The Academy Of Breastfeeding Medicine

ABM Protocols

A central goal of **The Academy of Breastfeeding Medicine** is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.

Protocol #10: Breastfeeding the near-term infant (35 to 37 weeks gestation)

GOALS

1. Promote, support, and sustain breastfeeding in the near-term infant
2. Maintain optimal health of infant and mother

PURPOSE

1. Allow infants born at 35 to 37 weeks of gestation to breastfeed and/or breast-milk feed to the greatest extent possible.
2. Heighten awareness of difficulties near-term infants and their mothers may experience with breastfeeding.
3. Offer strategies to anticipate, identify promptly, and manage breastfeeding problems that the near-term infant and mother may experience in the inpatient and outpatient setting.
4. Prevent medical problems such as dehydration, hypoglycemia, hyperbilirubinemia, and failure to thrive in the near-term infant.
5. Maintain awareness of mothers' needs.

DEFINITION

"Near-term infant" refers to infants born between $35^{0/7}$ to $36^{6/7}$ weeks of gestation. **Many problems of the near-term infant are also found in the larger 34- to 35-week preterm infant and the borderline term infant of $37^{0/7}$ to $37^{6/7}$ weeks gestation and, therefore, the following guidelines may be applicable to these infants as well.**

BACKGROUND

The advantages of breast-milk feeding for premature infants appear to be even greater than those for term infants. Establishing breastfeeding in the near-term infant, however, is frequently more problematic than in the full-term infant. Because of their immaturity, near-term infants may be sleepier and have less stamina; more difficulty with latch, suck, and swallow; more difficulty maintaining body temperature; increased vulnerability to infection; greater delays in bilirubin excretion; and more respiratory instability than the full-term infant. The sleepiness and inability to suck vigorously is often misinterpreted as sepsis, leading to unnecessary separation and treatment. Alternatively, the near-term infant may appear deceptively vigorous at first glance. Physically large newborns are often mistaken for being more developmentally mature than their actual gestational age. (Remember the 3.84 kg baby born at 40 weeks was 3.0 kg at 36 weeks of gestation.) Near-term infants are more likely to be separated from their mother as a result of the infant

being ill or requiring a screening procedure such as evaluation for sepsis, IV placement for antibiotics, and phototherapy.

Mothers who deliver near, but not at, term are more likely to deliver multiples or have a medical condition such as diabetes, pregnancy-induced hypertension, prolonged rupture of membranes, chorioamnionitis, pitocin induction, or a C-section delivery that may affect the success of breastfeeding. Any one or a combination of these conditions places these mothers and infants at risk for difficulty in establishing successful lactation or for breastfeeding failure.

The potential maternal and infant problems listed above place the near-term breastfeeding infant at increased risk for hypothermia, hypoglycemia, excessive weight loss, dehydration, slow weight gain, failure to thrive, prolonged artificial milk supplementation, exaggerated jaundice, kernicterus, dehydration, fever secondary to dehydration, rehospitalization, and breastfeeding failure. In places where early discharge is the norm, these infants will be sent home soon after delivery. Discussion and parental education become crucial in the proper management of breastfeeding.

Near-term infants have a greater chance of exclusive breastfeeding in hospitals that adhere to the Ten Steps to Successful Breastfeeding. To this end, practitioners should become knowledgeable in the Ten Steps and work with the administration in their maternity hospitals to endorse the guidelines set forth in the Ten Steps (see Protocol #7).

Most of the acute problems encountered in the newborn are managed on the postpartum floor in the first few hours and days after parturition; however, there are times that an infant's condition deteriorates in the interval between discharge and the first office visit. Therefore, timely evaluation of the near-term infant after discharge is critical. Just as many hospitals are becoming breastfeeding friendly, the outpatient office or clinic needs to be not only supportive of the breastfeeding mother, but also able to assist mothers with uncomplicated problems or questions related to breastfeeding. In addition, it is essential to be able to refer mothers and infants in a timely manner to a trained lactation professional for more complicated breastfeeding problems. A lactation referral should be viewed with the same medical urgency as any other acute medical referral.

PRINCIPLES OF CARE

1. Optimal communication
    a. Pathway and order set for breastfeeding the near-term infant
    b. Written feeding plan to follow on hospital discharge
    c. Facilitate communication among physician, nurses, and lactation consultants in the inpatient and outpatient settings
    d. Avoid conflicting advice to mother and family of the near-term infant
2. Assessment/reassessment
    a. Objective assessment of gestational age and associated risk factors
    b. Daily assessment of breastfeeding on the postpartum floor or special care nursery
    c. Careful assessment of breastfeeding issues in the outpatient setting
3. Timely lactation support in the inpatient and outpatient setting
4. Avoid separation of mother and infant
    a. Immediate postpartum period
    b. In cases in which either mother or infant is hospitalized for medical reasons
5. Prevent frequently encountered problems in breastfed near-term infant
    a. Hypoglycemia
    b. Hypothermia
    c. Hyperbilirubinemia
    d. Dehydration or excessive weight loss
6. Education
    a. Ongoing education of staff and care providers of issues specific to breastfeeding the near-term infant in the inpatient and outpatient settings
    b. Have one (or two) outpatient office support person (RN or lactation educator) trained in breastfeeding support, assessment, basic breastfeeding problem solving, and near-term breastfeeding issues
    c. Educate parents about breastfeeding the near-term infant
7. Discharge/follow-up
    a. Develop criteria for discharge readiness
    b. Establish a feeding plan to follow after discharge

c. Facilitate timely and frequent outpatient follow- up to assure effective breastfeeding after discharge
d. Careful outpatient monitoring of mother and near-term infant

Inpatient: implementation of principles of care

1. Initial steps:
   a. Communicate the feeding plan through a prewritten order set that can be easily modified.
   b. Encourage immediate and extended skin-to-skin contact to improve postpartum stabilization of heart rate, respiratory effort, temperature control, metabolic stability, and early breastfeeding.
   c. Assessment of gestational age by obstetrical estimate and Dubowitz scoring. Observe infant closely for 12 to 24 hours to assure physiologic stability (e.g., temperature, apnea, tachypnea, hypoglycemia).
   d. Encourage rooming in 24 hours a day. If the infant is physiologically stable and healthy, allow the infant to remain with the mother while receiving IV antibiotics or phototherapy. Depending on the individual situation, use of the bili-blanket during breastfeeds, as well as limiting time outside more intense phototherapy, may be necessary.
   e. Allow free access to the breast, encouraging initiation of breastfeeding within 1 hour after birth. Encourage continuous skin-to-skin contact as much as possible.
   f. Breastfeeding ad libitum (on demand) should be encouraged. It is very important that the infant be breastfed (or breast-milk fed) *at least* eight times per 24-hour period. Sometimes it may be necessary to wake the baby if he or she does not indicate hunger. A mother may need to express her milk and give it to the baby using a cup or other alternative feeding method. Mothers should be warned that use of bottles at this stage might prevent breastfeeding in some babies.
2. Ongoing care:
   a. Communicate daily changes in feeding plan either directly or with use of written bedside tool such as a crib card.
   b. Formal evaluation from a lactation consultant or other certified health professional with expertise in lactation management should be completed within 24 hours of delivery.
   c. Assess and document breastfeeding at least three times per day by at least two different providers with use of a standardized tool (e.g., LATCH Score,[2] IBFAT,[3] Mother/Baby Assessment Tool.[4]
   d. Educate the mother about breastfeeding her infant (e.g., position, latch, duration, early feeding cues, etc.)
   e. Monitor vital signs, weight change, stool and urine output, and milk transfer. Pre-post feeding weights where available, may be helpful, especially once lactogenesis II has occurred. Monitor for frequently occurring problems (e.g., obtain bilirubin if jaundiced before discharge, glucose screen before feeds for the first three feeds or until stable if hypoglycemia has occurred [see Protocol #1]). It is recommended to routinely screen for hyperbilirubinemia in near-term infants and to use standardized nomograms to assess risk of hyperbilirubinemia as well as plan for follow- up testing.
   f. Avoid excessive weight loss or dehydration. Losses greater than 3% of birth weight by day 1 or greater than 7% by day 3, ineffective milk transfer, or exaggerated jaundice are considered excessive and merit further evaluation and monitoring.
      i. The infant may need to be supplemented after breastfeeding with small quantities (5 to 10 mL per feeding on day 1, 10 to 30 cc per feeding thereafter) of expressed breast milk or formula. Mothers may supplement using a supplemental nursing device at the breast, cup feeds, finger feeds, syringe feeds, or bottle depending on clinical situation and mother's preference. Cup feedings have demonstrated safety in both preterms and term infants.[6] Cup feeding may also preserve breastfeeding duration among both preterm[7] and term[8] infants that require multiple supplemental feeds. However, there is little evidence about the safety or efficacy of other alternative feeding methods or their effect on breastfeeding. When cleanliness is suboptimal, cup feeding may be the best choice.[9]
      ii. If supplementing, the mother should pump or express milk regularly (use of a hospital grade electric pump is recommended when feasible) during the day (e.g., every 3 hours) until the baby is breastfeeding well or if the mother and infant are separated and unable to breastfeed.
      iii. Consider use of an ultrathin silicone nipple shield if there is difficulty with latch or evidence of ineffective milk transfer.[10] The use of nipple shields is controversial and generally requires close supervision of a trained lactation consultant or knowledgeable health care professional. Inappropriate or prolonged nipple shield use can decrease milk supply, and in some situations, nipple shields decrease, rather than increase, milk transfer.

g. Avoid thermal stress by using skin-to-skin (e.g., kangaroo) care or by double wrapping if necessary and by dressing the baby in a shirt and hat. Consider intermittent use of an incubator to maintain temperature. Where it is culturally acceptable, mothers can sleep with their babies to provide warmth.

3. Discharge planning

a. Assess readiness for discharge, including physiologic stability and adequate intake exclusively at breast or with supplements. May use 24-hour test weights, with a scale designed with adequate precision for such weights, for infants with >7% weight loss.[11]

b. Develop discharge-feeding plan. Consider diet, milk intake (mL/kg/day), and method of feeding (breast, bottle, supplemental device, etc.) If supplementing, determine method most acceptable to mother for use after discharge.

c. Make an appointment for follow-up within 48 hours of discharge to recheck weight, feeding adequacy, jaundice.

d. Communicate discharge-feeding plan to pediatric outpatient provider. Written communication is preferred.

Outpatient: implementation of principles of care

1. Initial Visit

a. The first outpatient office or home health visit should be when the infant is 3 to 5 days of life or 1 or 2 days after discharge.

b. Review the inpatient maternal and infant records including prenatal, perinatal, infant and feeding history (e.g., need for supplement in the hospital, problems with latch, need for phototherapy, etc). Gestational age, birth weight, and weight at discharge should be recorded in the outpatient chart.

c. Physician review of breastfeeding since discharge needs to be very specific regarding frequency, approximate duration of feedings, and how baby is being fed (e.g., at breast, expressed breast milk with supplemental device such as supplemental nursing system, finger feeds, or bottle with artificial nipple). Information about stool and urine output, color of stools, baby's state (e.g., crying, not satisfied after a feed, sleepy and difficult to keep awake at the breast during a feed, etc.) should be obtained. If parents have a written feeding record, it should be reviewed.

d. Examination of the infant must include an accurate weight without clothes and calculation of change in weight from birth and discharge, state of alertness, and hydration. Assess for jaundice with cutaneous bilirubin screen and/or serum bilirubin determination if indicated.

e. Assess the mother's breast for nipple shape, pain and trauma, engorgement, and mastitis. The mother's emotional status and degree of fatigue should be considered, especially when considering supplemental feeding routines. Observe the baby feeding at the breast, looking at the latch, suck, and swallow.

2. Problem Solving

a. Poor weight gain (<20 g/day) is most likely the result of inadequate intake. Median daily weight gain of a healthy newborn is 26 to 31 grams per day.[12] The care provider must determine whether the problem is insufficient breast milk production, inability of the infant to transfer enough milk, or a combination of both. The infant who is getting enough breast milk should have six to eight voids and yellow seedy stools daily by day 4, have lost no more than 8% of birth weight, and be satisfied after 20 to 30 minutes of nursing. Consider feeding more frequently or supplementing (preferably with expressed breast milk) after suckling if the mother is not already doing so or increasing the amount of supplement. Consider instituting or increasing frequency of pumping or manual expression. Consider referral to a lactation specialist.

b. For infants with latch difficulties, the baby's mouth should be examined for anatomical abnormalities [e.g., ankyloglossia (tongue-tied),[13] cleft palate], and a digital suck exam performed. A referral to a trained professional lactation specialist or in the case of ankyloglossia a referral to someone trained in frenotomy may be indicated.

c. The jaundiced near-term infant poses more of a problem when considering management of hyperbilirubinemia. Keep in mind all risk factors should be determined, and if the principal factor is lack of milk the primary treatment is to provide milk (preferably through improved breastfeeding or expressed breast milk) to the baby. Institution of phototherapy for breastfeeding jaundice either in the home or in the hospital may actually interfere with the primary treatment of getting increased quantities of milk to the baby.

d. Consider the use of a galactogogue (a medicine or herb that increases breast milk supply) in mothers who have a documented low breast-milk supply (see Protocol # 9).

e. The mother's ability to cope and manage the feeding plan needs to be evaluated. If the mother is not coping well, work with her to find help and or modify the feeding plan to something that is more manageable.

3. Follow-up

The near-term infant should have weekly weight checks until 40 weeks postconceptual age or until it is demonstrated that he or she is thriving with no supplements.

a. Babies who are not gaining well and for whom adjustments are being made to the feeding plan may need a visit 2 to 4 days after each adjustment. A home health provider, preferably trained in medical evaluation of the newborn and in lactation support, who reports the weight to the primary care provider could make this visit.

b. Near-term infants have less vitamin D stored at birth, increasing their risk for later deficiency. Depending on sunlight exposure and skin color, vitamin D supplements (200 IU/day) may be indicated if the infant is exclusively breastfed. Strong consideration should be given to starting these supplements earlier than the 2 months of age recommended for term infants in the United States. Consideration should also be given to supplementing the near-term exclusively breastfed infant with iron, as iron stores in these infants are not those of the full-term infant. The American Academy of Pediatrics Committee on Nutrition recommends 2 mg/kg/day of elemental iron for preterm breastfed infants in the form of iron drops from 1 to 12 months of age.

c. After the first week, infants should be monitored for adequate growth and evidence of normal biochemical indices (See Table P-4 from Protocol #12) Weight gain should average more than 20 g/day, and length and head circumference should each increase by an average of more than 0.5 cm/week.

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APPENDIX

Baby friendly hospital initiative steps for successful breastfeeding:

1. Have a written breastfeeding policy.
2. Train all health care staff in the skills necessary to implement the policy.

3. All mothers should be informed of the benefits of breastfeeding.
4. Help mothers initiate breastfeeding within 1 hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation, even if they are be separated from their infant.
6. Give newborn infants no food or drink other than breast milk, unless medically indicated.
7. Practice rooming-in, allow mothers and infants to remain together, 24 hours a day if medically stable.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them, on discharge form the hospital or clinic.