

Evidence: Mother's milk best for preemies

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Despite several years of research providing the medical and economic evidence that feeding a mother's own milk to very low birth weight infants improves clinical and financial outcomes, multiple barriers to mothers' providing their own breast milk for infants in the neonatal intensive care unit to persist.

In an article in the October 2016 issue of the *Journal of Pediatrics*, a leading human milk scientist provides guidance that NICUs can use to "frame the argument for the superiority of [mothers'](#) own milk over donor human milk with families, peers and hospital administrators in a manner that results in high doses and longer exposure periods for MOM use in very [low birth weight](#) infants.

The article, "Donor Human Milk Update 2016: Evidence, Mechanisms and Priorities for Research and Practice" documents how the use of pasteurized donor human milk has steadily become the standard of care for these most vulnerable patients when mothers' own milk is not available. Meanwhile the general term "human milk feeding" is used by researchers and administrators to describe both mother's own milk and donated milk (or combinations of the two) despite the fundamental differences in the two, according to the lead author, Paula Meier, PhD, Rush University Medical Center's director for Clinical Research and Lactation, Special Care Nursery and a Professor of Pediatrics and Women, Children and Family Nursing.

"While there is a substantial body of research showing that a mother's own milk is the most effective option for greatly improving the health of hospitalized, very low birthweight infants, NICU care providers need to be able to make the evidence-driven argument that mother's own milk is the most cost effective option as well," Meier said. Rush's Aloka L. Patel, MD, attending neonatologist and associate professor of pediatrics, and Anita L Esquerra-Zwiers, PhD candidate in the Rush College of Nursing are contributing authors.

"Human Milk Feeding" category blurs the lines

The authors reported that researchers and quality improvement executives tracking outcomes for very low birthweight infants (those born weighing less than 1,500 grams) have increasingly used the general

term "human milk feeding" to refer to both MOM and DHM, seemingly ignoring the fundamental, scientific differences between the two. The use of this common indicator is "clinically significant because quality improvement initiatives about human milk feeding are undertaken to reduce the prevalence of specific morbidities for which a mother's own milk, but not donated milk, is protective," Meier said. "Thus, when high-dose human milk feedings consisting mostly of donated milk fail to reduce sepsis and are associated with slow growth, these findings are generalized to a mother's own milk as well."

Not distinguishing mother's own milk from donated milk, the researchers say, can have a profound economic impact. A growing body of evidence indicates that receiving a mother's own milk, especially in high doses very soon after birth reduces the risk of acquiring very costly conditions in very low birthweight infants including sepsis, chronic lung disease and, especially, necrotizing enterocolitis, a devastating disease that affects mostly the intestine of premature infants.

Beyond the NICU, not accounting for the fundamental differences between a mother's own and donated milk also ignores broader and longer term studies connecting mother's own milk and improved overall development and lower lifetime health and educational costs.

But the authors summarize best practices for acquiring and using mother's own milk, thereby providing evidence for NICU leaders to use in prioritizing needed resources. The researchers describe a series of modifiable barriers that make it difficult for mothers to provide their own milk for their hospitalized infants, who must remove milk by breast pump up to 8 times daily for weeks or months at a time. For example, insurance companies often provide ineffective and inefficient breast pumps that fail or are uncomfortable to use and NICUs typically lack sufficient freezer space to safely store all mothers' milk in the hospital, telling mothers to care for their pumped milk at home. Most importantly,

the authors document that hospitals do not invest in NICU-specific, evidence-based practices known to optimize milk volume, such as helping mothers use the breast pump within the first hour after birth and incorporating daily monitoring of mothers' pumped volume during the first two weeks after birth because this evidence-based care is considered too expensive, too difficult, and too time consuming. Instead, NICUs say that "our mothers just can't provide enough milk" and quickly turn to the use of donor [human milk](#) which is much more expensive to acquire and less effective in reducing complications.

More information: Paula Meier et al. Donor Human Milk Update: Evidence, Mechanisms, and Priorities for Research and Practice, *The Journal of Pediatrics* (2016). [DOI: 10.1016/j.jpeds.2016.09.027](https://doi.org/10.1016/j.jpeds.2016.09.027)

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