Step 4

Help mothers initiate breastfeeding within an hour of birth. Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour. Encourage mothers to recognize when their babies are ready to breastfeed and offer help if needed.

Objectives

1. Ensure that babies are in skin-to-skin contact with their mothers for at least one hour immediately following birth.

2. Help mothers to recognize when their babies are ready to breastfeed and offer help if needed.

Step 4

Goal: To assure that mothers and babies experience the benefits of early and continuous skin-to-skin contact and infant-led initiation of breastfeeding.

Background

Successful suckling at the breast begins with early and frequent maternal and infant contact. If allowed an infant will capably and competently, find its way to extrauterine nutrition, protection and warmth. Infants are in a heightened state of alertness in the first hour after birth. When a healthy, unmedicated, dried, naked newborn is placed in skin-to-skin contact (prone on the mother's bare chest) at birth or soon afterwards, it uses its senses, especially olfaction, to set a course and, through a series of intentional movements, will find and attach to the breast. A surge of oxytocin and other hormones then release in the mother and baby. Oxytocin causes the mother's uterus to contract, slowing bleeding. Oxytocin also causes the mother's colostrum to flow easily, reduces maternal and infant pain and cortisol levels and creates feelings of love and attachment.

Should skin-to-skin contact be interrupted for any reason (e.g., clinical indication or maternal choice), it should be resumed as soon as feasible. In the event of Cesarean birth, babies should be placed skin-to-skin with the mother as soon as she is able to respond to her baby, or within half an hour. Further, skin-to-skin contact should be encouraged throughout the hospital stay and post-discharge by the mother and her partner.

Benefits of early and continuous skin-to-skin contact include:

- Early establishment of effective breastfeeding [1,2]
- Longer duration of breastfeeding [3-10]
- Increased exclusive breastfeeding [11]
- Increased interaction and bonding between mother and infant [4,7,12-14]
- Infant physiologic regulation
  - Improved state organization [15-21]
  - Helps baby to regulate temperature [17,22-25]
  - Helps baby to regulate heart rate and breathing [3]

Encourage and support the mother to breastfeed as soon as the baby shows signs of feeding readiness. This usually occurs within the first hour but may occur any time from several minutes after birth to more than an hour. Help the mother to find a comfortable position that facilitates breastfeeding.

- Increase metabolic adaptation and stabilizes blood glucose [3,17,26]
- Establishes healthy gut flora [28,29]
- Protects against morbidity and mortality [29-39]

- Improved health outcomes [40]

Perinatal Care Factors Impacting Early Breastfeeding Initiation

- A Cochrane review of eight studies on early skin-to-skin contact - placing the naked baby prone on the mother's bare chest immediately or as soon as possible after birth and covering them both with a blanket found that mothers practicing skin-to-skin contact were twice as likely to still be breastfeeding at 1-3 months compared to those who did not practice skin-to-skin contact. The review also found that the infants of mothers practicing skin-to-skin contact breastfed an average of 42 days longer than those who were separated from their mothers after birth.

- Other studies demonstrate that the timing of the first suckling, the duration of breastfeeding and onset of milk production are all related, with early initiation resulting in increased duration of breastfeeding [4-10] and reduced risk for delayed onset of milk production. [5]

- A study found that limiting elective Cesarean sections, managing maternal anemia and regular effective pregnancy follow- up visits were each associated with early initiation of breastfeeding. [41]

- In order to avoid unnecessary interruption of maternal-infant interaction and the initiation of breastfeeding, non-time-sensitive routine procedures (e.g., administration of vitamin K, erythromycin, etc.) can be delayed if medically appropriate. [1,42-44]

- The amniotic fluid on the infant's skin and hands has the same scent as the mother's breast. The infant uses olfaction to find the breast, so washing the breast or infant's hands prior to the first feeding could interfere with breastfeeding initiation and spontaneous attachment. [45-48]

- Early skin-to-skin contact increases plasma oxytocin levels, aiding in the expulsion of the placenta, reducing bleeding and enhancing maternal-infant bonding. In addition, oxytocin levels increase in a dose-response fashion with each subsequent breastfeeding after the first one or two. [49]

- A recent experimental study found that Cesarean-delivered newborns who received skin-to-skin contact for two hours after the mother's return to the postpartum room (the mean time of skin-to-skin initiation was 51 minutes) were not at increased risk for hypothermia, were attached to the breast earlier and were more likely to be breastfeeding at discharge and three months later than infants who received traditional routine care. In addition, mothers in the skin-to-skin group expressed higher levels of satisfaction. [50]

Implementation Strategy

Implementation: Best Practices for Success

Key Principles of Step 4

Skin-to-skin contact will be the default method of post-delivery care for all healhty mothers and babies. The naked baby should be dried during the transfer directly to the mother's chest, between her bare breasts, immediately after birth. Both mother and baby can be covered with a warm blanket. Skin-to-skin contact should continue for as long as the mother wishes and be allowed to occur in a quiet, unhurried environment, at least, until the mother and baby are both ready to breastfeed. However, regardless of feeding intentions, early close contact facilitates physical and hormonal changes that prepare mothers and babies for the beginning of their relationship together. It is best practice for staff to protect and support closeness between mom and newborn.

The first period of contact should never be interrupted for the convenience of the staff. Procedures such as vitamin K or erythromycin administration and weighing can be delayed until after the first feeding. There is no indication for bathing or other non-clinical infant care routines to occur at a given time. In fact, bathing the infant or removing the vernix should be postponed as the scent of the amniotic fluid on the baby's skin helps that baby find its way to the mother's breast, which has the same scent.

Mothers who require suturing should receive adequate pain control so that they can continue to safely hold their newborns. However, she and the baby should be observed with prompt removal of the newborn if either she or her baby's condition deteriorates.

Observe the environment and arrange for safety to ensure that the newborn cannot fall or become entrapped and that its airway remains clear. If the mother has an altered state of consciousness (e.g. is drowsy from analgesia) it's not safe for her to hold her baby unassisted. However, without any effort on the mother's part, an attentive caregiver can help the baby have its first breastfeeding when he/she shows readiness.

The use of a wheelchair or gurney during transfer to the postpartum unit can enable skin-to-skin contact to continue. If separation is necessary, or requested, it should be resumed immediately when the two get to the ward, especially if the first feed has yet to occur.

The first breastfeed should be allowed to happen in its own time. It's not necessary to hurry or force babies to the breast. This is a time for a new mother to build her confidence in her ability to provide for her baby and help her gain trust in the baby's competency to seek and secure the warmth and connection it needs for survival.

Staff should be present after the birth in case the mother has questions or issues with optimally positioning the baby for locating the breast. When the baby becomes alert, starts moving, makes suckling movements and reaches for the breast, staff should explain what is happening and guide the mother to position herself comfortably. If a baby has not started to breastfeed in the delivery room, staff should make sure skin-to-skin contact continues until the first feeding occurs. Staff should also watch for, and educate on signs of feeding readiness and offer support and encouragement.

If mother and baby are separated, restore and maintain the mother-baby connection as early as possible.

Any medications should be discussed with the mother before labor as they may affect the baby's early response to breastfeeding.

Minimize separation of the mother and baby following a Cesarean section. Skin-to-skin contact is possible and common after a Cesarean section and should be encouraged in the operating room after birth if the mother's and baby's healthy allow. If skin-to-skin contact in the operating room is not possible, mother and baby can be transported together to the recovery room or the postnatal unit for unhurried contact and feeding.

If skin-to-skin contact must be delayed or interrupted for clinical indication, it should be started or resumed as soon as possible. If the baby requires neonatal intensive care, accommodations for the mother to held the infant and provide kangaroo care should be facilitated as soon as the mother and baby are stable enough to be together.

If the mother is unable to hold her newborn, but the baby is healthy and stable, it should be placed in skin-to-skin contact with the father or another close family member. However, the mother should always be the first choice for skin-to-skin contact if she is able, because of the physical, hormonal and emotional consequences for both mother and baby and because the baby is only able to receive colostrum from the mother.

Breastfeeding can still be successfully established even if separation occurs before the first feed, but extra support may be needed. Frequent and uninterrupted skin-to-skin contact can help.

Preparation: Getting Ready for Skin-to-Skin Contact

Suggested Action steps for implementing Step 4 include:

- Training staff on principles and techniques for skin-to-skin contact.
- Facilitating continuous mother-infant contact after delivery.
- Educating all pregnant women about the benefits of skin-to-skin contact.
- Including information such as pamphlets, videos and posters in staff and parent-education programs.
- Working with staff to redesign infant perinatal routines to allow time for immediate mother-infant contact. This process should include staff interviews and brainstorming sessions.
- If possible, in the delivery room, considering the mother's need for privacy and a calm environment, paying special attention to lighting, how many people are in the room and whether all machines in the room are necessary.
- If possible, ensure that all labor, delivery and recovery areas have adequate climate control.

Early contact can have important effects on infant health, maternal behavior and bonding. Every mother should be encouraged to hold her baby in skin-to-skin contact as soon as possible after birth in an unhurried environment, regardless of her feeding intention.

- For mothers who choose to breastfeed, ensuring that early initiation occurs by assigning responsibility to and equipping staff with the necessary skills for assisting.
- Auditing, sharing results, revising the action plan and repeating audits.

Overcoming Barriers: Strategies for Success

The most common concerns related to implementing Step 4 are detailed below, along with strategies for overcoming them.

1. **Perception that units are too busy to accommodate immediate and continuous skin-to-skin contact.** While implementing policies of skin-to-skin does require significant change and restructuring of care, it requires very little effort by healthcare professionals once implemented. Continuous observation of a healthy and stable infant and mother is not required.

2. **Perception that there is not sufficient space to accommodate unhurried contact in the labor and delivery rooms.** Mother and baby can easily and safely be transferred from the labor and delivery suite to the postpartum unit, either in a bed or wheelchair, while maintaining skin-to-skin contact. This saves staff time because there is no need to transport the infant to and from the newborn nursery. Patient satisfaction improves when there is no separation of mother and baby. And, most important, the infant thermoregulation and stability are maintained.

3. **Perception that routine care should be prioritized over skin-to-skin contact.** If a nurse needs to close out her charting before skin-to-skin contact is initiated, weighing and measuring the baby can be done quickly at the bedside as soon as the baby is dried and before the baby is put in skin-to-skin contact. All other care routines can be adjusted so that they are delayed until after the first feeding, and even then, mother-baby contact can be maintained.

4. **Perception that the mother will not want this type of care.** Staff may believe that mothers are indifferent to instruction on skin-to-skin contact. However, efforts to inform mothers of the importance of skin-to-skin contact should be made regardless of perceived interest.

5. **Staff concerns about offending mothers who choose to not breastfeed.** Staff may be concerned that breastfeeding could occur spontaneously during skin-to-skin contact with mothers who have chosen not to breastfeed. Experience in Baby-Friendly hospitals has demonstrated, however, that few mothers object to an offer to help when

their infants show readiness or if their infants initiate this first feeding, even if they go onto formula-feed thereafter. [51]

6. **Concerns related to cultural traditions.** Prelacteal feeds, or the offering of fluids prior to the first breastfeeding, are traditional in some cultures. However, even a few spoonfuls of these non-colostral feeds can increase the risk of infection and allergy to the infant. If your area includes cultures in which prelacteal feeds are used, prenatal education about the importance of exclusive breastfeeding and the benefits of colostrum is crucial. Discussing cultural expectation may help find solutions that fulfill tradition and also protect the infant from prelacteal feeds. For example, sometimes expressing and discarding the first several drops of colostrum is all that is needed to satisfy cultural norms related to a baby not receiving colostrum during its first feeding.

7. **Concerns about the mother who does not want to hold her newborn.** Not wanting to hold a newborn may be a sign of depression and that the baby is at an increased risk for abuse, neglect or abandonment. Contact with the baby might significantly reduce these risks and should be encouraged. If a mother is stating that she does not want to hold her infant, conducting a depression screening may be warranted. The PHQ-9 (http://bit.ly/2jOm13C) is a evidence based screening tool that is easy for staff or the mother to use.

8. **Twins present a unique situation**. Skin-to-skin contact can be given to the first infant until the second labor begins. This time interval will vary with each birth. After the second birth, the mother can hold both infants.

Evaluating Success

Use the information in this section and the IMPLEMENTATION RESOURCES at the back of this step as checkpoints to verify that you are successfully implementing Step 4. Assign one or two staff members who have the best perspective on day-to-day operations to complete these checkpoints. This section is for your information only. UCATS does not require submission of these tools for certification.

Process changes. When evaluating your facility's success in implementing Step 4, consider the following:

- Average time to first initiate skin-to-skin contact.
- Average time in skin-to-skin contact after delivery.
- Average time until first breastfeeding.

Facility management should use the included Step 4 Action Plan to assess progress on this Step.

Impact on patient experience. Your facility should track data related to skin-to-skin contact and early breastfeeding. Data to track include:

- Incidence of hypothermia.
- Incidence of hypoglycemia.
- Maternal request for nursery care.
- Lactation acuity at second feeding.
- Prelacteal feed rate.
- Supplementation rate.

Assessing value to the facility. Use Step 4 Facility Impact included in the IMPLEMENTATION RESOURCES section to assess how the recommended measure have affected your facility and to assess cost savings that may be attributed to the changes made.

Please see IMPLEMENTATION RESOURCES for UCATS certification application.

Resources

- Cochrane Review: Moore ER, Anderson GC, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants. Cochrane Database Syst Rev. 2012.16;5:CD003519. Review. Available: http://bit.ly/2jOydkQ
- Sample policies, patient information, chart review tool, references and other resources to support skin-to-skin contact. California Department of Public Health Model Hospital Policy Recommendations On-Line Toolkit. Policy #5: http://bit.ly/2jOwRqt
- The warm chain (Video) evidence-based WHO recommendations for preventing neonatal hypothermia after birth, including skin-to-skin contact and keeping baby on mother. This video was created by Ukrainian Maternal & Infant Health Project/ JSI: http://youtu.be/hP5XMBppokU
- WHO. Pregnancy, Childbirth, Postpartum and Newborn Care—A Guide for Essential Practice. 3rd ed. (2015) Department of Reproductive Health and Research (RHR), WHO. http://bit.ly/2jOGmpn
- The Mother and Child Health and Education Trust. breastcrawl.org/

  Website detailing initiation of breastfeeding by "breast crawl." Includes video of a newborn finding its way to the breast unassisted after placement in skin-to-skin contact immediately after birth.

- Delivery Self-Attachment video. Two brief videos, both produced in underdeveloped countries, depicting a newborn's ability to crawl up to the breast and attach unassisted.

  - Initiation of Breastfeeding by Breast Crawl. UNICEF Maharashtra (India) http://bit.ly/2jQPoEF

  - The Breast Crawl, (Philippines): http://bit.ly/2jQW8mh

- Information Sheet: The First Hour of Life: Reasons to Breastfeed. UNICEF Malaysia Communications, 2007: http://uni.cf/2jOBQHt

- Arizona Baby Steps to Breastfeeding Success Training Video: http://bit.ly/2jOIZYg

Books

- Smith LJ. Impact of Birthing Practices on Breastfeeding – Protecting the Mother and Baby Continuum. Jones & Bartlett Publishers, 2nd ed. 2010.

Skin-to-Skin Contact for the Preterm Infant

- WHO. Kangaroo Mother Care: A Practical Guide. (2003). Department of Reproductive Health and Research (RHR), WHO. http://bit.ly/2jOzDvM

Kangaroo Mother Care DVDs/Videos [Manufacturer's descriptions]

- Kangaroo Mother Care—Restoring the Original Paradigm for Infant Care and Breastfeeding

  This video provides the latest research and evidence to prove that the new born thrives best in its original 'rightful place'—on its mother's chest. Kangaroo mother care has some vital components: the video provides full details on why kangaroo mother care works and why it is so important for all newborn babies. It is intended for healthcare workers dealing with healthy and 'at-risk' mothers-to-be as well as for prospective mothers and fathers. The application of kangaroo mother care must be carried out under supervision of a healthcare professional and is not described in the video. (Running time: 51 minutes)

Kangaroo Mother Care—Rediscover the Natural Way to Care for Your Newborn Baby

Kangaroo mother care is for all newborn babies, especially premature ones. This video summarizes research and evidence to prove that the newborn thrives best in its original rightful place—on its mother's chest. A practical method of doing kangaroo mother care is described. (Running time: 26 min)

Implementation Resources

- Action Plan
- Facility Impact
- UCATS Application Form

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Step 4
Action Plan

Step 4 Implementation Owner: _____

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

Primary Goals of Step 4:

- ☐ Ensure that babies are in early and continuous skin-to-skin contact with their mothers immediately following birth for **at least** an hour.
- ☐ Help mothers to recognize when their babies are ready to breastfeed and offer help if needed.

Budget/Resources for implementation:		
Resource area and description	**Planned actions**	**Budgeted amount**
Training: Train staff on the benefits of skin-to-skin contact and early contact between mother and baby. Teach staff to facilitate continuous mother-infant contact after delivery. Set aside time for discussing information gathered by literature review committee.		$
Materials development: Distribute information such as pamphlets, videos and posters to be included in staff and parent education programs.		$
Equipment: Ensure that all labor, delivery and recovery areas have adequate climate control.		$
Other costs related to implementation of *Step 4*.		$
Total expected costs		$

Implementation

Do facility policies:

☐ Promote skin-to-skin contact immediately—or as soon as clinically feasible—after birth?

☐ Initiate early contact and skin-to-skin as a rule, unless the mother has requested otherwise?

☐ Allow time for immediate mother-baby contact?

☐ Promote a quiet, calm, unhurried environment in the delivery room?

☐ Help to keep mother and baby close throughout their postpartum stay—from delivery to discharge?

☐ Delay non-critical procedures—administration of vitamin K, weighing, etc.—in the first hours after birth?

Do staff trainings and competencies support:

☐ Promotion of skin-to-skin and early contact?

☐ Understanding of the benefits— physically, hormonally and emotionally—of skin-to-skin and early contact?

☐ Labor, delivery and postpartum practices that promote mother-baby contact?

☐ Methods to help with breastfeeding initiation, including providing a calm, unhurried environment and helping the mother to recognize her infant's innate capabilities? Staff should support maternal confidence and maternal-infant bonding during this feeding. Therefore, it is not necessary to emphasize or provide instruction on breastfeeding technique or effectiveness of attachment at this time.

☐ Establishing or re-establishing skin-to-skin contact after any initial delays?

Notes

Step 4 Implementation Tracking

Use the table below as a checkpoint for your unit and facility planning and for assessing your progress on *Step 4*. 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
	All facility staff are trained to facilitate continuous mother-infant contact after delivery, whenever feasible.			
	Data are being collected and assessed for: • Incidence of hypothermia • Incidence of hypoglycemia • Maternal request for nursery care • Lactation acuity at second feeding • Prelacteal feed rate • Supplementation rate			
	Literature has been distributed to prenatal providers to help educate pregnant women on the benefits of early and regular skin-to-skin contact, particularly immediately after delivery. Materials include information about the expected effects of various medications on the newborn's ability to be alert and suckle early on.			
	A literature review committee has been established.			
	Relevant literature is being reviewed and shared with staff (and patients) appropriately.			
	Policies regarding skin-to-skin and early contact have been reviewed and revised as necessary.			
	Facilities have been assessed and/or updated to ensure that privacy and low lighting are available and that all rooms have climate controls.			

Step 4
Facility Impact

Balancing Measures				
	Details	**Person Responsible**	**Initials**	**Date Completed**
Staff time spent with breastfeeding after delivery.	Has the paradigm shift to earlier contact reduced staff time addressing breastfeeding issues in the postpartum unit?			
	What quantifiable changes have been observed with regard to staff time?			
Patient satisfaction scores.	Track and analyze patient satisfaction quarterly.			
	Determine a plan for assessing patient satisfaction.			
	Has patient satisfaction improved since implementing *Step 4*?			
Equipment, time and technology savings.	Since implementation of *Step 4*, you should see a decrease in the amount of equipment, time and technology spent in L&D and postpartum (e.g., warmers, probes, additional staff to care for infants, etc.)			
	What effects have been noted at the facility?			
What can be improved upon next year?				

Step 4

UCATS Stepping Up for Utah Babies Application

As part of standard practices, at least 70%of infants born vaginally or by Cesarean section at the inquiring health facility are expected to be placed in skin-to-skin contact with their mothers immediately after birth. This contact should remain uninterrupted and supported for a minimum of one hour, unless there are medically justifiable reasons to separate the mother and infant. Additionally, for vaginal deliveries, at least 80% of mother-baby dyads have initiated breastfeeding within 1 hour of birth and 100% have initiated breastfeeding within 2 hours of birth. In Cesarean deliveries, at least 40% of mother-baby dyads have initiated breastfeeding with in a hour and 60% have initiated within 2 hours. Nurses can support first feedings by encouraging mothers to look fore early infant feeding cues displayed during the first period of contact and offer help, if need or requested. (Note: The infant should not be forced to breastfeed but rather, supported to do so when ready. If desired, the staff can assist the mother with placing her infant so he/she can move her breast and latch when ready). At least 60% of first time mothers should be helped to recognize the hunger cures of their infants.

After a Cesarean section, mother-baby dyads should have skin-to-skin contact as soon as possible aft the mother is responsive and alert, with the same procedures followed for vaginal births. In the case of delay, efforts shots should be made to keep mothers and infants in the same room, ideally with the infant skin-to-skin on the father or other close family member.

1. What percent of mother-baby dyads are placed ski-to-skin immediately (meaning within 15 minutes or immediately after mother becomes responsive and alert) after birth and encouraged to continue this contact for an hour or more? _____%

   Numerator: # of infants placed skin-to-skin immediately after birth
   Denominator: # of infants delivered

2. What percent of first time mothers are helped to recognize the signs that their babies are ready to eat (hunger cues) and offered to help if needed? _____%

   Numerator: # of first time mothers who are helped to recognize hunger cues
   Denominator: # of first time mothers

For Vaginal Deliveries:

3. For vaginal deliveries, what percent of mother-baby dyads are placed skin-to-skin immediately (meaning within 15 minutes) after birth and encouraged to continue this contact for an hour or more? _____%

   Numerator: # of vaginally delivered, healthy infants placed skin-to-skin immediately after birth
   Denominator: # of vaginally delivered, healthy infants

4. For vaginal deliveries, what percent of mother-baby dyads initiated breastfeeding within one hour of birth? _____%

   Numerator: # of vaginally delivered, healthy infants who initiated breastfeeding within one hour of birth
   Denominator: # of vaginally delivered, healthy infants

5. For vaginal deliveries, what percent of mother-baby dyads initiated breastfeeding within two hours of birth? _____%

   Numerator: # of vaginally delivered, healthy infants who initiated breastfeeding within two hours of birth

   Denominator: # of vaginally delivered, healthy infants

For Cesarean Deliveries

6. For Cesarean deliveries, what percent of mother-baby dyads are placed skin-to-skin immediately (meaning immediately after mother becomes responsive and alert) after birth and encouraged to continue this contact for an hour or more? _____%

   Numerator: # of cesarean delivered, healthy infants placed skin-to-skin immediately after birth

   Denominator: # of cesarean delivered, healthy infants

7. For Cesarean deliveries, what percent of mother-baby dyads initiated breastfeeding within one hour of birth? _____%

   Numerator: # of cesarean delivered, healthy infants who initiated breastfeeding within two hours of birth

   Denominator: # of cesarean delivered, healthy infants

8. For Cesarean deliveries, what percent of mother-baby dyads initiated breastfeeding within two hours of birth? _____%

   Numerator: # of cesarean delivered, healthy infants who initiated breastfeeding within two hours of birth

   Denominator: # of cesarean delivered, healthy infants