



Feature

US NICUs and donor milk banks brace for COVID-19

Neonatal intensive care units (NICUs) and donor human milk programmes across the USA are bracing for the coronavirus disease 2019 (COVID-19) pandemic. NICU workers have tested positive for the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that causes COVID-19. A worker at the Children's Hospital & Medical Center NICU in Omaha (NE) was in contact with ten patients 3–4 days before testing positive for the virus, according to a March 25 report by the Associated Press. In Alabama, at least one newborn was placed in isolation after a NICU nurse tested positive. The Illinois Department of Public Health announced on March 28 that an infant who tested positive for COVID-19 had died in Chicago—the first infant death in the US outbreak. But state officials contacted by *The Lancet Child & Adolescent Health* would not confirm whether or not that baby had been treated at a NICU.

The pandemic is a quickly evolving challenge for labour and delivery units and NICUs. "Every day is a different set of data, and we're really trying to manage how we're dealing with our workforce and how it interacts with the mother and baby", said Jae Kim, Director of the Division of Neonatology at Cincinnati Children's Hospital (Cincinnati, OH, USA).

Some US NICUs and hospital nurseries, but not all, are isolating newborns from visitors and even family members. The US Centers for Disease Control and Prevention (CDC) recommends separating newborns from mothers with suspected or confirmed COVID-19. "Unfortunately, I think there's a risk of that happening more and more", said Jennifer Canvasser (Necrotizing Enterocolitis Society, Davis, CA, USA). "The NICU experience is already stressful as it is, and then to force parents and babies to be separated—it's just devastating. How

will babies [in NICUs] get the mothers' milk they so desperately need, if you're separating mothers and babies?"

Disruptions in breastfeeding could increase babies' risk of developing necrotising enterocolitis (NEC), a life-threatening gastrointestinal emergency that can lead to gut perforation and sepsis, Canvasser said. She lost her infant son Micah to complications of the disease in 2012. Premature newborns, particularly those with very low birth weight, are at the greatest risk of developing NEC. Human milk can reduce that risk.

Hospital visitor restrictions to reduce the risk of SARS-CoV-2 transmission have put volunteer cuddler programmes on hold at some NICUs, further reducing newborns' opportunities for skin-to-skin touch and holding.

Women with COVID-19 should breastfeed their newborns if they want to do so, argues Lindsay Groff, Executive Director of the Human Milk Banking Association of North America (HMBANA, Fort Worth, TX, USA), citing WHO guidance on breastfeeding during the COVID-19 outbreak. Respiratory hygiene is crucial, she emphasised. Mothers should wear masks if they are available and should wash their hands thoroughly before and after touching their babies. Surfaces touched by COVID-19-positive mothers must be thoroughly cleaned and disinfected, she said.

Pasteurised donor milk is a vital resource for babies in NICUs whose mothers cannot provide breast milk. But donor supplies have become a concern as more US cities and states issue stay-at-home orders. "Even if mothers are willing to venture out, many of the milk drop-off sites are in hospitals that are not allowing visitors", noted Groff, whose organisation represents 29 regional non-profit milk banks across the USA and Canada.

Because donors are tested for HIV, HTLV, hepatitis B and C, and syphilis, blood draws are another potential barrier to donations during pandemic-related travel restrictions. So some milk banks are now sending phlebotomists to donors' homes, she said.

"We're thinking about an uninterrupted supply of donor breast milk", said neonatologist Tara Zamora, Medical Director at the University of New Mexico (UNM) Children's Hospital NICU (Albuquerque, NM, USA). "We get our donor breast milk from the Denver milk bank and they think their donor supplies may be adequate, but we worry about the ability to transport the milk on time, [and] having donors able to leave home to drop off milk."

The UNM NICU ordered more donated milk than usual to store on-site, to be safe, Zamora said. But like other US hospitals, Zamora's unit has also started precautionary rationing, allocating donor milk to the smallest and most at-risk preterm infants (those weighing <1500 g at birth or younger than 30 weeks' gestation), to prevent NEC. "We revised our guidelines to be a little more restrictive in the short term until we see how this affects us."

It is reasonable to anticipate that donations to milk banks could decline because donors will remain sequestered and because anxiety can decrease milk production, noted Richard J Schanler, Director of Neonatal Services at Cohen Children's Medical Center and Northwell Health (Long Island, NY, USA). "For both of these reasons, the need for donor milk will increase."

"We need more donors now than ever", said Amy Vickers (Mothers' Milk Bank of North Texas and HMBANA). "We want to prepare for future uncertainty and not interrupt service to babies in the NICU whose lives depend on donor milk."

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For CDC recommendations on COVID-19 in inpatient obstetric settings see <https://www.cdc.gov/coronavirus/2019-ncov/hcp/inpatient-obstetric-healthcare-guidance.html>

For WHO guidance on breastfeeding and COVID-19 see <http://www.emro.who.int/nutrition/nutrition-infocus/breastfeeding-advice-during-covid-19-outbreak.html>