

Standardised Feeding Approach Improves NICU Babies' Growth



Researchers at Nationwide Children's Hospital (OH, USA) have created a new standardised approach for feeding infants in the neonatal intensive care unit (NICU). The guidelines published in the *Journal of Parenteral and Enteral Nutrition* helps babies attain full oral feeds sooner, improves their growth and sends them home sooner.

Many infants have complicated feeding difficulties and changes in clinical caregivers throughout their hospital stay. The researchers hypothesised that a standardised approach to feeding could eliminate variability and simplify the transitions from enteral feeding to full oral feeding (milk by mouth without tubes or limitations).

The research team collected baseline data from 92 infants before initiating their quality improvement study with another 92 infants they enrolled in their SIMPLE (simplified, individualised, milestone-targeted, pragmatic, longitudinal and educational) programme. This specific programme involved analysing critical aspects of institutional processes, building consensus, developing educational workshops, monitoring compliance and accountability and providing constant feed-forward information.

"Our SIMPLE feeding approach resulted in improved growth, eventually leading to more time at home with parents," says Sudarshan R. Jadcherla, MD, principal investigator in the Innovative Feeding Disorders Research Programme at Nationwide Children's. "The emphasis of our programme was on implementation of guidelines that can still be tailored to the infant's and parent's individual needs."

Babies on the SIMPLE feeding programme spent significantly less time on trophic feeds, which stimulate the gut but do not provide sufficient nutrients for growth, and less time being tube-fed. They were also able to tolerate the introduction of oral feeds and exclusive oral feeding earlier than babies prior to the guideline implementation. The research team credits this improved feeding trajectory with the greater daily weight gains achieved by babies on the SIMPLE plan, which in turn led to stays of about 15 days shorter duration.

"The length of stay was reduced while balancing measures and co-morbidities such as necrotising enterocolitis, chronic lung disease, mortality and readmission rates remained similar or trended downward," explains Dr. Jadcherla, who also is a principal investigator in the Center for Perinatal Research in The Research Institute and a professor of paediatrics at The Ohio State University College of Medicine.

There are no accepted benchmarks for feeding babies in an all-referral NICU, where admission requirements and sickness levels can be heterogeneous. Dr. Jadcherla founded the concept of the SIMPLE plan, developed the core group, trained feeding providers and led a multidisciplinary team of NICU caregivers in this quality improvement endeavour.

The team hopes the programme's success at Nationwide Children's will be obtainable by other hospitals, as well. "The guidelines were designed with an understanding of infant development, aerodigestive reflexes and individual clinical needs that will be adaptable to any NICU population," according to Dr. Jadcherla. "The SIMPLE feeding programme also provides a forum for regular collaboration in regards to feeding management, which will help other institutions easily incorporate it into their care efforts."

Source: [Nationwide Children's Hospital](#)

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