



R³: Research, Read & Review

Literature dissemination by the NIDCAP and Science Sub-Committee

November 2021

Title	Rates and Determinants of Mother’s Own Milk Feeding in Infants Born Very Preterm
Reference	Dhareel D, Singhal N, Wood C, Cieslak Z, Bacchini F, Shah P, et al. Journal of Pediatrics. 2021;236:21-27.
What is known about this topic?	<ul style="list-style-type: none"> • Mother’s own milk (MOM) is the best nutrition for infants of all gestational ages. The nutritional, immunologic, and neurodevelopmental advantages of MOM are more pronounced in infants born preterm. • Use of MOM during NICU hospitalization reduces the infant's risk of feeding intolerance, necrotizing enterocolitis, nosocomial infection, bronchopulmonary dysplasia, retinopathy of prematurity, neurocognitive delay, and rehospitalization. • The benefits of feeding MOM for preterm infants are dose-dependent.
What does this paper add?	<ul style="list-style-type: none"> • A steady and consistent provision of breast milk is a challenging task for mothers of hospitalized preterm infants. This paper affords a closer look at factors that might play a role and affect mothers' provision of their own milk, and highlights the availability of mother's breast milk <u>at age 3 days</u> as an <u>important predictor</u> of MOM feeding at discharge. • The study was performed on a large, population-representative, multicenter cohort.
A summary	<p>The aim of this population-based cohort study was to examine rates and determinants of MOM feeding at hospital discharge in a Canadian cohort of preterm infants born at <33 weeks of gestation. Multivariable logistic regression analysis was used to identify independent determinants of MOM feeding. “Breast milk” was recorded for <i>any use of mother’s own breast milk</i> in the 24 hours prior to discharge.</p> <p>Main Results: 4457 out of 6404 (70%) infants born very preterm and discharged home during the study period, received MOM or MOM</p>

	<p>supplemented with formula (rates ranged from 49% to 87% across NICUs).</p> <p>Positive determinants associated with MOM feeding at discharge were: higher gestational age at birth (29-32 wk compared with <26 wk), primiparity, feeding with MOM at 3 days of age, higher maternal age, infant male sex, and receiving magnesium sulfate during labor. Negative determinants were maternal diabetes and cigarette smoking during pregnancy (see full article for regression table and ORs). The strongest predictor of breast milk feeding at discharge was infant's receipt of MOM by day 3 of age.</p> <p>The authors conclude that supporting mothers to provide breast milk in the first 3 days after birth may be associated with improved MOM feeding rates at discharge.</p>
<ul style="list-style-type: none"> • What is the relevance to NIDCAP? 	<ul style="list-style-type: none"> • The study by Dharel et al. taps on an important topic for NIDCAP-oriented caregivers: the opportunity to support and promote neurodevelopment (breast milk has been amply documented as advantageous for neurodevelopment) during a quite specific time window in the mother-preterm infant dyad's trajectory, ie., the time from birth to discharge, and perhaps even during the very first days of life. • Early breastfeeding support in the NICU, awareness of providing breastfeeding-friendly environments, promotion of milk expression and pumping from the very first hours after birth, easy access to milk expression guidance and to breast pumps, available lactation consultants, early skin-to-skin contact and alternative proximity strategies when this is still not possible – are important ways of facilitating the initiation and maintenance of breast milk use during hospitalization. • It is important to maximize our efforts as caregivers, to sensitively support mothers to establish some level of MOM supply during the first 3 days of life, keeping in mind that this may affect breast milk maintenance weeks ahead. • As NIDCAP professionals, we need to be creative in guiding and supporting mothers during a complex period (the first days after giving birth to a premature infant), when they need to "perform" (start expression and pumping in a methodic fashion so breast milk supply can be established) while they experience significant physical and emotional difficulties.