Promoting Breast Milk Feeding in the NICU

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Breast milk feeding among preterm infants has been shown to decrease some common neonatal complications, including necrotizing enterocolitis (NEC), retinopathy of prematurity, infections, and poor neurodevelopmental outcomes.

Breastfeeding and breast milk feeding has also been linked to reducing risk and incidence of:

- Respiratory tract and ear infections
- Sudden infant death syndrome
- Allergic disease (asthma, allergies, and eczema)
- Inflammatory bowel disease
- Obesity
- Diabetes

As a result of being selected to participate in the Best Fed Beginnings Learning Collaborative, Loyola is participating in quality improvement methods to test, share, and implement improvement strategies that will lead the hospital towards Baby-Friendly designation.

During 2010, it was found that <20% of infants admitted to Loyola Neonatal Intensive Care Unit (NICU) were receiving feedings of breast milk (BM) or breast milk with fortifier (BMF) as a sole source of nutrition at the time of discharge. Additionally, 44% of these infants were discharged with formula-only feedings.

Can we do better?
Promote breastfeeding and breast milk feeding in the NICU to health care providers and infant caretakers in order to increase the use of human milk feedings for all NICU infants regardless gestational age and weight.
Project Goals

- Increase the percentage of breast milk-only feedings on admission to the NICU.
- Decrease the percentage of formula-only feedings upon discharge from the NICU.

Ultimately, we want to help mothers to produce breast milk for a longer duration therefore allowing for more babies to feed at the breast when they go home.
Solutions Implemented (Over 3 years)

- Developed the “NICU Breastfeeding Protocol” which includes information about breastfeeding positions, appropriate latch, Kangaroo Care protocol, and how to dialogue with the parents about breastfeeding.
- The NICU Breastfeeding Committee consisting of 7-9 nurses studied the NICU Breastfeeding Protocol to become experts and sources of information for other nurses and breastfeeding mothers.
- In-serviced all NICU nurses on the NICU Breastfeeding Protocol.
- Continued education of the entire health care professional team in the NICU on the benefits of breast feeding.
- Provided education, counseling, and support to our breast feeding mothers prior to and during their baby’s NICU stay.
- Created of a breastfeeding order set which will be in place for all infants in the NICU upon admission.
- Full-time neonatal nurse became a certified lactation consultant and has offered to provide counseling services to lactating mothers in the unit.
- Increased number of lactation consultants in postpartum unit from 1 to 3 who are also available to consult mothers in the NICU.
Breast Milk-only Feeds on Admission From 2010-2013

Total N = 992
Formula-only Feeds on Discharge From 2010-2013

Total N = 994
### 2010 and 2012-13 Comparison

#### Discharge Feeding Type in 2010
- Both: 37.0%
- BM + BMF: 19.1%
- Formula: 43.8%

N = 324

#### Discharge Feeding Type in 2012-2013
- Both: 31.9%
- BM + BMF: 29.3%
- Formula: 38.9%

N = 386
Analysis of Results

- Overall there has been an increase in the percentage of infants admitted to the NICU who were started on breast milk-only feeds from 2010 to 2013.
- There has also been an overall decrease in the percentage of infants discharged from the NICU who were taking formula-only feeds.
  - Incidentally, it was decided to monitor our progress based on formula-only feeds at discharge because it has become common practice in our NICU to discharge infants who require higher calorie diets (preterm, late-preterm, small for gestational age) with supplemental formula feeds in addition to breastfeeding feeds.
- Formula-only feeds on discharge decreased from 44% to 39% from 2010 to 2012/13.
- Breast milk-only feeds on discharge increased from 19% to 29%.
Lessons Learned

- Promoting breastfeeding prenatally and during the first few days of the infant’s life can improve breast milk usage.
- Having a collaborative approach to support breastfeeding mothers is important.
- Having a Breastfeeding Protocol allowed uniform patient care and promotion of breastfeeding.
- Mothers who provided breast milk for the first feedings were more likely to continue producing breast milk at discharge.
Next Steps

- Implement the Breast Feeding Order Set into EPIC and use for all NICU admissions.
- Continue steps towards attaining Baby-Friendly designation.
- Improve the NICU breast pump room aesthetics to make it a pleasurable experience for pumping moms.
- Make access to hospital-grade breast pumps easier for mothers once discharged from the hospital.
- Continue education for all health care providers on benefits and how-to of breastfeeding.
- Ultimate future goal: Attain donor breast milk to use in our NICU, especially for extremely premature and low birth weight infants.
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*A review by Manager/AD/Medical Director/VP is recommended prior to submission.*

Reviewed By: __________________________
Date __________________________