

Using technology to build connections with families: Implementation of a video-messaging system in the NICU

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Background

- As a consequence of the pandemic and the paucity of knowledge around SARS-Cov-2, hospitals and healthcare facilities put in place measures known to restrict viral spread, including the restriction of parental access to their infant in the NICU
- These restrictions had the potential to negatively impact parent mental health and decrease parent-infant bonding and engagement in care
- A prior qualitative research study from the UK showed that most parents and nursing staff that had used the video technology vCreate in NICU setting found it to be beneficial
- Further, the application was user-friendly and embraced quickly by the bedside nurses attesting to its use in clinical practice

Objective

- The objective of this proposal was to use technology to offset the adverse effects on parents and infants, of the restrictive visiting policies in the neonatal intensive care unit (NICU) during the SARS-Cov-2 pandemic

Methods

- We proposed the use of a secure video messaging (vCreate®) web application developed to enable nursing teams to record on-demand video updates of infants and to send them to parents
- Videos that nurses generate with vCreate® provide a link for concerned parents whose infant is in the NICU
- This proposal builds on the commitment of Mount Sinai Hospital (MSH) to the partnership between parents or other caregivers and staff in the care of infants using the principles of FiCare

What is vCreate?

vCreate®

A **Secure Video Messaging** service to minimise **separation anxiety** in parents of children in Neonatal and Paediatric Units.

[Click here to view parent testimonial video](#)



Project Road Map

Phase I	Identify organizational requirements for the change	Phase 2	Preparation for implementation by Operational Team	
	<ul style="list-style-type: none"><input type="checkbox"/> Hospital approved tablets will be used to support the software.<input type="checkbox"/> vCreate® software requires approval from the hospital E-committee to ensure compliance with health privacy standards for Ontario.<input type="checkbox"/> The hospital Wi-Fi will be used for software connection; the software does not require integration in the hospital network and will be used as a standalone application.<input type="checkbox"/> This will require approval from Senior Management, Chief Information Officer, the Privacy Office and Practice.			<ul style="list-style-type: none"><input type="checkbox"/> Identify champions amongst nurses, physicians and interprofessional team.<input type="checkbox"/> Identify unit process for:<ul style="list-style-type: none">o Storage location for hardware (tablets)o Cleaning the hardware (tablets) with support from Infection Prevention and Control departmento Identify support for staff operating the software.o Parent introduction to software.o Notification that parents have registered on vCreate® app and consent provided.o Identification of staff responsible for taking photos/videos.o Identification of minimum number of times per week when photos/videos will be uploaded and disclaimer for families.o Identify support staff for parents operating the software.o Closing the vCreate® account once patient is discharged.<input type="checkbox"/> Review vCreate® consent, orientation materials and customize as required for MSH.<input type="checkbox"/> Provide training to staff for use of the hardware/software: taking photos/videos and uploading to vCreate®.<input type="checkbox"/> Confirm criteria/restrictions for taking photos/videos
	Create implementation teams			

<ul style="list-style-type: none"><input type="checkbox"/> Steering Committee (8-10 members) This team will be composed of parents of NICU graduates, NICU nurses, interprofessional staff members, Clinical Director of Nurseries and Nursing Unit Administrator. They will oversee the project and ensure all the conditions in the NICU to facilitate the introduction of the application and equipment such as:<ul style="list-style-type: none">o Obtaining organizational approvalso Purchase hardware/software – identify number to be purchased (see Annex I)o Staff engagement/supporto Time provided for staff to work on the project implementation and evaluation<input type="checkbox"/> Operational Team (10-15 members) This team will be composed of parents of NICU graduates, NICU nurses and interprofessional staff members. They will be responsible for all activities at the unit level including:<ul style="list-style-type: none">o Develop unit process for the use of the hardware/software.o Developing orientation materials for staff and parents.o Identify timing for delivery of parent orientation materials.o Staff orientation and training for the hardware (tablet) and software.o Parent orientation to the software.
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Criteria	Restrictions
<ul style="list-style-type: none">o Any infant admitted in NICU whose parent(s) have registered with vCreate®o Photos/Videos to be taken at a time that does not interfere with patient care	<ul style="list-style-type: none">o Active newborn resuscitation or procedures in progresso Urgent newborn transfer required

Phase 3: Implementation

- Planned pilot study for 1 year
- Train champions for the implementation
- All staff need to be trained on the use of the hardware/software and details of the process
- Following the first month, we anticipate that the app can be managed by the bedside nursing staff with support from champions

Phase 4: Evaluation

- To evaluate the **program effectiveness**
 - # of families enrolled
 - # of videos/pictures uploaded
 - # of videos watched by parents
 - Electronic survey of family
- To evaluate the **implementation effectiveness**
 - Parent and nurse feedback regarding training
 - Parent and nurse feedback regarding ease of use
 - # of calls for assistance
 - Feedback from staff re: glitches in technology
 - Concerns re: privacy breaches

# families enrolled (6 months)	70
Videos	319
Photos	431

What parents say ...

Thank you guys for the beautiful moment. I wish I could've been there to experience it as well!

Thank you for the shot. You made my day!

What staff say ...

" I would definitely recommend vCreate; it means so much to parents; much more than phoning and being told their baby is okay, now parents can see how their child is doing for themselves. "