Breastfeeding the NICU patient

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Maternal Role Attainment
Ramona Mercer

• Commitment and Preparation of pregnancy - anticipatory stage

• Acquaintance, practice and physical restoration – first 2 weeks

• Approaching normalization 2 weeks to 4 months

• Integration of maternal identity - 4 months and beyond
Common Anticipation of Breastfeeding

Breastfeeding in the ICN
Nursing Care in the ICN is Based on: Ten Steps to Breastfeeding Vulnerable Infants

• Informed decision
  – Educating parents on the risks of not breastfeeding

• Establishment and maintenance of milk supply
  – Pump every 2-3 hours (8-10x day),
  – Daily assessment of milk supply

• Breastmilk management
  – Storing, handling, not wasting

• Feeding of breastmilk
  – Priority: (1) Colostrum (2) Fresh (3) Frozen (4) Donor
  – Trophic feeds: bolus vs. continuous to maintain important fats

10 steps continued

• Skin-to-skin care
  – Stabilize temp and respiration
  – Readiness to feed cues

• Non-nutritive sucking at the breast
  – Readiness to feed, monitoring

• Assessment of milk transfer
  – Test weights

• Preparation for discharge
  – Rooming in

• Appropriate follow-up
Review of Human Breastmilk for a Vulnerable Human Baby

Digests easier and more fully = Decrease NEC Risk

• Human milk proteins are more completely broken down and absorbed
  – Contains lipase to help digest important fats more efficiently.
  – Protective immune properties for the gut.

• Decreases infection risk
  – Live anti-infective and anti-inflammatory agents are available in fresh milk, even more in colostrum.

• Human-specific: types of fatty acids, hormones, enzymes and growth factors
  – Facilitates Vision decreased ROP Risk
  – Enhances CNS maturation

ICN Factors Associated With Challenges for Breastfeeding

• Unable to make enough breast milk/ worry about milk supply.
• Maternal-infant separation
• Maternity leave is used up while baby in hospital
• ICN stress
• Lack of privacy in the ICN
• Baby may not be able to breastfeed
  – At All
  – Partially
  – Well
  – Exclusively
Premature Infant Olfactory System

- When infants are provided with mom’s smell before a feeding:
  - Longer sucking bursts
  - More milk consumed
  - Shorter stays


Oral Care:
Involve parents whenever possible
Hand Expression

- Although for many moms (and nurses), hand expression feels awkward at first, do teach all moms the technique.
- Milk is not in the nipple, milk just comes through the nipple. Nipple is not the target of hand expression, milk is.
- Encourage hand expression of colostrum, many mothers will find it more productive than a pump in early days. Both can be used.

How to help a mother do hand expression

Kangaroo Care: Makes More Milk

Comfortable place to sit
Pillow support

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Early Oral Exposure to Breastmilk

- Drops of milk into baby’s mouth to:
  - Awaken baby’s senses: taste, smell, tactile
  - Provide nutrition
  - Promote normal flora
  - Provides GI tract w/sIgA and antibodies
  - Helps you teach manual expression
  - Mom-baby response and relationship
Early Oral Feedings

- There are many benefits to starting oral feedings at the breast before bottles
- Flow at the breast is responsive, the bottle flow is not
- Improved sO2, HR, RR, and temp compared to bottle feeding

Non-Nutritive Breastfeeding

- Nurses observe when the baby is ready
- MD/NNP order is required to initiate
- Feeding starts on a “dry” breast, after pumping
- Non-nutritive allows practice for baby and mom without flow
- Move to nutritive feeds requires an order.
First Nutritive Breastfeeding

- An order is required
- Supplement full, half or none of normal feed volume
- Frequency as tolerated (and the mother available)
- When possible delay bottles until full feedings at breast & weight gain, if feasible

NON NUTRITIVE BREASTFEEDING

- [https://www.youtube.com/watch?v=AwLeSQ7mwdo&t=1s](https://www.youtube.com/watch?v=AwLeSQ7mwdo&t=1s)
Nipples Shields

- Useful for some situations
  - Premature infants
    - One study with premature infants showed double the intake with a shield
    - Temporary use - usually about a month
  - Flat nipples
  - Inverted nipples

Breastfeeding Assessment

- LATCH Score is based on degree of effectiveness
  - 0 = Inability / full assistance needed
  - 1 = Somewhat challenging / in need of some assistance
  - 2 = Effective / can perform without assistance

- L- Latch
- A- Audible Swallows
- T- Type Nipple
- C- Comfort for Mom
- H- Holding Baby Independently
Breastfeeding Quality Scale

- Used to gauge amount of supplement needed on a sliding scale format
- Quality Ranges from:
  - Excellent (no supplement)
  - Good (0%-50% supplement)
  - Fair (50% supplement to 100% supplement)
  - Attempted (100% supplement)
  - Poor (100% supplement)
  - No Feed (100% supplement)

Supplement Decisions

- If baby breastfed, how well did he do?
- Base decision on:
  - Active feeding (with swallows) time
  - Breast softer? (may not apply for small volume)
  - Baby’s behavior
  - Baby’s clinical appearance
  - Swallowing
  - NOT on residual in NG-milk gets digested quickly
- Watch baby, mother is involved in the decision
Use of Breast Compression During a Feeding

• Breast compression will increase milk transfer. This can overwhelm a baby, or can be a helpful when help with transfer is needed. With care this can show parents what swallowing is supposed to look/ sound/ feel like.

• It is also an effective way to give baby an oral stimulus for an oral response.
  – Creating a mouth full of milk to initiate the need to swallow, rather than tapping on baby’s face or feet.

Use of Breast Compression continued

• The use of hand “compression and hold” (as tolerated) while baby is suckling can help encourage a sleepy, fatigued or distracted baby to continue feeding.

• Follow baby’s lead: Sucking burst, then compress and hold. When baby pauses to breathe and rest, mom to relax compression. Suck, compress and hold, relax.
Alternative Supplementation Methods: Bottles

Bottle feeding: there is no one best bottle nipple for breastfeeding…. Get more info from lactation professionals.

Alternative Supplementation Methods: Syringe Feeding

- Use Enteral Syringes for small volume supplement.
Baby P A

- **Prenatal and Birth History**
- **Infant Data:**
  - Birth Date: 1/16/2019
  - Birth Time: 11:28 AM
  - GA at Birth: Gestational Age: 27w4d
  - Birth Weight: 2 lb 3.3 oz (1000 g)
  - Gender: female

- **Maternal Data:**
  - 43 y.o. G1P0100 with chronic hypertension, type 2 DM and hypothyroidism
  - Assisted reproduction

Milk tracking
Post partum lactation note

• Babies’ mother was started electric breast pumping by her postpartum RN. During this lactation consult, the process for optimizing maternal milk production by using a breast pump was reviewed including: frequency and duration of pumping, set up, use of and cleanup of the equipment, and handling and storage of the expressed milk. Hands free breast pumping was demonstrated. Maternal breast massage and hand expression of the colostrum was also instructed and encouraged to further enhance maternal milk supply. In addition, written information on breast pumping and breastfeeding the ICN baby was given.

Supplementing with SNS
Starter Supplemental Nursing System (SNS)

- Drip chamber with valve
  - Valve drains towards baby
- Clamp for turning flow off and on
- Clamp for holding to clothing (not shown)

Some Infant Conditions that Impact Feedings at Breast

- Prematurity
- Respiratory Distress
- Cardiac defects
- Surgical Conditions
  - TEF (Tracheoesophageal Fistula)
  - Abdominal Surgery
  - CDH (Congenital Diaphragmatic Hernia)
  - Gastrochisis
  - NEC (Necrotizing Enterocolitis)
- Neurological insult
- Medications
- Cleft lip/palate
- Pierre Robin
- Small jaw or tongue
- Tongue-tie
- Clavicle fracture
- Torticollis
- In-utero position
Issues Affecting Feeding

More Feeding Challenges for a Vulnerable Baby

• Tubes in the way of searching for the nipple. May not have energy to search. To push a bottle nipple into baby’s mouth doesn’t allow baby’s natural cues for feeding readiness.

• Grasping and keeping the nipple deeply in the mouth requires fat cheek pads for stability.

• Creating and maintaining a seal requires toned lips.

• Coordination is required between the GI, Respiratory and CNS that our OT team is awesome at assessing for.

• Last, but not least, is a good position and latch between baby and mother.
Positions

Upright Football

Nola Breast Support

Cross Cradle

Cradle

Side-Lying

Football
Positions

Laid Back

Cradle

Baby's condition influences positioning

Baby with cast on pelvis
Latching Tips

- **Allow** baby to participate
- **Align** baby for the widest latch
- **Assess** after latched
- **Adjust** during feeding as needed

Unwrap Babies’ Feeding Instincts

- Babies use their hands, mouths, cheeks, chin, lips, tongue and body to search for the nipple. Unwrap baby.
- The process of searching before latch increases mom’s oxytocin, therefore the potential for release of milk.
- Allowing babies to search catalyzes the parasympathetic nervous system
  - =Rest and Digest.
Supporting Baby’s Body

Tips:
- Baby’s ear-shoulder-hip in alignment
- Baby’s spine and shoulder girdle should be well supported between mom’s body and her entire arm
- Cross cradle/cradle: tuck baby under mom’s opposite breast
- Football hold: baby’s belly against mom’s lateral rib cage

Assess Once Latched

continued

Hear: Swallows may sound like- “G” or “Kah” or “puh” sound

Colostrum= 5 to 9 sucks:1 swallow
Milk= 1 to 3 sucks:1 swallow

Mom should feel a pull rather than a pinch
If the nipples are injured, a sting will also be felt.
Multiples may be fed at same time, once each are feeding well.

Digital Suck Assessment

• Using your gloved finger, pad side up, tickle nose to top lip.
• Wait for root and opened mouth.
• Drop finger on tongue.
• Allow baby to suck finger back to as near the hard-soft palate junction as baby will allow.
Digital Suck Assessment:
What you might feel...

You may feel:
• good cupping and suction of your finger
• tongue thrusting
• tongue against palate
• higher than normal hard palate
• super-sensitive gag reflex

Transporting Frozen Milk

• Small insulated bag for few bottles, with blue ice pack
• Place milk together, using commercial freezer packs instead of ice
  - Water freezes at a warmer temperature than milk, so will thaw milk sooner
• Pack to eliminate air
  - Use blankets, crumpled paper, plastic bags
Breastfeeding Support in the Community

- LC Clinic visit
- Private LC’s
- WIC
- Family
- Mothers’ groups
- Baby centers
- La Leche League

- OB for breast problems
- Pediatrician for baby problems