Early Initiation of Breastmilk Expression in NICU Mothers

Felicitas T. Cacal DNP, MSN, RN, CNM, RNC-OB, C-EFM

Problems
- Breastmilk has been identified as the preferred choice for infant nutrition in the first 6 months of life (World Health Organization, 2018).
- Breast milk provides unique protection for the vulnerable NICU population (Ikonen et al., 2018).
- The inconsistent immediate breastfeeding support for NICU mothers has been identified in the literature as a practice gap (Ikonen et al., 2018; Spatz et al., 2015).
- Supportive interventions begin with early breastmilk expression. Early expression is associated with an increased chance for successful lactation and sustainability of milk supply (Lizarondo, 2018).

Clinical Question
- For mothers separated from their infant due to a NICU admission at a mid-sized medical unit in the Midwest, will the implementation of the U.S. Baby-Friendly guideline, compared to current practice, increase rates of breastmilk expression within 6 hours post-delivery in 11 weeks?

Project Implementation
- Theoretical framework: Swanson’s middle-range theory of caring and the Plan-Do-Study-Act (PDSA) change model.
- Project setting: Women and Children’s Department at a Mid-sized Medical Center in the Midwest.
- Population: 62 of mothers of infants immediately admitted to the NICU post-delivery (33 pre-intervention, 29 post-intervention).
- Data collection: Breastfeeding audit tool to collect date/time of delivery and initiating of pumping.
- Evaluation: Comparison of number of mothers who initiated pumping within the 6 hour timeframe pre and post implementation.
- Data analysis: Relative Risk and Average birth-to-pump time.

Results
- Seventy percent (n=23) of women delivering in the pre-intervention period pumped within six hours of delivery and 79% (n=23) of post-intervention women pumped within six hours.
- The relative risk for the intervention was 1.14 (95% CI: 0.85, 1.43), in other words women post intervention were 14% more likely to pump within six hours of birth than women giving birth prior to the intervention.
- The average birth-to-pump time for the implementation group decreased by 14% with the implementation group pump time for the implementation group decreased by 14% with the implementation group decrease.

Implications
- Maternal/Newborn units should couple the policy with staff education to ensure consistent nursing interventions and patient education by staff (Parker et al., 2018; Shattawi, 2017; Briere et al., 2015; Meier et al., 2017).
- Support from nursing staff plays a key role in long term breastfeeding success by providing vital anticipatory guidance and support for the patient and family (Meier et al., 2017; Spatz et al., 2015).

Conclusions
The combination of a breastmilk expression policy and standardized healthcare provider education is key to improving birth-to-pumping initiation times and adherence with Baby-Friendly guidelines.

Acknowledgements/Hospital Team
- Crystal Pearson DNP, CNM
- W&I Nursing Practice and Quality Team
- Barbara Diamond BSN, RN, RNC-MNN (Chair)
- Alexandria Pearson BSN, RN, RNC-OB (Co-Chair)
- Hope Sasau-Byun, RN, RNC-MNN
- Agathel Sezolotl SGN, RN
- Etty Mackenzi, BSN, RN
- Vanessa Istvanyi, RN, RNC-MNN
- Rosalinda Diminoz SGN, RN
- Joan Monarca BSN, RN
- Heidt Costanera, RN, RNC-MNN
- Kathryn Lopez, RN, RNC-MNN
- Jamie Kelly M Sinn, RN, RNC-OB (Educator)

References
- Briere et al., 2015; Meier et al., 2017.