

Early Initiation of Breastmilk Expression in NICU Mothers



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

Problem

- * 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 midsized 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-implementation, 29 post-implementation)
- * Evidence-based intervention: The Baby-Friendly Guidelines of initiating pumping within 6 hours of delivery in mothers separated from their newborn (UNICEF & World Health Organization, 2018).
- ❖ Data collection: Breastfeeding audit tool to collect date/time of delivery and initiation 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

Acknowledgements/Hospital Team

Crystal Paunan DNP, CNE

W&I Nursing Practice and Quality Team

Barbara Diwisch BSN, RN, RNC-MNN (Chair)

Alexandria Pearson BSN, RN, RNC-OB (Co-Chair)

Hope Suasin BSN, RN, RNC-MNN

Agatha Sowizral BSN, RN

Edyta Mackiewicz, BSN, RN

Vanessa Iovinelli RN, RNC-MNN

Rosalinda Dionisio BSN, RN

Joan Monarca BSN, RN

Heidi Costenaro RN, RNC-MNN

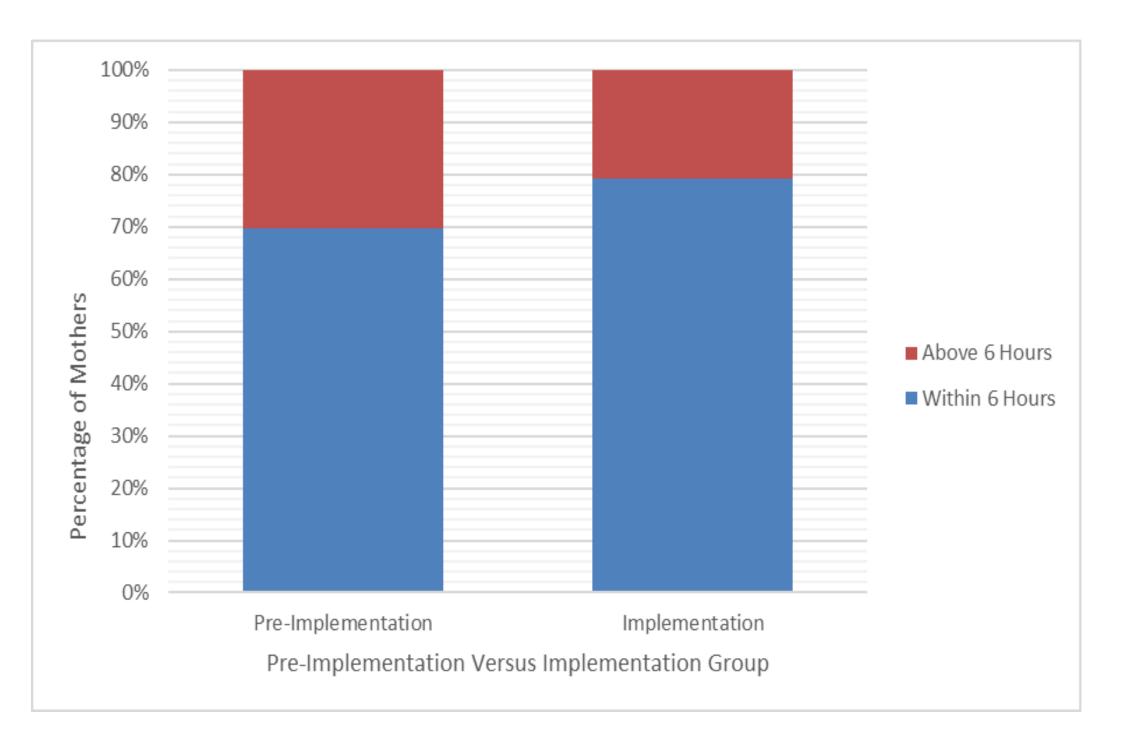
Kathryn Lopez RN, RNC-MNN

Jaime Kelly MSN, RN, RNC-OB (Educator)

Women and Infants Team

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: .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-to-birth time averaging 5 hours and 23 minutes with a standard deviation of 4.258.



<u>Implications</u>

- Auternal/Newborn units should couple the policy with staff education to ensure consistent nursing interventions and patient education by staff (Parker et. al., 2018; Shattnawi, 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.

References

Ikonen, R., Paavilainen, E., Helminen, M., & Kaunonen, M. (2018). Preterm infants' mother's initiation and frequency of breast milk expression and exclusive use of mother's breast milk in neonatal intensive care units. Journal of Clinical Nursing, 27, e551–e558. doi: 10.1111/jocn.14093

Lizarondo, L. (2018). Evidence summary: Expression of milk for pre-term infants. The Joanna Briggs Institute EBP Database, 1–5. DOI: 10.11124/JBISRIR-2017-003534

Spatz, D., Froh, E., Schwarz, J., Houng, K., Brewster, I., Myers, C., ... Olkkola, M. (2015). Pump early, pump often: A continuous quality improvement project. The Journal of Perinatal Education, 24(3), 160–170. http://dx.doi.org/10.1891/1058-1243.24.3.160

UNICEF & World Health Organization. (2018). Protecting, promoting ad supporting breastfeeding in facilities providing maternity and newborn services: The revised Baby-Friendly Hospital Initiative. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/272943/97