Making the Leap to Virtual Care:
The Toronto Rehab Toolkit for Implementing Telerehabilitation within Outpatient Rehabilitation Programs

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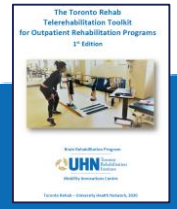
UHN Toronto Rehabilitation Institute
Mobility Innovations Centre
The Kite Research Institute



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Today's objectives

- Understand the steps taken to transform and evaluate outpatient telerehabilitation services during a pandemic.
- Apply tools, resources and processes from a telerehab toolkit to your own organization.
- Share enablers, barriers and proposed solutions for implementing telerehab with the goal to support uptake across rehabilitation settings.

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Road map

- About us
- Patient experience of virtual rehab
- Provider experience of virtual rehab
- Introducing the TR Telerehab Toolkit
- Comments & questions

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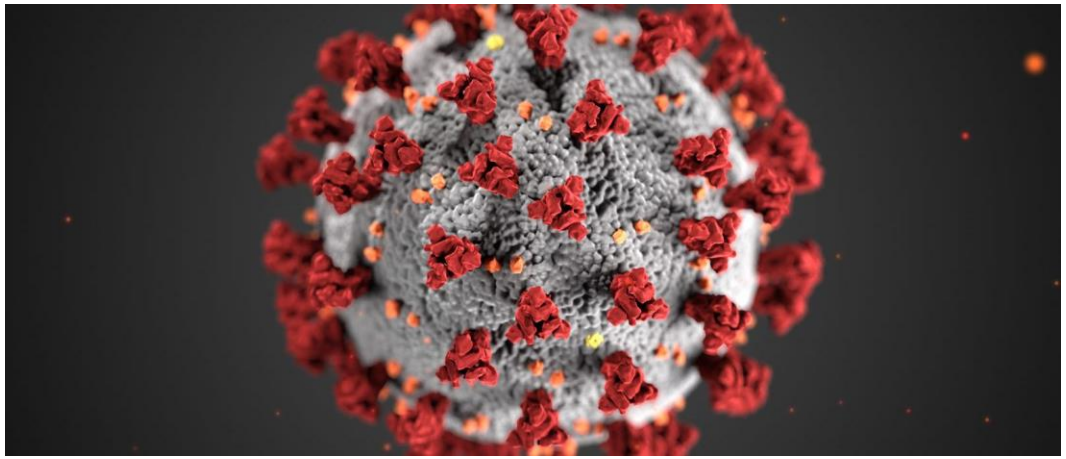
Can you implement virtual rehab in 4 weeks?



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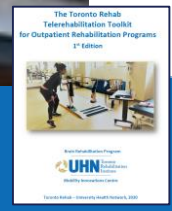
Who we are

- Urban, academic rehabilitation setting
- **Inpatient Stroke and Acquired Brain Injury (ABI)**
- **Outpatient Stroke, ABI, and Multiple Sclerosis (MS), LEAP**
  - *Early Supported Discharge Stroke* in-person therapy, typically 4-5 times/week
  - *Stroke, ABI, and MS* in-person therapy, typically 2-3 times/week



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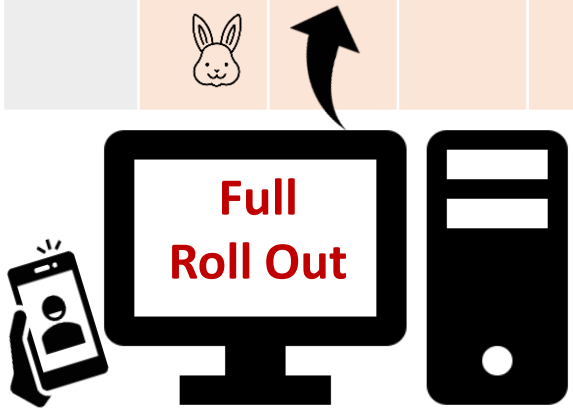
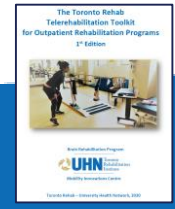
Rapid pivot during COVID-19 due to the pandemic

Sun	M	T	W	Th	F	Sat
Mar 22	23	24	25	26	27	28
29	30	31	Apr 1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18

Planning began





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How we evolved … from preparation to now …

Week 1 & 2

Stage 1: Build Foundation

- Forming the Virtual Working Group
- Met with the interprofessional teams to learn & plan
- Research & explore resources
- Develop model
- Initiate planning for OTN access & equipment

Week 2 & 3

Stage 2: Transform learnings into practice

- Develop processes & forms
- Develop & provide training with staff
- Setup online resources for staff
- Develop patient & family handouts and tools
- Setup equipment

Beginning of Week 4 April 14th

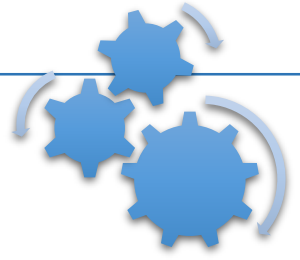
Full Roll-Out!

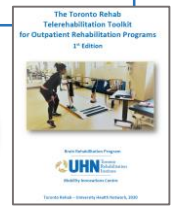
Week 4 to now

Stage 3: Ongoing Learning & Improvement

- Gather formal & informal feedback & evaluation
- Ongoing improvements on forms & processes
- Provide staff training (1:1 / group)
- Update online resources
- Continue to address equipment needs

Some clinicians started providing Virtual Therapy & received 1:1 support





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What the virtual program offers

Adapted assessments

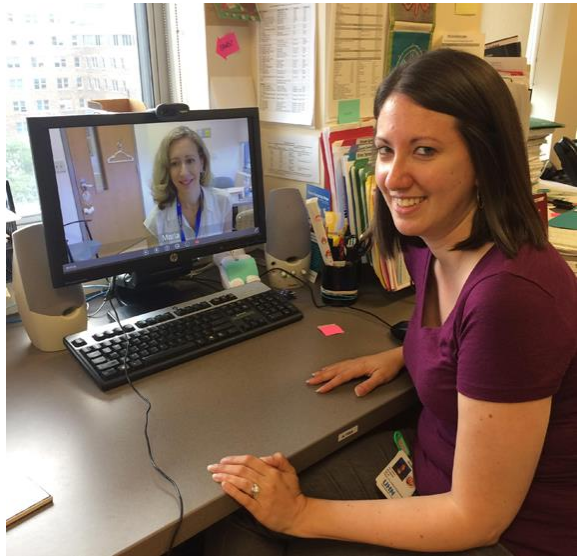
- Adapted speech and cognitive assessments
- Functional observations and assessments

Adapted treatment and consultation

- Email exchange of photos, videos, and documents
- Use of videos
- Use of family caregivers to assist

Adapt and progress home programs

- Making use of what they have at home
- Patient and family caregiver education



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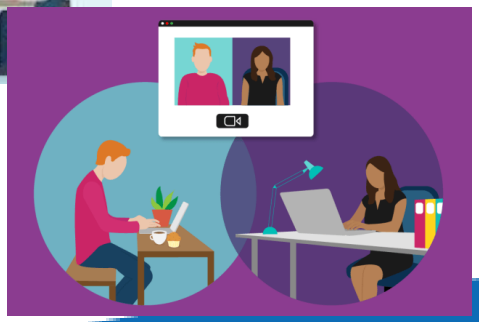
We keep learning!

1. Online patient and carer surveys
2. Online staff surveys

- Quality Patient Safety Rounds
- Team meetings
- Informal feedback from the teams, patients and caregivers



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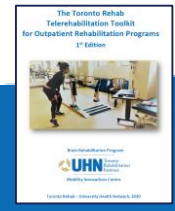
Patient experience of virtual neurorehab

Part of a broader program of evaluation and learning

- **Goal of surveys**
  - Understand changes over time
  - Respond rapidly
  - Inform future planning
- Comparing **early on** in the pandemic **to present**
  - Groups largely similar
  - “Moderately familiar” with virtual rehab



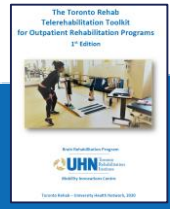
What challenges are patients reporting?

Technology: 26%

None: 50%

8% **Technology**

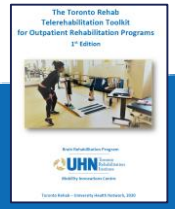
None: 66%



Our learning along the way

From our patients & carers

- ***Most*** patients found virtual therapy to be an **acceptable format** to receive therapy after a Stroke or ABI
- Experience ***improved*** **over the pandemic**
  - Helped reach their goals (↑88%)
  - Felt confident to participate (↑93%)
  - Satisfied with technology (↑92%)
  - Would recommended to others (↑73%)



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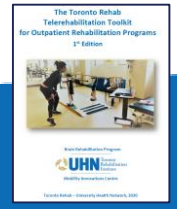
Did a family member help you with your virtual rehab?

About 50% "a fair amount" of **support of a carer**

Cardiac rehab: *About 90% needed "no help at all"*

"Patients who do not have a caregiver family member to help or supervise during a session makes it very challenging to provide as much as value or be as safe as I would like to be."

Virtual Therapist



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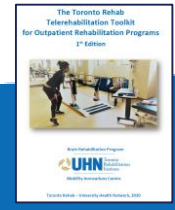
Our learning along the way

From our Patients & Carers

- Prefer in-person for *physical exercises*
- Need proper *space* to participate
- Learn / help to navigate the *technology*



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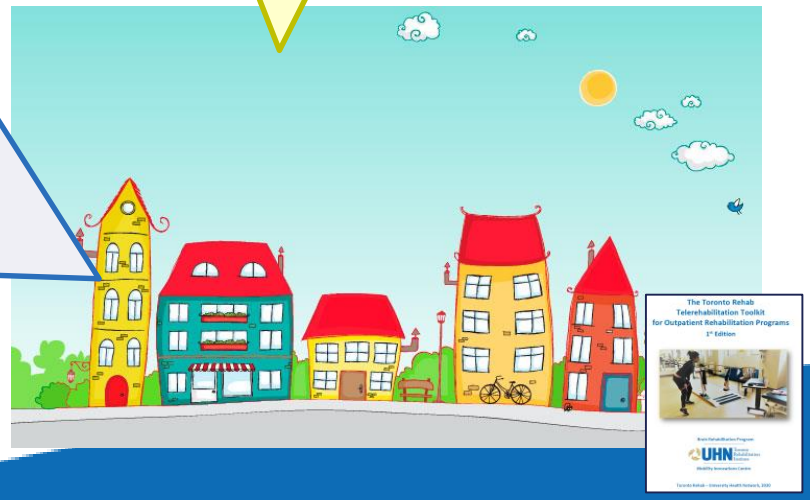
"I am grateful that virtual sessions have allowed me to move forward with my journey … everything has pictures … Any other method would just not work!" *Patient*

"It is nice that I don't have to travel, but much more than that, I can do a full hour of therapy because I am not so exhausted. However, I do miss the closeness … I have to listen and watch everything much more closely. My therapists need to repeat more and be very patient with me. It's a partnership and I am very grateful for it!" *Patient*



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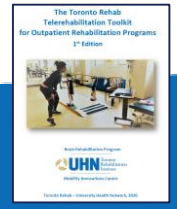

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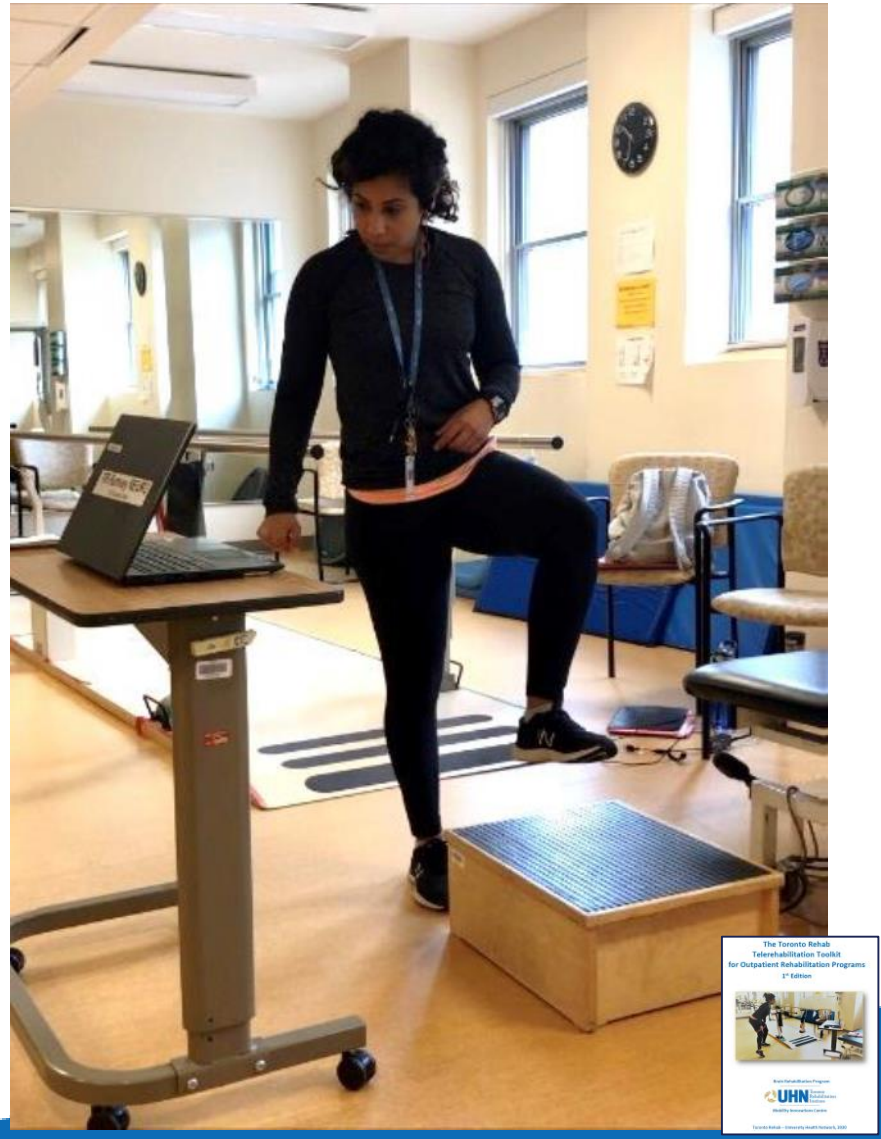
Provider experiences of virtual neurorehab

"As a team, we have really come together to support each other, to learn, share … Patients and families feel connected and valued, that their recovery matters. For those who would other wise have no therapy … that is a real privilege."

Virtual Therapist



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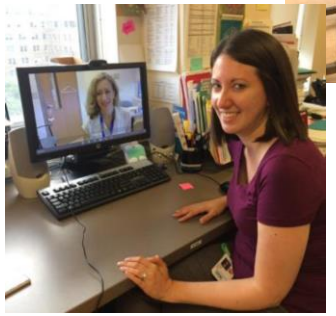
Our learning along the way

From our Providers



- ***Improved*** staff perception of **knowledge to provide virtual care** over the pandemic

  (Focusing on processes & best practices guidelines, without considering technology)

  ↑89%

- **Confidence** in using technology is high (→83%)

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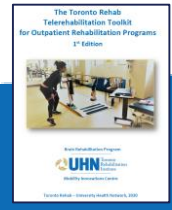
Our learning along the way

From our Providers

- Low satisfaction with **technology** (↓24%) and **equipment** (↓35%)
  - More laptops & Bluetooth headsets
  - Poor and unstable connection – impact of sound & video quality
- **Low perceived support** (↓35%)
  - Additional training and access to equipment
  - Feasible options for assessments, outcome measures and intervention
  - More real-time tech support *for patients*
- **Virtual fatigue & preparation time**



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Our learning along the way

From our Providers

- **Ability to meet rehab needs** (↓29%)
  - Less able to address patients with higher impairment
  - Cannot assess pre-driving skills
  - Limited to specific patients, specific goals
  - Limited to individuals who have access to technology
- Virtual care is **not for everyone**
- **Benefits of a hybrid model**
  - A mix of virtual & in-person sessions, depending on goals and needs

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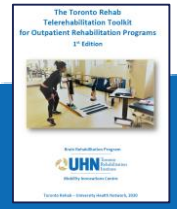
"It has been challenging providing virtual PT to patients with lower stages of motor recovery … Even with instruction, caregivers have difficulty in providing the hands-on cueing and assistance."
Virtual Therapist

"Bandwidth, freezing, delay, OTN overload, can't screen share … and repeat." *Virtual Therapist*

"There is value in assessing patients within their home environments and doing tasks that are meaningful to them, to identifying safety issues and tailoring their exercise and education."
Virtual Therapist

Highlights

- Meeting the needs of many in the face of receiving no therapy
- ABI and Stroke patients experience challenges to access and participate in virtual sessions … **but fewer than you might think**
- **Carer participation** enhances the safety and value of a virtual visit, and this is **critical in many cases**
- Virtual therapy is not suitable for everyone or every goal
- Importance of **a hybrid model** → depends on goals, access, technology, and complexity
- Challenges seem to be impacting providers more than patients



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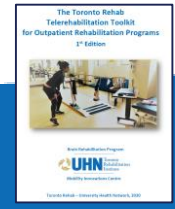
Adapting along the way

- Ongoing support for **technology setup** and **practice with patients** during inpatient stay
- In-person outpatient session to provide tech support
- Flexibility to adapt between virtual only, hybrid & in-person models base on needs and goals
- Continue to address equipment and bandwidth concerns
- Develop **home exercise kits** for patients as they leave inpatients



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We wanted to share our learnings, resources with other programs so that everyone can better help patients in need of rehab during these pandemic times, and beyond.

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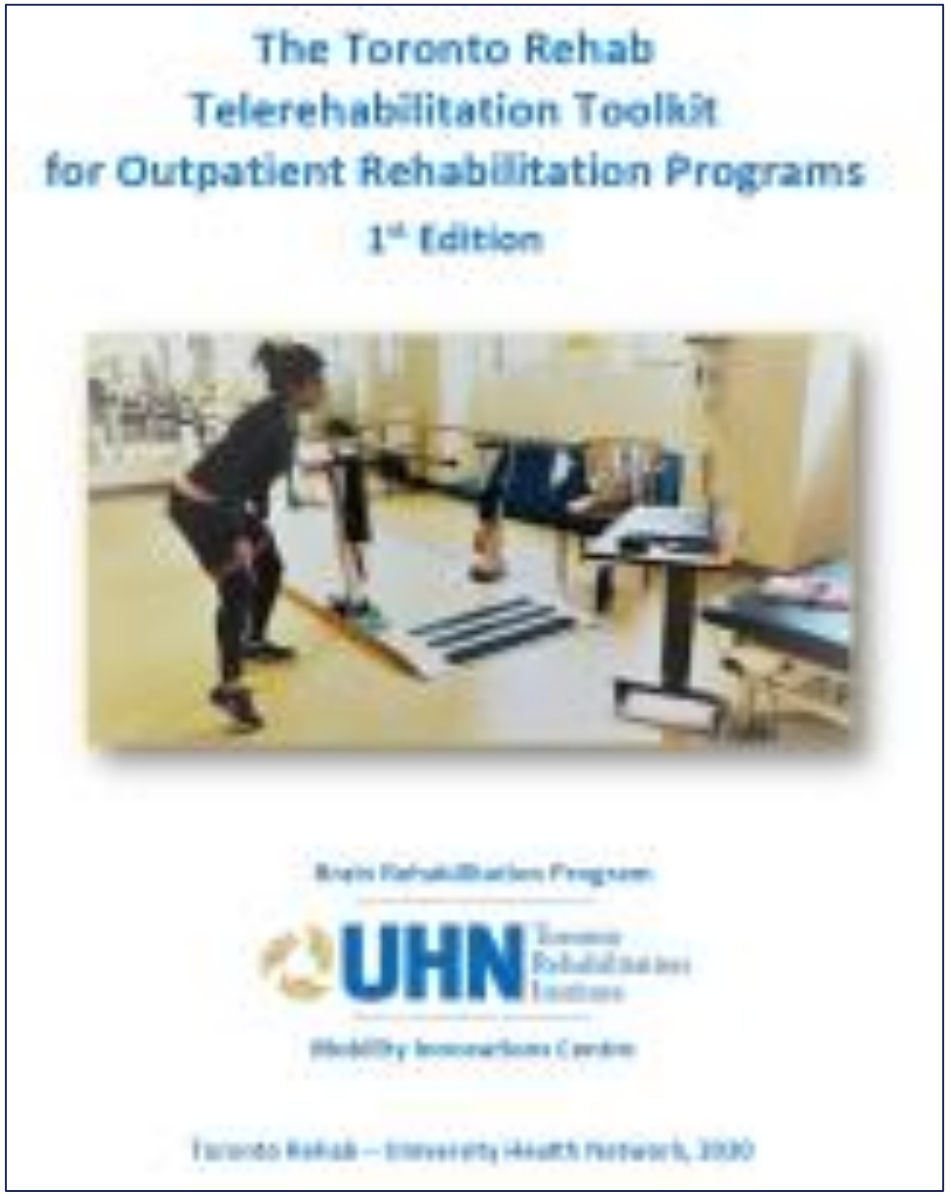
The TR Toolkit for Telerehab

- A joint project between the Toronto Rehab Brain Rehabilitation Program, Cardiac Rehabilitation Program and the Mobility Innovation Centre
- Existing resources from the Brain Rehabilitation Program's virtual rehab program + newly created resources created over 4 months
- Feedback from our partners:
  - Dr. Hillel Finestone and Jennifer O'Neil (Bruyère)
  - Dr. Stephanie Plamondon (Foothills)



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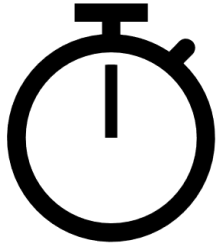
What is in this toolkit?



Getting Started

Preparing Patients and Carers for Telerehab

Implementing Virtual Telerehab

Evaluating and Monitoring

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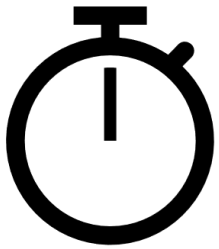
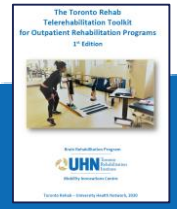


Getting Started

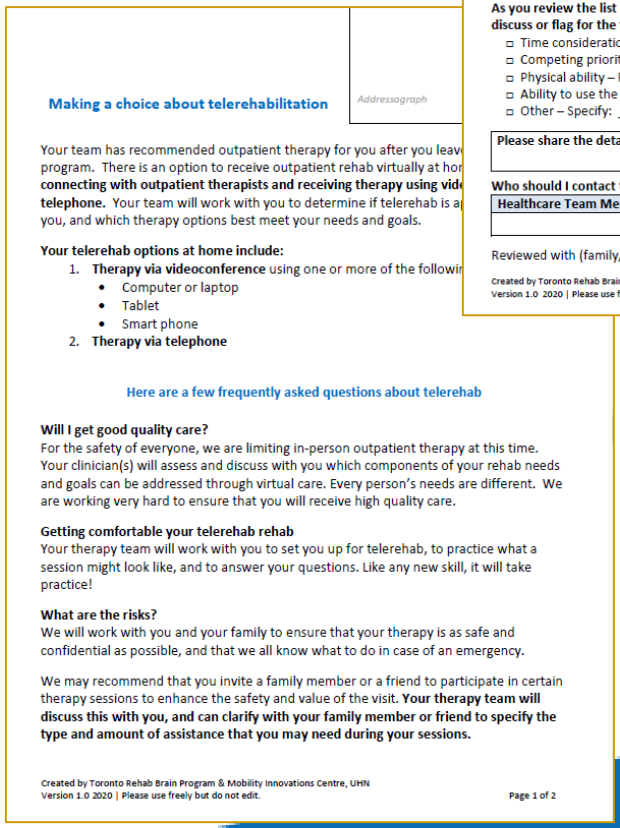
- A QI, implementation science approach to getting started
  - Forming the team
  - Understanding enablers and barriers – Gap analysis, Guiding questions
  - Checklist on how to support clinicians



What is in this toolkit?

Preparing Patients and Carers for Virtual Telerehab

- Consent
- Setting goals and expectations
- **How to determining if a patient is appropriate**
- **Preparing your family member or friend to participate**



Making a choice about telerehabilitation

Addressograph

Your team has recommended outpatient therapy for you after you leav
program. There is an option to receive outpatient rehab virtually at hor
**connecting with outpatient therapists and receiving therapy using vid
telephone.** Your team will work with you to determine if telerehab is a
you, and which therapy options best meet your needs and goals.

Your telerehab options at home include:

1. **Therapy via videoconference** using one or more of the followi
   - Computer or laptop
   - Tablet
   - Smart phone
2. **Therapy via telephone**

Here are a few frequently asked questions about telerehab

Will I get good quality care?
For the safety of everyone, we are limiting in-person outpatient therapy at this time. Your clinician(s) will assess and discuss with you which components of your rehab needs and goals can be addressed through virtual care. Every person's needs are different. We are working very hard to ensure that you will receive high quality care.

Getting comfortable your telerehab rehab
Your therapy team will work with you to set you up for telerehab, to practice what a session might look like, and to answer your questions. Like any new skill, it will take practice!

What are the risks?
We will work with you and your family to ensure that your therapy is as safe and confidential as possible, and that we all know what to do in case of an emergency.

We may recommend that you invite a family member or a friend to participate in certain therapy sessions to enhance the safety and value of the visit. **Your therapy team will discuss this with you, and can clarify with your family member or friend to specify the type and amount of assistance that you may need during your sessions.**

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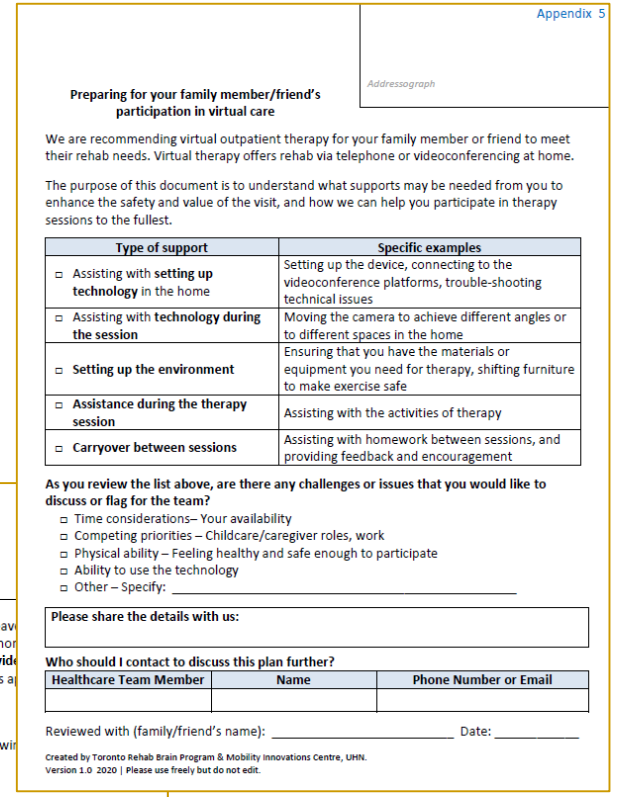

Appendix 5

Addressograph

Preparing for your family member/friend's participation in virtual care

We are recommending virtual outpatient therapy for your family member or friend to meet their rehab needs. Virtual therapy offers rehab via telephone or videoconferencing at home.

The purpose of this document is to understand what supports may be needed from you to enhance the safety and value of the visit, and how we can help you participate in therapy sessions to the fullest.

Type of support	Specific examples
☐ Assisting with **setting up technology** in the home	Setting up the device, connecting to the videoconference platforms, trouble-shooting technical issues
☐ Assisting with **technology during the session**	Moving the camera to achieve different angles or to different spaces in the home
☐ **Setting up the environment**	Ensuring that you have the materials or equipment you need for therapy, shifting furniture to make exercise safe
☐ **Assistance during the therapy session**	Assisting with the activities of therapy
☐ **Carryover between sessions**	Assisting with homework between sessions, and providing feedback and encouragement

As you review the list above, are there any challenges or issues that you would like to discuss or flag for the team?

- ☐ Time considerations– Your availability
- ☐ Competing priorities – Childcare/caregiver roles, work
- ☐ Physical ability – Feeling healthy and safe enough to participate
- ☐ Ability to use the technology
- ☐ Other – Specify: _____

Please share the details with us:

Who should I contact to discuss this plan further?

Healthcare Team Member	Name	Phone Number or Email

Reviewed with (family/friend's name): _____ Date: _____

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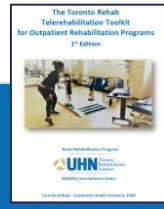

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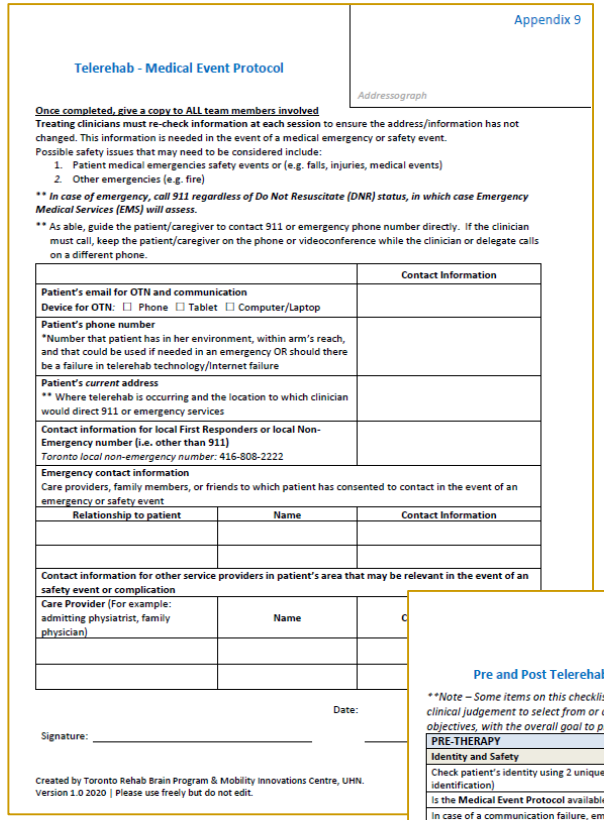
What is in this toolkit?

Implementing Telerehab

- Suggested handoff process between inpatient and outpatient
- Patient and carer handouts on how to use the technology
- Scheduling email template
- **Medical event protocol**
- **Safety Checklist**



Appendix 9

Telerehab - Medical Event Protocol

Addressograph

Once completed, give a copy to ALL team members involved

Treating clinicians must re-check information at each session to ensure the address/information has not changed. This information is needed in the event of a medical emergency or safety event.

Possible safety issues that may need to be considered include:

1. Patient medical emergencies safety events or (e.g. falls, injuries, medical events)
2. Other emergencies (e.g. fire)

*** In case of emergency, call 911 regardless of Do Not Resuscitate (DNR) status, in which case Emergency Medical Services (EMS) will assess.*

** As able, guide the patient/caregiver to contact 911 or emergency phone number directly. If the clinician must call, keep the patient/caregiver on the phone or videoconference while the clinician or delegate calls on a different phone.

	Contact Information
Patient's email for OTN and communication **Device for OTN:** ☐ Phone ☐ Tablet ☐ Computer/Laptop	
Patient's phone number *Number that patient has in her environment, within arm's reach, and that could be used if needed in an emergency OR should there be a failure in telerehab technology/Internet failure	
Patient's *current* address ** Where telerehab is occurring and the location to which clinician would direct 911 or emergency services	
Contact information for local First Responders or local Non-Emergency number (i.e. other than 911) *Toronto local non-emergency number:* 416-808-2222	
Emergency contact information Care providers, family members, or friends to which patient has consented to contact in the event of an emergency or safety event	

Relationship to patient	Name	Contact Information

Contact information for other service providers in patient's area that may be relevant in the event of an safety event or complication

Care Provider (For example: admitting physiatrist, family physician)	**Name**	C

Date:

Signature: _____

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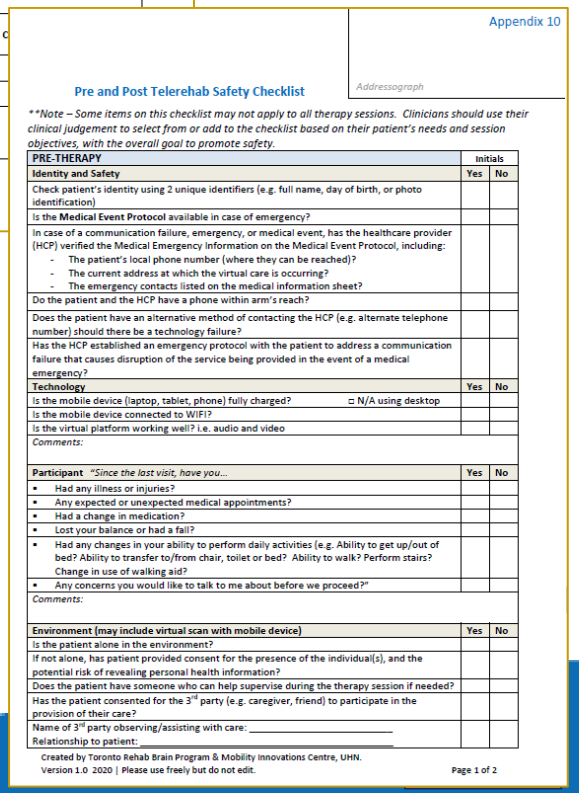

Appendix 10

Addressograph

Pre and Post Telerehab Safety Checklist

*Note – Some items on this checklist may not apply to all therapy sessions. Clinicians should use their clinical judgement to select from or add to the checklist based on their patient's needs and session objectives, with the overall goal to promote safety.

PRE-THERAPY	Initials	
Identity and Safety	**Yes**	**No**
Check patient's identity using 2 unique identifiers (e.g. full name, day of birth, or photo identification)		
Is the **Medical Event Protocol** available in case of emergency?		
In case of a communication failure, emergency, or medical event, has the healthcare provider (HCP) verified the Medical Emergency Information on the Medical Event Protocol, including: - The patient's local phone number (where they can be reached)? - The current address at which the virtual care is occurring? - The emergency contacts listed on the medical information sheet?		
Do the patient and the HCP have a phone within arm's reach?		
Does the patient have an alternative method of contacting the HCP (e.g. alternate telephone number) should there be a technology failure?		
Has the HCP established an emergency protocol with the patient to address a communication failure that causes disruption of the service being provided in the event of a medical emergency?		
Technology	**Yes**	**No**
Is the mobile device (laptop, tablet, phone) fully charged? ☐ N/A using desktop		
Is the mobile device connected to WIFI?		
Is the virtual platform working well? i.e. audio and video		
Comments:		

Participant *"Since the last visit, have you…*	**Yes**	**No**
• Had any illness or injuries?		
• Any expected or unexpected medical appointments?		
• Had a change in medication?		
• Lost your balance or had a fall?		
• Had any changes in your ability to perform daily activities (e.g. Ability to get up/out of bed? Ability to transfer to/from chair, toilet or bed? Ability to walk? Perform stairs? Change in use of walking aid?		
• Any concerns you would like to talk to me about before we proceed?"		
Comments:		

Environment (may include virtual scan with mobile device)	**Yes**	**No**
Is the patient alone in the environment?		
If not alone, has patient provided consent for the presence of the individual(s), and the potential risk of revealing personal health information?		
Does the patient have someone who can help supervise during the therapy session if needed?		
Has the patient consented for the 3rd party (e.g. caregiver, friend) to participate in the provision of their care?		
Name of 3rd party observing/assisting with care: _____ Relationship to patient: _____		

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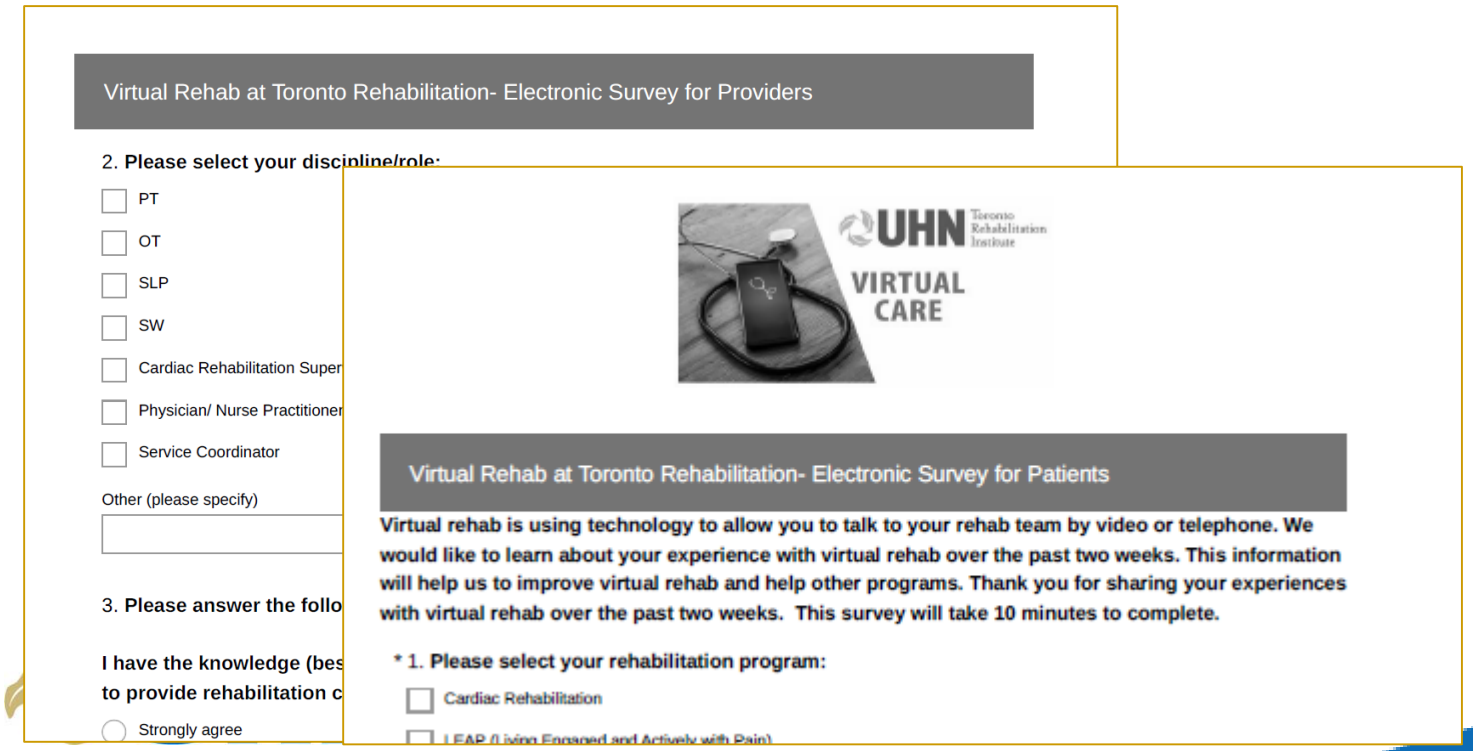
UHN Toronto Rehabilitation Institute

https://kite-uhn.com/tools/tr-telerehab-toolkit

What is in this toolkit?

Evaluating and Monitoring

- Suggested evaluation
  - **Ideas for measures**
  - **Patient and provider experience surveys**



Virtual Rehab at Toronto Rehabilitation- Electronic Survey for Providers

2. **Please select your discipline/role:**

- PT
- OT
- SLP
- SW
- Cardiac Rehabilitation Super
- Physician/ Nurse Practitioner
- Service Coordinator

Other (please specify)

3. **Please answer the follo**

I have the knowledge (bes
to provide rehabilitation c

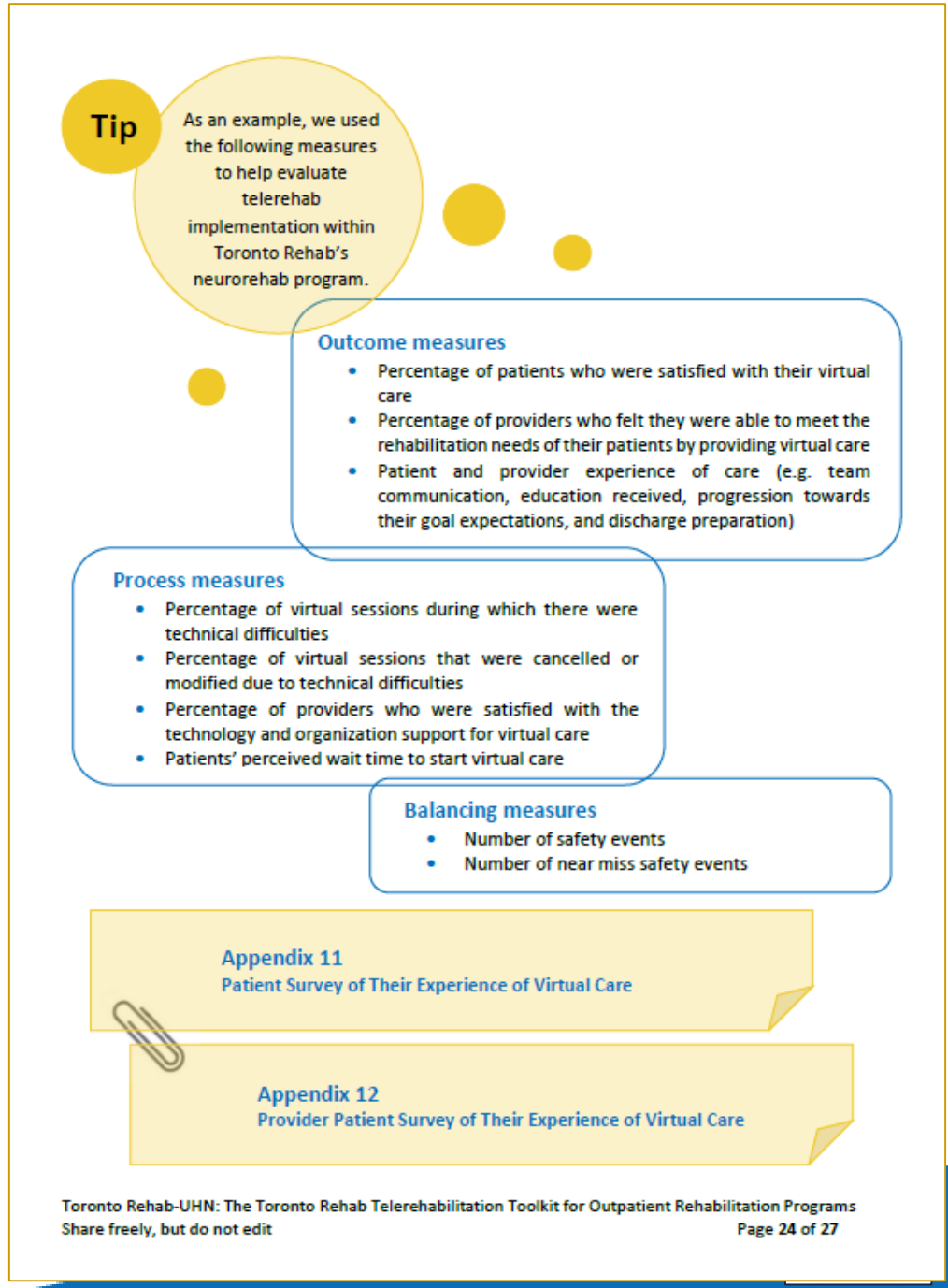
- Strongly agree

Virtual Rehab at Toronto Rehabilitation- Electronic Survey for Patients

Virtual rehab is using technology to allow you to talk to your rehab team by video or telephone. We would like to learn about your experience with virtual rehab over the past two weeks. This information will help us to improve virtual rehab and help other programs. Thank you for sharing your experiences with virtual rehab over the past two weeks. This survey will take 10 minutes to complete.

*** 1. Please select your rehabilitation program:**

- Cardiac Rehabilitation
- LEAP (Living Engaged and Actively with Pain)



Tip

As an example, we used the following measures to help evaluate telerehab implementation within Toronto Rehab's neurorehab program.

Outcome measures

- Percentage of patients who were satisfied with their virtual care
- Percentage of providers who felt they were able to meet the rehabilitation needs of their patients by providing virtual care
- Patient and provider experience of care (e.g. team communication, education received, progression towards their goal expectations, and discharge preparation)

Process measures

- Percentage of virtual sessions during which there were technical difficulties
- Percentage of virtual sessions that were cancelled or modified due to technical difficulties
- Percentage of providers who were satisfied with the technology and organization support for virtual care
- Patients' perceived wait time to start virtual care

Balancing measures

- Number of safety events
- Number of near miss safety events

Appendix 11
Patient Survey of Their Experience of Virtual Care

Appendix 12
Provider Patient Survey of Their Experience of Virtual Care

Toronto Rehab-UHN: The Toronto Rehab Telerehabilitation Toolkit for Outpatient Rehabilitation Programs
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The future

2021?

- Version 2.0 TBD
- Multimedia content on how to adapt what we used to offer in-person to the virtual platform
- Telerehab will allow us to reach patients who live in remote areas, or who lack supports to attend in-person rehab

Why is the toolkit not just a clickable download link?!

- Have to complete an user profile before receiving the toolkit:
  - To allow us to keep track of where the toolkit has been distributed
  - To get feedback so that we can improve it for subsequent versions!
  - Also allow us to tell you when subsequent versions of the toolkit become available

- Simple SurveyMonkey user profile that takes minutes to complete

Acknowledgments – We are better together!

Dr. Mark Bayley
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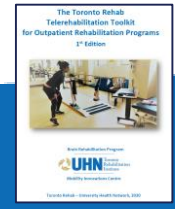
Dr. Alexander Lo
Dr. McKyla McIntyre
Dr. Sarah Munce
Dr. Paul Oh

To the clinical teams across the Brain and Cardiac programs for their commitment to care and to the patients we serve.



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? Comments, questions, suggestions

Copy this link to download toolkit:
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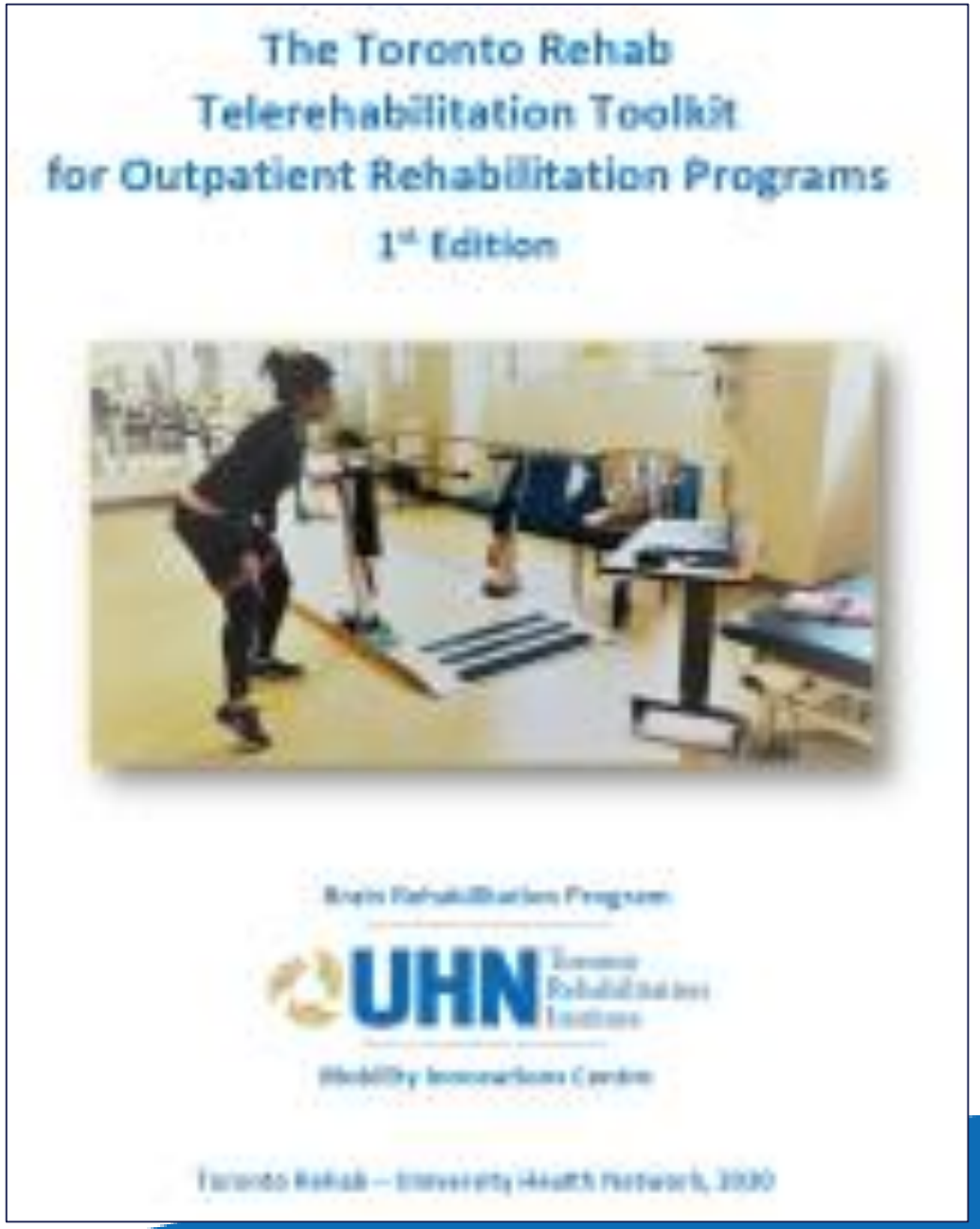
We would love your input!

- Is there anything in the toolkit you could apply to your work tomorrow?
- Is there anything that we need to add?
  - We would like to add a section on "**Delivering good quality telerehab"** - what content would be most helpful?