

Cancer Science & Pediatrics 2019: Breast feeding and human milk use in the neonatal intensive care unit - Fawaz T Kashlan - Prince Sultan Military Medical City, Saudi Arabia

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Breast milk is considered the ideal nutrition for full-term infants. Its advantages for the feeding of preterm infants have received increasing attention. Described benefits for premature infants include prevention of infection, a reduction in the rate and severity of necrotizing enterocolitis and retinopathy of prematurity, and a possible beneficial effect on later intelligence. Because of infant immaturity and/or neonatal morbidity, most mothers of very low birth weight infants (VLBW <1500 g) need to express breast milk for weeks and sometimes months before their infant is able to nurse at the breast. Rates of successful lactation for mothers of preterm infants, especially VLBW infants, are low. We will explore ways to improve and sustain breast milk feeding for infants admitted to our NICU and possibly to postnatal ward.

Breast milk feeding protocol for improvement must be written and implemented. It should also be monitored to assess the magnitude of improvement and compliance. This was NICU quality improvement project which faced many difficulties. In the third edition of *The Use of Human Milk and Breastfeeding in the Neonatal Intensive Care Unit*, NANN recommends that all infants should be exclusively breastfed for the first 6 months of life with continued breastfeeding for 1 year or more. Data from the Centers for Disease Control and Prevention's 2014 Breastfeeding Report Card¹ reveal that only 18.8% of infants are exclusively breastfed for the first 6 months of life, which is far below the Healthy People 2020 goal of 60.6%.

This revised position statement includes the following recommendations for increasing breastfeeding rates: prenatal lactation intervention should focus on education so that families can make informed decisions, milk supply should be maintained through the use of a hospital-grade electric pump and daily ongoing assessment of maternal milk volume to ensure that mothers come to full milk volume and sustain milk production,³ oral care with human milk should be used to promote immunological defense as well as positive oral experiences for the infant, human milk management, prioritization of fresh milk, and optimizing human milk feedings including the use of donor milk as a bridge to mother's own milk, and vulnerable infants should be transitioned to at-breast feedings as soon as possible prior to discharge and an electronic scale should be used to measure pre- and post-weights to determine milk transfer. Recent research by Hallowell and colleagues⁵ demonstrated that only 49% of neonatal intensive care units had lactation consultants

employed in the neonatal intensive care unit and nurses only reported providing breastfeeding support 13% (median) of the time during their prior shift. All neonatal nurses should possess evidence-based knowledge regarding the science of human milk, lactation, and breastfeeding. As the professional voice of neonatal nurses, NANN recommends that nurses integrate lactation support and care into their daily routines to ensure that vulnerable infants receive human milk through discharge and beyond.

Human milk remains the preferred feeding for all infants, including premature and sick newborns. However, mother's milk is not sterile, and expressed milk can be a source of commensal and pathogenic microorganisms. Microbiological quality standards for the use of expressed human milk in hospitals are not available, unlike for donor or formula milk. To document current practices for the use of human milk in the neonatal intensive care units (NICU) in Belgium and Luxembourg, both for mother's own milk and donor milk, a questionnaire was sent to all 20 neonatal units. Of the 19 units that completed the survey, 47% perform bacteriological testing of expressed milk.

Applied bacterial count limits for the acceptable level of contamination differ among units, for both commensals and pathogens. Only six units have a device for pasteurizing milk at their disposal. Storage time in the refrigerator for fresh milk varies between 24 hours to 7 days before use. Access to donor milk is limited. Routines for handling of human milk differ widely among NICUs in Belgium and Luxembourg. An assessment of current issues through a structured survey is a useful tool in the development of best practice guidelines.