## Connected Care on The Go!

# Final Report submitted to Registered Nurses Foundation of Ontario

December 2021









#### What did we test?

Connected Care on the Go! (CCOTG) was pitched as an innovation to enable rapid delivery of scarce and specialized paediatric training resources straight into the hands of remote learners across the Province. Home care nurses and children/families received delivery of customized 'Go Boxes' that included teaching aids, standardized checklists and task trainers (e.g. training mannequins) that they used to practice skills while being taught virtually by expert Connected Care Resource Nurses from The Hospital for Sick Children (SickKids).

Funded in winter 2021 by the Registered Nurses Foundation of Ontario – Nursing Innovation Award (RNFOO-NIA); \$16,300.00 and led by principals: K. Keilty & S. Chu [SickKids] in partnership with S. McKay, M. Wong (VHA Home HealthCare [VHA]), this project tested Connected Care on the Go! using a Plan/Do/Study/Act approach to iterative implementation and evaluation of the innovation.

#### What did we deliver?

The project team achieved all deliverables pending dissemination of full evaluation.

MILESTONE	AUG 2020	OCT 2020	NOV 2020	DEC 2020	JAN 2021	FEB 2021	MAR 2021	APR 2021	MAY 2021	JUN 2021	JUL 2021	AUG 2021	SEP 2021	OCT 2021	NOV 2021
Project Proposal	С														
Workflow design and operational planning			С												
Equipment procurement					С										
Curriculum review					С										
Proof of concept (test CC on the Go)			С												
Implementation of CC on the Go															С
Evaluation (ongoing)															C*
Project Dissemination															IP

Legend: Green= in progress, Yellow= in plan, C= completed step, IP= In Progress

#### What did it cost?

The budget to test the innovation supported project implementation and evaluation.

	Funds Budgeted	Actual Spend	In-Kind
Staffing	\$3782.40	\$3600.00 Nursing (80 hrs) \$1020.00 Admin	Clinical support from VHA (2 hrs/week)
<b>Equipment &amp; supplies</b> (training mannequins, disposables, etc.)	\$6548.35	\$7585.71	IPAC cleaning and maintenance of equipment and supplies (30min/session)
Shipping Containers	\$408.00	\$205.37	
Shipping	\$3516.00	\$1399.00	
Printing	N/A	N/A	Curriculum resources, hand-outs sent with 'Go-boxes' (~\$10.00/session)
Evaluation	-	\$1280.00	
Knowledge Translation	\$2000.00	~\$1200.00 (TBD) for publications, conferences	
Total	\$16, 300.00	\$15, 090.08	

<sup>\*</sup>Evaluation is in dissemination phase.

#### **Budget items & justification:**

Staffing: All allocated funds for staffing needs were used as well as in-kind resources from Connected Care and VHA.

Equipment and Supplies: Exceeded the plan by \$1000.00. Purchases were aligned with product market fit and optimized costing of equipment and supplies. Additional webcams were purchased to support organizations with technology needs

Shipping Containers: Savings were realized by using hospital (SickKids) discount with preferred vendor

Shipping: Wear and tear and loss of equipment was not material. Distance boxes shipped on average was less than originally estimated.

In-Kind Resources: Cleaning materials to disinfect and maintain training mannequins and printed resources to support training were provided in-kind.

Knowledge Translation: See: <a href="https://www.vha.ca/news/sickkids-and-vha-collaborate-on-integrated-service-connected-care/">https://www.vha.ca/news/sickkids-and-vha-collaborate-on-integrated-service-connected-care/</a> The team has also reached out to Canadian Journal of Nursing Leadership, Editor Diane Kent-to plan for a submission, early 2022. Children's Healthcare Canada, SIM Expo and Community Health Nurses of Canada Conference will also be explored.

#### What did we measure?

Evaluation of Connected Care on the Go! was conducted concurrent with project implementation. Findings from mixed data sources informed continuous process improvement throughout the project.

Over 12 months, 17 tests of Connected Care on the Go! were conducted with deliveries spanning a geography of >300 km from SickKids to a total of 939 km across Ontario. Diverse knowledge users included those from a community hospital (1), paediatric hospice (1), Service Provider Organizations (4) (aka home care nursing agency) and directly to the homes of 6 family caregivers of children with medical complexity.

#### **Summary of Tests of Change:**

Connected Care on the Go! sessions were conducted with 56 learners; 12 family caregivers (FC), 42 home and community care providers (HCCP) and two unregulated care providers (UCPs).

Approaching half of the learners returned evaluations (Table 1).

Participants were included in tests of change when they were assessed by Connected Care to: 1) have a knowledge gap about the care of paediatric home care technology, 2) live at a distance from hospital (not admitted), 3) have access to secure internet, and 4) be willing to complete an evaluation.

CCOTG sessions supported a wide range of learning needs from preparing caregivers for discharge to supporting staff with refreshing knowledge with updated best practices (Table 2).



Table 1. Demographics of participants that completed the evaluation survey

Respondent Category	Number of Respondents (%)							
Home and Community Care Provider (n=15)								
RN	4 (44.4)							
RPN	4 (44.4)							
Community Congregate Care	1 (11.1)							
No response	6 (60.0)							
Leader in Home and Community Care (	n=6)							
Service Provider Organization	4 (66.7)							
Community Congregate Care	1 (16.7)							
No response	1 (16.7)							
Family Caregiver (n=3)								
Parent	3 (100.0)							

Some sessions bridged gaps in training when organizations lacked the resources and expertise to support family caregivers. Other sessions supported family caregivers after discharge to continue building confidence and competence in skills learned prior to going home.

Table 2. Summary of CCOTG types, locations and supports provided per session

Knowledge User	Technology supported	Setting of session	Distance covered (km)	Need supported	Number of learners	Learnings - Feasibility
FC	NG	Hospital	30.0	Prep for D/C	2	Local hospital unable to provide training for family caregivers. Our team collaborated with the hospital team to support family caregivers during virtual teaching
НССР	CVAD	Hospice	3.5	PD	10	On-going support to maintain best practice knowledge, refresh skills and existing competence
НССР	NG, GT, Enteral Feeds	Hospice	3.5	PD	4	On-going support to maintain best practice knowledge, refresh skills and existing competence
НССР	Trach	Hospice	3.5	PD	5	On-going support to maintain best practice knowledge, refresh skills and existing competence
FC	CVAD	Hospital	7.0	Prep for D/C	2	Joint in person session and virtual to family caregiver at home. Enabled both caregivers to learn together
FC	CVAD	Hospital	70.0	Prep for D/C	2	Additional training to support family
FC	NG	Hospital	30.0	Prep for D/C	2	caregivers after discharge  Additional training to support family caregivers after discharge
НССР	NG, GT, Enteral Feeds	SPO	60.0	PD	4	On-going support to maintain best practice knowledge, refresh skills and existing competence
НССР	Trach	SPO	6.5	PD PD	4	SPO had some difficulties with technology. SPO webcam was not portable so facilitators had some difficulty seeing learners demonstrating skills.
НССР	Trach	SPO	396.0	PD	5	Local hospital unable to provide training to HCCP, so clinical team reached out to Connected Care for support. Training provided by CCOTG enabled child to return to school with trained nurses. Go-box lost en route to SPO (then found, but after virtual session provided)
UCP	Enteral Feeds	School	217.0	Prep for school	2	CCOTG supported training of school staff for a child to return to in person learning
НССР	Trach	SPO	8.0	New HCCP assigned to family	1	Joint in person session and virtual to staff at home. Enabled access to unvaccinated staff.
НССР	CVAD	Hospice	3.5	PD	8	Session cancelled due to internet failure at SPO
FC	NG	Home	43.0	Prep for D/C	1	Additional training to support family caregivers after discharge
НССР	Trach	SPO	25.0	New HCCP assigned to family	1	Same day request for HCCP with no trach experience. CCOTG session provided at beginning of shift in partnership with family caregivers
НССР	Trach	SPO	25.0	New HCCP assigned to family	1	Session cancelled due to HCCP illness

CCOTG = Connected Care on the Go, FC= Family caregiver, HCCP= home and community provider, UCP = unregulated care provider, NG = nasogastric tube, GT = G tube, CVAD = central venous access device, D/C= discharge, PD= professional development,

#### What did we hear?

E-surveys and paper surveys with Likert-type and open-ended questions were distributed virtually and included as paper copies in 'Go Boxes' to collect feedback from all knowledge users. Items examined constructs of knowledge user acceptability, feasibility, and effectiveness of CCOTG.

#### Voiced Feedback:

"I am glad I received the training as it has allowed my husband and I to make informed decisions about our child's care. All parents should be given the option/made aware of the trainings offered with Connected Care as their classes and support are phenomenal!" – Family caregiver

"Valued the ability to do return demo and to involve family." – Nursing learner

"The seamless booking of the training and the ease of the delivery of equipment was appreciated. I mostly like it when the facilitator engaged each participant and ensured that they catered to each participant's individual learning needs." – Nursing leader

#### **Survey Responses:**

A total of 24 (HCCP=21, FC=3) evaluations were received (See Appendix for Table of survey responses).

#### Family Caregivers:

- 100% reported the overall coordination of the session was simple and the turnaround time met needs.
- 100% reported receiving/returning the learning supplies to be easy and the materials to be sufficient for learning.
- 100% reported the slides/handouts understandable, the information relevant and the session pace adequate.

#### Home and Community Care Providers:

- 100% gained new and valuable knowledge to bring to practice, could verbalize understanding during the session and had increased confidence in being ready to provide the specialized care after the session.
- 20% reported the virtual setting prevented facilitator from picking on up cues.
- 87% of learners reported the information to be relevant to their practice setting.

#### Leaders in Home and Community Care:

- 100% of leaders reported the process of coordinating sessions and the delivery of 'Go boxes' to be simple.
- 100% of leaders reported the equipment effective, they were able to ask questions and verbalize understanding, and they were able to troubleshoot equipment.
- 100% of leaders declined taking on a stronger facilitating role during the sessions.

#### What did we learn?

CCOTG was small in scale, but implementation was purposeful in reaching out to different regions (e.g. urban, rural) and included participants with diverse home care experiences (e.g. RNs, RPNs, UCPs) and learning needs (e.g. type of technology). Connected Care's Engagement & Integration Advisory Table, which includes leaders and clinicians from hospital and home and community care across the province and family advisors, was leveraged to promote the new service among end-users.

#### Acceptability:

CCOTG enabled a partnered approached between Connected Care and learners in their local geographies. 100% of participants responded that they would recommend CCOTG to their peers.

- Demand for the service was bolstered by purposeful 'peer to peer' communications and directed marketing to Service Provider Organizations with paediatric contracts, in home and community care.
- Interpreters were not required for any of the sessions, although they were available (in kind). There is need to explore strategies to increase equity, diversity, and inclusivity for CCOTG.
- Hands-on practice in homes and local communities was highly appreciated, respectful of learner differences and enabled 'better focus' for some.

#### Feasibility:

Overall implementation was highly successful. Five (5) more tests of change in the pilot period were achieved than anticipated.

- Demand of CCOTG was higher than planned, so additional shipping containers were purchased to meet the needs of multiple requests at the same time
- Sending and receiving the 'Go boxes' was generally considered simple and easy to support from end-to-end
- Variable technology capacity and needs among knowledge users, some requiring a high level of administrative and other support (webcams) to host the virtual sessions.

#### **Effectiveness:**

Outcomes for the learners were strong with 100% of participants reporting increased confidence in knowledge and skill.

- Review of emergency scenarios was suggested as an additional learning opportunity using virtual sessions and CCOTG
- Learners gained hands-on practice using the right equipment, which supported development of competencies to provide safe care
- Select limitations reported in using virtual vs in-person teaching which will require review of teaching/learning strategies and quality of video (facilitators ability to assess body language and other cues to their experience)

#### What's next?

Connected Care on the Go! is here to stay. There has been overwhelmingly positive appraisal from home care nurses and families, for the usefulness of the innovation.

Based on increasing demand for the service, and its alignment with the pressing need for capacity building in paediatric home and community care, the service has been priortized for sustained funding.

#### How can I learn more?

Please see the infographic attached and share widely (see Appendix).

Connected Care welcomes referrals or inquiries to learn more about Connected Care on the Go!

Please reach out to: connectedcare.inquiries@sickkids.ca or visit www.connectedcare.sickkids.ca

Respectfully submitted on behalf of the team to RNFOO.

For questions about this report, please contact: Krista Keilty, NP-Paeds, PhD, Associate Chief Interprofessional Practice- Connected Care & System Integration, Hospital for Sick Children, krista.keilty@sickkids.ca

### Appendices

Table A. Reason for attending CCOTG

Participant Category	Number of								
Home and Community Care Braviday (N=15)	Respondents (%)								
Home and Community Care Provider (N=15)									
Professional Development	12 (80.0)								
Refresh skills and existing competencies	12 (80.0)								
Prepare for a new child/family	8 (53.3)								
assignment									
Address identified gap in knowledge	5 (33.3)								
Orientation for a new position/role	2 (13.3)								
Leader in Home and Community Care (N=6)									
Professional Development	0 (0.0)								
Refresh skills and existing competencies	2 (33.3)								
Prepare for a new child/family	2 (33.3)								
assignment									
Address identified gap in knowledge	1 (16.7)								
Orientation for a new position/role	1 (16.7)								
Family Caregiver (N=3)									
Learn to care for child's technology	3 (100.0)								
Refresh knowledge and skills	1 (33.3)								
Address gap in knowledge and skills	0 (0.0)								
Other	0 (0.0)								

Table B. Responses from CCOTG survey

Survey Question	Strongly	Agree	Neutral	Disagree	Strongly	N/A
Respondent Category (# of responses)	agree	n (%)	n (%)	n (%)	Disagree	n (%)
	n (%)				n (%)	
Length of session met learning needs						
FC (2)	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (14)	8 (57.1)	4 (28.6)	1 (7.1)	0 (0.0)	1 (7.1)	0 (0.0)
LHCC (6)	1	-	-	-	-	-
Session delivered at right pace						
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	11 (73.3)	3 (20.0)	0 (0.0)	0 (0.0)	1 (6.7)	0 (0.0)
LHCC (6)	5 (83.3)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Materials informative, easy to understand		•	•	•	•	
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	10 (66.7)	3 (20.0)	0 (0.0)	0 (0.0)	1 (6.7)	1 (6.7)
LHCC (6)	5 (83.3)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Information relevant to practice setting						
FC (3)	3 (100)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	10 (67)	3 (20.0)	0 (0.0)	0 (0.0)	2 (13.3)	0 (0.0)
LHCC (6)	4 (67)	2 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Able to ask specific questions during session		•	•	•	•	
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	9 (60.0)	5 (33.3)	0 (0.0)	0 (0.0)	1 (16.7)	0 (0.0)
LHCC (6)	5 (83.3)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Able to verbalize understanding during session						
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	10 (66.7)	5 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

LHCC (6)	5 (83.3)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Able to gain hands-on practice during session					JI.	
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	9 (60.0)	6 (40.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	4 (66.7)	2 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Able to demonstrate back skills during session			•		•	•
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	7 (46.7)	5 (33.3)	2 (13.3)	0 (0.0)	0 (0.0)	1 (6.7)
LHCC (6)	2 (33.3)	3 (50.0)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)
Able to troubleshoot equipment during						
session					•	
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	7 (46.7)	5 (33.3)	2 (13.3)	0 (0.0)	0 (0.0)	1 (6.7)
LHCC (6)	2 (33.3)	4 (66.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Prior knowledge/experience was respected		1	1			_
FC (3)	-	-	-	-	-	-
HCCP (14)	11 (78.6)	2 (14.3)	0 (0.0)	0 (0.0)	0 (0.0)	1 (7.1)
LHCC (6)	5 (83.3)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Facilitators were able to pick up cues virtually	- / :		- 15 -:	- 15 -1	- /	- (:
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	5 (33.3)	6 (40.0)	0 (0.0)	1 (6.7)	2 (13.3)	1 (6.7)
LHCC (6)	3 (50.0)	3 (50.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Equipment was effective to support learning	0 (100 0)	0 (0.0)	0 (0 0)	0 (0 0)	0 (0 0)	0 (0 0)
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	8 (53.3)	5 (33.3)	1 (6.7)	0 (0.0)	0 (0.0)	1 (6.7)
LHCC (6)	5 (83)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Learned new knowledge to apply to practice		_	1	-	_	<u> </u>
FC (3)	12 (90.0)	3 (20.0)	0 (0 0)			0 (0 0)
HCCP (15) LHCC (6)	12 (80.0) 4 (66.7)	2 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Session helped to support safe care	4 (00.7)	2 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	11 (73.3)	4 (26.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	5 (83.3)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Felt confident to provide care after session	(00.0)	= (==::)	- (0.0)	- (c.c)	- (5.5)	- (0.0)
FC (3)	2 (66.7)	1 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	10 (66.7)	5 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	3 (50.0)	1 (16.7)	2 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)
Interested in more sessions			, ,	, ,		
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	10 (66.7)	3 (20.0)	1 (6.7)	0 (0.0)	0 (0.0)	1 (6.7)
LHCC (6)	4 (66.7)	1 (16.7)	1 (16.7)	0 (0.0)	0 (0.0)	0 (0.0)
Would recommend to colleagues/peers						
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
HCCP (15)	11 (73.3)	4 (26.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Coordinating delivery of the session was						
simple						
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Turnaround time of the session met our needs						
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Receiving/returning materials = easy process						
FC (3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	5 (83.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (16.7)

Materials delivered were what we needed						
FC (3)	3 (100)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
LHCC (6)	4 (66.7)	2 (33.3)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
I would have liked to play a stronger role in						
facilitating the session						
LHCC (6)	0 (0.0)	0 (0.0)	0 (50.0)	0 (50.0)	0 (0.0)	0 (0.0)

CCOTG = Connected Care on the Go, FC= Family caregiver, HCCP= home and community provider, LHCC = Leader in Home and Community Care