

NeoQIC Human Milk Quality Improvement Collaborative, 2015-17

Mother's breast milk for very low birth weight (VLBW; <1,500) is critical because it reduces risk of serious intestinal infections (necrotizing enterocolitis; NEC) and blood stream infections, and improves brain development. Therefore, the NeoQIC Human Milk Quality Improvement (QI) Collaborative, comprised of 10 of 10 Level 3 NICUs in Massachusetts, worked to improve mother's milk in this vulnerable population across the state.



NeoQIC Human Milk QI Collaborative Fall 2017

GOALS

- Increase the rate of any and exclusive mother's milk use in the 24 hours prior to discharge/transfer among VLBW infants
- Reduce racial/ethnic disparities in rate of any and exclusive mother's milk use

VON BASELINE DATA (2011-2014)

To set a baseline for our collaborative, we examined VON data from 2011-2014 among Level 3/4 Massachusetts NICUs, and found that use of any mother's milk at discharge/transfer varied by from 46% to 86%, with substantial variation among racial/ethnic groups.

ABOUT THE 3-YEAR COLLABORATIVE (Funded by the W.K. Kellogg Foundation)

INFRASTRUCTURE

- Key Driver Diagram: Based on the evidenced-based hospital practices to promote mother's milk
- REDCap Database: Captured robust human milk metrics over the NICU hospitalization
- Hospital Teams: Multidisciplinary teams made up of neonatologists, perinatal specialists, nurses, dietitians, lactation consultants, families
- Leadership Team: Experts in QI coaching, QI data management, and breastfeeding for NICU populations
- Education materials for families: Written materials in 8 languages; Videos in English/Spanish; freely available: <http://www.neoqic.org/humanmilk/human-milk-educational-materials>



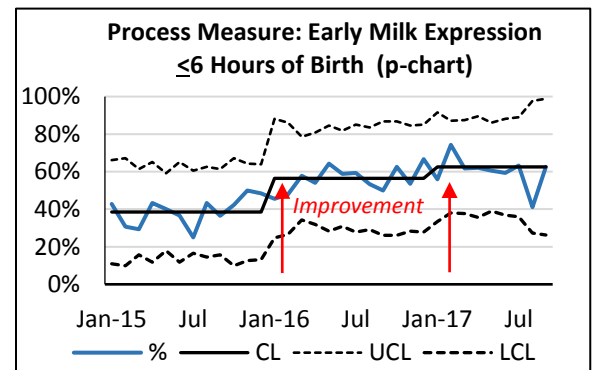
NICU mother getting prepared for skin to skin care

QUALITY IMPROVEMENT WORK

Hospital teams completed over 60 Plan-Do-Study-Act (PDSA) cycles focused on improvements in 4 target areas: (1) parental education; (2) early milk expression; (3) mother's milk continuation; and (4) preparation for direct breastfeeding in the home environment. QI education was provided through monthly homework and newsletters, quarterly webinars, bi-annual conferences, and leadership site visits. Teams openly shared their on-going successes and challenges which translated to rapid learning and momentum.

RESULTS

- 1,897 VLBW infants entered into our database, as of 11/2017
- 82% of VLBW infants with any mother's milk at 1 month, and 64% with any mother's milk at discharge/transfer
- There have been notable improvements in our process measures focused on the first month of life, but not our outcome of mother's milk at discharge/transfer
- No change in NEC, any late-onset sepsis, and infant growth
- VLBW infants with Hispanic mothers have the lowest rate of mother's milk at discharge/transfer (48%), compared to non-Hispanic black (57%) and non-Hispanic white (70%)



NEXT STEPS

- Our leadership team plans to move our work to other areas of the US, with the on-going focus to improve mother's milk use for vulnerable, VLBW infants and reduce racial/ethnic disparities that exist

For more information contact Collaborative Director, Dr. Margaret Parker, at Margaret.Parker@bmc.org

