

Preterm Infant Feeding Patterns in Hospitals Offering Donor Human Milk

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Background: Preterm infants fed solely human milk have improved development and decreased necrotizing enterocolitis. However, mothers who deliver infants prematurely have particular difficulty initiating and sustaining lactation. Pasteurized donor human milk (DM) has become an available alternative in preterm infant feeding to improve health outcomes when compared to formula.

Objective: To examine the acceptance and use of donor human milk in two hospitals offering DM to preterm infants and determine whether use of donor human milk influences the extent of mothers' milk (MM) feedings in hospital and at discharge.

Patients and Methods: Preterm infant feeding and demographic data were analyzed from two hospital neonatal intensive care units in Cincinnati, OH. At University Hospital, data for 513 preterm infants was collected between 2006-2010 during the implementation of a quality improvement initiative that included a DM feeding program. Data provided longitudinal trending of milk feeding volumes over time. The second cohort included 237 infants admitted to Good Samaritan Hospital (GSH) and UH between 2009-2011. Detailed feeding data was analyzed to determine daily feeding patterns and the impact of early feeding trends on subsequent provision of MM.

Results: At UH, DM feeding increased from 7% in 2006 to 65% in 2010, while MM feedings remained unchanged. At UH and GSH, 90% of infants received MM, 78% received DM and 44% received formula in hospital; 39% of infants received MM at discharge. MM feedings in the infant's first fourteen days of life was found to strongly predict breast milk at discharge, while formula and DM feedings were found to have negative relationships with subsequent MM provision. Demographic factors associated with provision of MM at discharge included: older maternal age, white race, married mothers and private insurance.

Conclusions: Donor milk is widely accepted by mothers of preterm infants and serves to replace formula but not MM feeding. DM was found to serve two major roles: 1) as a bridge in the infant's first few days of life to initiate predominant MM feedings; 2) as a short-term replacement for formula feeding. Thus, donor human milk is a valuable method of improving human milk feedings in hospital.

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