

Too few hospitals have clinical decision support tools to calculate nutrition in NICU

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Most neonatal intensive care units (NICUs) participating in the Children's Hospitals Neonatal Consortium are unable to reliably and consistently monitor caloric intake delivered to critically ill infants at

risk for growth failure, according to a study published in the *Journal of Perinatology*. Managing optimal nutrition for preemies is a complex process, especially when the baby is transitioned from receiving nutrition intravenously to enteral (or through the gut) feeds. The study found low prevalence of fully automated clinical decision support systems used to calculate and adjust nutritional intake for premature infants.

"Delivery of appropriate amounts of calories, protein, fat and carbohydrates to [premature infants](#) in the NICU is associated with improved outcomes, including better growth and decreased risk of neurodevelopmental impairment," says lead author Gustavo Falciglia, MD, MSCI, MSHQS, neonatologist at Ann & Robert H. Lurie Children's Hospital of Chicago and Assistant Professor of Neonatal-Perinatal Medicine at Northwestern University Feinberg School of Medicine. "We have the electronic health record but most of us still lack a fully automated system to track the baby's [caloric intake](#). We are still doing manual calculations, which take time and are susceptible to error. Our findings highlight the pervasive need for clinical decision support to monitor and improve delivery of calories and nutrients to babies in our NICUs."

Dr. Falciglia and colleagues surveyed 34 regional level IV NICUs on availability of clinical decision support systems to calculate nutrition and fluids the infant received in the prior 24 hours and to estimate projected nutrition and fluids that the infant should receive in the next 24 hours. They found that more NICUs have clinical decision support to calculate fluid intake compared to caloric or nutrient intake.

"Fluid intake is much more straightforward to calculate than caloric needs, so it is not surprising that clinical decision support is more commonly available for this function," says Dr. Falciglia. "Caloric calculations involve many more factors and there is less consistency among NICUs in how nutrition calculations are approached. We need to

establish and share [best practices](#), in order to develop a standardized computerized solution."

Provided by Ann & Robert H. Lurie Children's Hospital of Chicago

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