

#ResearchAtHorizon: Changing the care delivery experience for parents and babies through technology



Leanne Davis, research coordinator at Horizon's Saint John Regional Hospital, chats with colleagues Natasha Hanson, research writer, and Krisan Palmer, Horizon's regional manager for Telehealth, via Telepremie technology.

A program designed and led by Horizon teams is helping our most vulnerable patients and their parents connect with their health care providers through technology.

Horizon's Telehealth Program began its journey to improve patient care through technology in 1998 with post-surgical home monitoring for heart surgery patients – a program that continues today as the longest-running telehealth initiative in North America.

Because of the numerous solutions created by Telehealth, barriers to receiving follow-up health care, such as the availability of a specialist in the community, living far from the hospital or clinic, and poor weather conditions, can be reduced and often eliminated.



From left: Krisan Palmer, Horizon's regional manager for Telehealth, Leanne Davis, research coordinator, and Natasha Hanson, research writer, are photographed at Horizon's Saint John Regional Hospital with technology and equipment used in the Telepremie program.

While Telehealth has designed solutions for departments, such as the NB Heart Centre, oncology, a provincial emergency stroke network, and palliative care home visits, more recently the program's staff focused on helping our smallest patients – the babies of the Saint John Regional Hospital's neonatal intensive care unit (NNICU) and their parents.

Krisan Palmer, regional manager for Telehealth, and her team, were approached by Dr. Cecil Ojah, neonatologist at Horizon's Saint John Regional Hospital. Dr. Ojah was interested in using technology to make the transition from the intensive care unit to home less stressful and more empowering for new, anxious parents.

“Ultimately, TelePremie was about designing a solution to ‘bridge the gap’ and facilitate a smooth transition from the hospital to the home, ultimately empowering parents with the knowledge and confidence they needed to take care of their babies after staying in the NNICU,” said Krisan.

The team then requested the support of Horizon's Research Services' SOAR Team (Support Opportunities and Assistance for Research), a unique program that paired the applicants with experienced research professionals to design and manage their proposed research study of their telehealth solution for the NNICU.

The successful project, TelePremie: Telehomecare for step-down care post-NICU discharge, ran from August 2017 to March 2018, and was funded through Canada Health Infoway.

Interested parents of NNICU infants were randomly assigned to either a Telehealth group or a standard of care group. In the standard of care group, parents would simply attend a follow-up appointment with their primary care provider 24 hours after leaving the NNICU (as well as any other appointments scheduled with specialists).

In the Telehealth group, parents had two additional virtual visits (a day before and a day after the standard of care primary care provider follow-up appointment) that involved a home monitoring kit designed by Krisan and her team. Using the kit, parents would weigh the baby on a scale that shared the data with the NNICU team via a tablet.

A small sensor secured around the baby's ankle would also send data on oxygen saturation back to the clinical team at the hospital. A movable web cam completed the kit, and allowed the parents to provide the health care team with precise real-time interactive video of the baby.

While parents' responses to surveys levels did not indicate less anxiety or more confidence, interviews told a different story: parents found the home monitoring appointments reassuring and positive.



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The data also showed that it was possible for the health care teams to accurately assess the babies' clinical stability, opening potential applications to other areas, such as other mother-baby programs. The possibilities are endless, with exciting new advances on the horizon.

The Research Team included:

- Cecil Ojah, MD
- Jennifer Woodland, PhD
- Natasha Hanson, PhD
- Leanne Davis, MA
- Krisan Palmer, RN
- Darlene DeCoursey, BN, RN

This research would not have been possible without the help/support of:

- Tanya McFarlane
- NNICU nurses and administrative assistants
- Dr. Luis Monterrosa, neonatologist
- Participants