

Queen's researcher uses monitoring device to understand feeding of high-risk newborns

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High-risk newborn infants in intensive care at Kingston Health Sciences Centre (KHSC) will be the first in Canada to be monitored and evaluated for their feeding skills in a novel research initiative led by Queen's University researcher, Kimberly Dow.

Her 30-month project will study the use of a nipple-monitoring device in the [neonatal intensive care](#) unit (NICU) at KHSC's Kingston General Hospital site, with an aim of better identifying and addressing feeding difficulties in pre-term babies.

"Breast- or bottle-feeding is a key milestone that [infants](#) in the NICU must achieve before they can go home, but currently we have no precise, objective method to evaluate feeding skills in these high-risk infants," says Dr. Dow, a neonatologist and clinician-scientist at KHSC and a professor of pediatrics at Queen's University.

Over 40 per cent of infants in the NICU experience oral feeding difficulties, which can lead to a prolonged hospital stay, or long-term feeding disorders. The current clinical practice is to observe an infant's feeding performance at the bedside.

The use of a nipple monitoring device allows for more precise observation of feeding skills, and allows for more accurate treatment recommendations to be made to caregivers and new parents.

The researchers hope to monitor more than 70 infants during the four

phases of the study. "Feeding skills are important for babies to grow and develop," says Dr. Sandra Fucile, an assistant adjunct professor of pediatrics at Queen's and a co-leader in the project. "Feeding is also a primary concern of parents of NICU infants. Yet it remains a poorly recognized health issue."

"The goal is to make a diagnosis more quickly and accurately," says Dr. Dow. "Ultimately, we hope that the babies will be able to be discharged home sooner and that the parents will know more about their babies' feeding habits."

Right now, similar devices are used in hospitals in the United States as research tools. Dr. Dow and her team will translate the device from a research tool into a bedside diagnostic tool.

This innovative approach has been recognized by University Hospitals Kingston Foundation, which has just named Dr. Dow the inaugural recipient of a research award from its newly launched Innovation Fund. The fund provides seed money for innovative practices that improve, develop, or expand treatment options for patients, clients, and residents of Kingston's hospitals.

"This is a wonderful example of bedside research with potential for better treatments for infants, enhanced knowledge for clinicians, and greater peace of mind for parents," says Roger Deeley, Vice-Dean of Research, Faculty of Health Sciences, Queen's University, and Vice President, Health Sciences Research, KHSC. "We congratulate Dr. Dow and her team on their innovative application of this research tool for a neonatal critical care environment."

Provided by Queen's University

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