Successful breastfeeding in the NICU
Interventions to improve breastfeeding outcomes both in and after the NICU
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Before we start
- Recognize your own bias
- Recognize your own needs
- Recognize what’s at stake
- Recognize what resources are available to you

Embracing the Science of Human Milk
- What has changed in how breast milk and breastfeeding is viewed in healthcare?
  - How does this compare with the changes in other areas of NICU care?
  - Do we as NICU nurses, embrace these changes in recommendations as fully as we embrace other quality measures? (IVH, Infection Prevention...)

From the AAP
- "The potent benefits of human milk are such that all preterm infants should receive human milk... If the mother’s milk is unavailable despite significant lactation support, pasteurized donor milk should be used.”

From NANN
- “Breast milk is the feeding of choice for neonates and should be used unless medically contraindicated.”

Embracing the Science of Human Milk

What’s Working?
- Washington’s breastfeeding rates (CDC: Breastfeeding Report Card 2016)
  - Ever breastfed: 87.4%
  - Exclusive Breastfeeding at 3 months: 51.7%
  - Exclusive Breastfeeding at 6 months: 28%
  - Breastfeeding at 12 months: 39.4%

- Nec rates
  - VON Data:
  - Outcomes are improving! It’s working!

Where do we Struggle?
- Initiating milk supply
  - Coordination between departments, between hospitals, between providers...
- Maintaining milk supply
  - Keeping mom motivated over days, weeks and months
- Transitioning a NICU baby to the breast
  - Are we encouraging physically breastfeeding?
  - Do we have the infrastructure to promote physically breastfeeding?
  - Is mother able to stay in the room?
  - Is mother traveling across the city, county, state?
  - Do we see this as a necessity or a nicety?
Initiating Milk Supply

- **Prenatal education**
  - Outreach and coordination with OB providers and especially High Risk OB providers
  - Mothers anticipating a preterm birth need to know that they CAN make milk, and they need to know why they should.
  - Women who think their provider is indifferent to breastfeeding are more likely to discontinue breastfeeding early. (Stube 2009)
  - Women who think their provider encourages breastfeeding are more likely to breastfeed longer. (Stube 2009)

- **Inpatient Antenatal education**
  - Coordinated outreach with referral antenatal units to provide appropriate lactation information.
  - NICU staff visiting mothers on hospital bedrest should include information on pumping immediately postpartum and the importance of her milk.

- **Early postpartum**
  - Coordination with L&D/WNC teams to initiate pumping (ideally hand expression combined with pumping) within the first 6 hours postpartum.
  - Followed by regular pumping q 2-3 hours.
  - Breastfeeding initiation as soon as possible for late preterm and term infants.
  - Skin to skin as soon as possible* for all infants.
  - Postpartum lactation consult ideally within 24 hours to review mother’s medical history, reinforce pump education provided by bedside nurse, and review stages of lactation.
  - Avoid paternalism. Support the family’s goals. Provide best practice.

- **Do your policies support these interventions?**
- **Does your charting support these interventions?**
- **Are your outcomes reflecting best practice?**
- **Are your outcomes reflecting areas to improve?**

Initiating Milk Supply

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Maintaining Milk Supply

- **Keep in mind this may be days, weeks or months.**
  - Appropriate interventions for the stage of lactation.
  - Pumping frequency recommendations may change after milk supply becomes stable.
- **Reinforce the importance of mothers own milk and the value of what mother has been able to provide thus far.**
- **Support all volumes.**

Transitioning a NICU Baby to the Breast

- **Feeding skills begin around 32-34 weeks.**
- **Allow for gavage feedings while infant is being held at the breast.**
- **Provide for frequent Skin to Skin time.**
- **Nipple shield use is appropriate and encouraged for preterm infants.**
  - Nipple shield use increased milk transfer an average of 15 ml per feeding. (Meier et al. 2000)
  - Nipple shield use can decrease let down response effectively assisting baby in flow management.
- **Monitor infant for challenges of latch, flow management and coordination.**
  - If you would assist mother in bottle feeding, you should be assisting her with breastfeeding.

Transitioning a NICU Baby to the Breast

- **Consider having mother pump “briefly” (2-3 minutes) before putting baby to breast if baby is unable to handle the milk flow at let down.**
- **Except under very rare circumstances, mother does not need to “pump to empty” or “dry breast” before breastfeeding practice.**
- **There is deficient data (none?) on limiting breastfeeding with unlimited bottles, (ie Infant may breastfeed once per day, all other feedings by bottle).**
The amount of Kangaroo Care time a family has before infant’s discharge directly correlates with long term breastfeeding success. (Flacking et al. 2011)
- Whenever possible enable breastfeeding.
- AC/PC weights may be needed when careful intake monitoring is necessary.
- Use your feeding resources! Lactation, Speech, Dietitian

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Breastfeeding vs. Bottle Feeding Breast Milk (Riordan & Wambach 2010)
- Babies who are physically breast fed get breast milk longer than their “bottle fed breast milk” peers.
- Suckling behaviors are different
  - Nutritive and non-nutritive vs. just nutritive
  - More suckling with breastfeeding
  - More mandibular movement with breastfeeding
- Less desaturations
- Less bradycardia

- Feeding skill development takes practice.
- Babies often sleep at breast because they feel safe and comfortable.

- Low Milk Supply
  - Actual low supply or appropriate for days postpartum?
  - Beware our wording often follows the patient
  - Actual low milk supply or supply decreased from an overproduction?
  - Early intervention with lactation if possible
  - Often reluctant to practice breastfeeding which makes the issue worse.
  - Often the recipient of good intended bad information

- Interventions for low milk supply
  - Utilizing AC/PC weights for reference points
  - Bottle supplementation
  - Continued breastfeeding
  - Time limitations may be necessary

Overproduction of milk
- Intervention with a lactation consultant to help gradually decrease supply and monitor for foremilk/hindmilk imbalances.
- Often the recipient of good intended bad information.
- May feed for short durations, giving the impression of a minimal intake.
- Often appear to feed well but struggle with weight gain, fussiness, and/or loose stools.

- Fat soluble vitamin levels (particularly A & E) are higher in hindmilk. If hindmilk is fortified and given by bottle/gavage at every feeding, daily recommendations of these vitamins may exceed daily recommendations. (Bishara et al. 2008)
Interventions for over production
- AC/PC weights if needed—remember we are building trust.
- Mom should continue pumping if baby is preterm, she has an over supply, or baby is being supplemented
- Appropriate outpatient follow up

Collect the Data
- You can't know it's working if you don’t collect the data!
- Look at your breastfeeding initiation rate
  - How many of your families get to leave your unit breastfeeding?
  - How many of your patients get to leave your unit receiving their mother’s breast milk?
  - How many of the mothers at your birthing facilities are pumping within 6 hours of delivery if separated from their infant?
  - How many times are your patients physically breastfed before discharge?
  - What are your families saying?

References
- Flacking, R., Evard, U., & Wallin, L. (2011). Positive Effect of Kangaroo Mother Care on Long-Term Breastfeeding in Very Preterm Infants. JOGNN. 40(2); 190-197