Supporting and Promoting Breastfeeding in Health Care Settings: Module 3: Hospital Care, Part 2

12/13/13

Four-Part Webinar Series

• Recommendations on how to examine, counsel, and teach breastfeeding to pregnant women and new mothers
• Targeted to clinicians and other health care providers
• Providers are encouraged to complete all four modules
  – Module 1 is targeted to prenatal providers
  – Modules 2 & 3 is targeted to hospital care providers
  – Module 4 is targeted to post-partum care providers
• Modules support Ten Steps to Successful Breastfeeding
Featured Speaker

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Disclosure Statements

The planners and presenters do not have any financial arrangements or affiliations with any commercial entities whose products, research or services may be discussed in this activity.

No commercial funding has been accepted for this activity.
Evaluations

Nursing Contact Hours, CME and CHES credits are available.

L-CERPS are available until December 2014

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• University at Albany School of Public Health

• NYS Department of Health
Overall Goals

• Provide guidance on examining, counseling, and teaching breastfeeding to women during pregnancy
• Improve rates of successful breastfeeding

Objectives – Module 3

• Describe how the “Ten Steps to Successful Breastfeeding” impact practice and quality improvement in hospitals
• Explain how breastfeeding and milk supply are established
• Describe the importance of exclusive breastfeeding
• List contraindications and precautions
• Explain the effect of maternal medications
• List best sources for medication information
# The Ten Steps to Successful Breastfeeding, 1-5

1. Have a written breastfeeding policy that is routinely communicated to all healthcare staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within one hour of birth.
5. Show mothers how to breastfeed and maintain lactation if separated from their infants.

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# The Ten Steps to Successful Breastfeeding, 6-10

6. Give infants no food or drink other than breast milk unless medically indicated.
7. Practice rooming-in 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no pacifiers or artificial nipples to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers after hospital discharge.
Steps Related to Breastfeeding Assessment and Management

6. Give newborns no food or drink other than mother’s milk unless medically indicated
8. Encourage breastfeeding on demand
9. Give no pacifiers or artificial nipples to breastfeeding infants

Preventing Problems

• Prevention is the most effective way to deal with the management of low milk supply, sore nipples and poor weight gain
• Understanding and being able to explain to mothers how normal breastfeeding is established is the key to prevention
Establishment of Breastfeeding: Hormonal Control

- Prolactin signals alveolar production of milk
- Oxytocin causes milk to be ejected into the duct system ("let down")
- Feedback Inhibitor of Lactation (FIL) – small whey protein - decreases milk production locally in breast
- Effective, frequent draining of breasts is essential to milk production

Feedback Inhibitor of Lactation

<table>
<thead>
<tr>
<th>Breast is full</th>
<th>Breast is emptier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased FIL</td>
<td>Decreased FIL</td>
</tr>
<tr>
<td>slows milk synthesis</td>
<td>speeds up milk synthesis</td>
</tr>
</tbody>
</table>

Infant suckles at the breast

Stimulation of nerve endings in mother’s nipple/areola sends signal to mother’s hypothalamus/pituitary

Hormones travel via bloodstream to mammary gland to stimulate milk production and milk ejection reflex (let-down).
Establishment of Breastfeeding: Infant Role

• Healthy newborns should breastfeed within first hour of life
• Newborns should feed at least 8–12 times per 24 hours
• Some normal early patterns include:
  – Nursing almost continuously for several hours then sleeping for several hours
  – Breastfeeding every 30–40 minutes for approximately 10 minutes around the clock
  – Frequent feedings during night
  – Every infant and mother are different

Establishment of Breastfeeding: Maternal Role

• Crying is a late sign of hunger in newborn
• Teach mother infant feeding cues:
  – Rooting
  – Sucking movements or sounds
  – Putting hand to mouth
  – Rapid eye movement
  – Cooing and sighing
  – Restlessness
Establishment of Breastfeeding: Colostrum

- Colostrum, is rich in host defense proteins, slgA, neutrophils
- Considered the infant’s “first immunization”
- Stimulates intestinal peristalsis which decreases enterohepatic circulation, encouraging elimination of bilirubin
- Small volume is normal:
  - 5-7 ml/feeding day 1
  - 5-15 ml/feeding day 2

Establishment of Breastfeeding: When the Milk “Comes In”

- Mature milk consists of foremilk (high volume, low fat) and hindmilk (low volume, high fat)
- Typically comes in at 2-5 days
- Transitional milk to 14 days
- Volume of milk and infant’s gastric capacity increase to about 60-80 ml
- Requires effective and frequent milk removal in the first week of life
Human Milk

- Mature milk
  - Occurs after 10-14 days
  - Volume continues to increase
  - Milk appears more watery in consistency
  - Breasts appear softer

Establishment of Breastfeeding: Feeding Assessment

- Proper positioning at the breast
- Proper latch and lip closure
- Sufficient areola in infant’s mouth
- Tongue extends over lower gums
- Adequate jaw excursion with suckling
- Effective swallowing motion
- Coordination of suck-swallow-breathe
Effective Breastfeeding

- Baby is content after feedings
- Audible swallowing during feedings
- Mother’s nipples are not sore
- 3+ stools/day after day 3
- No weight loss after day 3
- Breasts feel less full after feeding
Infant Assessment

- **Weight Loss**
  - Average loss of about 6% over the first 3-4 days
  - Loss greater than 8-10% mandates careful evaluation of breastfeeding

- **Weight Gain**
  - Begins with increase in mother’s milk production by at least day 4-5
  - Expect gain of 15-30 g/day (1/2 to 1 oz per day) through the first 2–3 months of life

Infant Assessment (cont.)

- **Expect**
  - 4-6 pale or colorless voids/day by day 4
  - 3-4 loose, yellow, curd-like stools after most feedings by day 4, continuing through the first month

- Infrequent stooling unusual in the first month; may indicate insufficient milk intake → evaluate

- Infrequent stools are common after the first month in the healthy breastfed infant
### Perception of Insufficient Milk Supply

- Very common
- Common cause for early weaning
- Only about 2-3% of women will not produce adequate amounts of milk for their babies

### Common Causes of Insufficient Milk Supply

- Anything that limits the infant’s ability to extract milk **effectively** and **frequently**, such as:
  - Separation of mother and infant
  - Formula supplementation
  - Scheduled intervals between feedings
  - Poor latch
  - Early use of pacifiers
  - Prematurity
### Reassurance

- If the infant is gaining weight well and stooling and voiding appropriately
  - Reassure mother her milk supply is adequate
  - Discourage supplementation with formula
  - Review normal patterns of breastfeeding, elimination, and weight gain

### Medical Indications for Supplementation

- Very low birth weight, some premature infants
- Hypoglycemia that does not respond to breastfeeding
- Severe maternal illness
- Inborn errors of metabolism
- Acute dehydration not responsive to routine breastfeeding or excessive weight loss
- Maternal medication use incompatible with breastfeeding
- Supplement with mother’s expressed milk (best), donor human milk or formula (requires a doctor’s order)

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*Academy of Breastfeeding Medicine Clinical Protocol #3: Hospital guidelines for the use of supplementary feedings in the healthy term breastfed neonate (www.bfmed.org)*
Neonatal Hypoglycemia

- No need to monitor asymptomatic low risk infants for hypoglycemia
- Routine monitoring of healthy term infants may harm the mother-infant breastfeeding relationship
- Early, exclusive breastfeeding meets the nutritional needs of healthy term infants and will maintain adequate glucose levels
- High-risk infants require glucose monitoring

Why recommend exclusive breastfeeding?

Rationale for Exclusive Breastfeeding

• Risks of supplementing with formula:
  – Decreased feeding at breast → Increased feedback inhibitor of lactation (FIL) in breast and reduced CNS stimulation → less milk is produced
  – Artificial nipples and pacifiers may interfere with infant’s ability to suckle effectively and may cause pain in mother
• Artificial milk interferes with immune system priming and gut colonization
**Gut-associated Lymphoid Tissue**

- Requires bacterial colonization after birth for optimal function
- Distinguishes innocuous antigens from pathogens
- Role in induction of T-cell activation
- Development of immunologic tolerance

**Prebiotics and Host Defense**

- Non-digestible oligosaccharides in human milk act in the colon as prebiotics
- Inhibit pathogen adherence, interfere with inflammation
- Stimulate up-regulation of protective cytokines
- Stimulate increased proliferation of probiotics bifidobacter and lactobacilli
Immune System Priming

- Probiotic bacteria
  - Regulate cytokine production
  - Enhance IgA secretion
  - Enhance tight junctions of intestinal barrier
  - Permit host defense without need for an inflammatory response (protects the epithelium)
  - “crosstalk” with toll-like receptors activates genes mediating immune and inflammatory responses

5. Show mothers how to maintain lactation when separated from baby

- Initiate milk expression within 6 hours of birth
- Combining manual expression and electric pump is best
- Avoid artificial nipples and bottles
- Feed by gastric tube, cup, supplemental device at breast, syringe, finger per mother’s preference and stability of infant.
Milk Expression

- Wash hands
- Use a good-quality electric pump for regular expression
- Express milk at least 6-8 times in 24 hours
- Milk storage
  - Chill as soon as possible.
  - Refrigerate milk for up to 4 days
  - Freeze for longer storage
10. Foster the establishment of breastfeeding support groups after hospital discharge

• Provide information on local resources on discharge from hospital
  – Knowledgeable physicians
  – Lactation specialists
  – Hospital support groups
  – WIC programs, peer counselors
  – La Leche League International and other mother-to-mother support groups

Community Support

• Promote community resources
• Communicate with lactation support personnel
• Know third-party payer coverage for breastfeeding services and supplies
• Encourage child care providers to support breastfeeding and feeding expressed breast milk
• Support breastfeeding in the workplace
• Advocate for supportive legislation
What are contraindications to breastfeeding?

Contraindications to Breastfeeding

- Infant with classic form of galactosemia
- Maternal HIV, HTLV-I, HTLV-II in U.S.
- Mothers receiving antimetabolite or chemotherapeutic agents, radioisotopes
- Maternal illicit substance use
- Medications incompatible (rare)*

Temporary Cessation

• Active herpes or varicella lesions on the breast
• Untreated, active TB (not latent TB)
• Antimetabolites, chemotherapeutic agents
• Radioactive isotopes

Conditions that are NOT Contraindications

• Maternal hepatitis A, B, C
• Maternal latent TB
• Maternal GBS infection
• Maternal carriers of CMV
• Tobacco smoking
• Maternal alcohol
• Maternal methadone
• Maternal fever
• Infant hyperbilirubinemia
Precautions

• Most common maternal infections are compatible with breastfeeding unless there are open lesions on the breast
• Specific antibodies will be concentrated in the milk and will help protect baby, so breastfeeding should be strongly encouraged if mother is ill
• Cleft lip, palate, prematurity and other problems with newborn require special help and should be referred to a lactation specialist

Maternal Medications

• Most common maternal medications are compatible with breastfeeding
• Short-acting compounds and feeding baby just prior to dose decrease infant exposure
• Antimetabolites and radioactive compounds are contraindicated (interrupt breastfeeding, don’t stop)
• Drugs affecting the CNS are usually safe, but must closely observe baby
Maternal Medications (cont.)

- Use good resources, consider risks of not breastfeeding
- New medications may not have been sufficiently studied yet; use safe alternatives
- Monitor infant for side effects
- Report adverse effects
- See LactMed for up-to-date reference materials

LactMed

[Image of LactMed database]

Summary

- Breastfeeding is the preferred feeding for almost all infants
- Skin-to-skin contact should be initiated immediately after delivery and breastfeed within first hour
- Supplementation is rarely indicated and interferes with successful lactation
- Good breastfeeding technique can help to minimize problems
- Close follow-up in the early days and weeks is essential for breastfeeding success
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