence and address policy lapses.			
	Reminders about these policies and support materials about supplemental feeding and pacifier use are posted and readily available to personnel.			

Impact on patient experience

Audit the impact to patient experience by assessing the following on a quarterly basis:

Number		Person Responsible	Initials	Date Completed
	Infants who have a hospital-provided or patient's own pacifier in use or at the bedside, as determined by room checks			
	Supplements given via bottles and artificial nipples as determined by chart audit			
	Number of nipple shields used			
	Number of instances when nipple shields were both initiated appropriately and used confidently by patients			
	Percentage of mothers breastfeeding exclusively at discharge			

Step 9
Facility Impact

Avoidance of Pacifiers and Artificial Nipples

Costs to Facility

	Description/Notes	Dollar Amount
Materials purchased for alternate feeding methods (cups, syringes, tubing, etc.)		$
Staffing and training: May include management of resources, training of support group leaders, etc.		$
Materials development: Resources for clinicians, handouts for families, talking points for prenatal care professionals		$
Other costs related to implementation of *Step 9*		$
	Subtotal	$

Savings to Facility

	Description/Notes	Dollar Amount
Staff time saved by avoiding poor infant and mother health outcomes related to pacifiers and bottles (nosocomial infections and mastitis, for example)		$
Facility savings (materials, administration, etc.) related to avoiding pacifiers and bottles		$
Savings from reduced need for infant formula		$
Increased breastfeeding duration and exclusivity among mothers		$
Other savings and benefits to facility		$
	Subtotal	$
		Net Annual Loss or Gain to Facility
		$

What can be done differently next year?