

# Specialized Rehabilitation

*Guidance for Ontario Health  
Teams (Complex Trauma)*

**MARCH 31, 2023**

## Specialized Rehabilitation

### BACKGROUND:

As Ontario's health care system transitions to an integrated care model, Ontario Health Teams (OHTs) will be responsible for providing a full and coordinated continuum of care for all but the most specialized conditions and procedures, which will be delivered by existing/identified specialized providers.<sup>1</sup> In 2021, the GTA Rehab Network published guidance for OHTs on specialized rehabilitation in collaboration with the University of Toronto's Physical Medicine and Rehabilitation group and GTA Rehab Network partners. In 2022, the Rehabilitative Care Alliance (RCA) engaged provincial partners to review the GTA Rehab Network's guidance documents and revise as needed to confirm provincial application. The RCA wishes to acknowledge the GTA Rehab Network in its development of such comprehensive guidance on specialized rehab for OHTs. The RCA has adapted the guidance documents to represent the provincial context (e.g., inclusion of information on the use of a Hub and Spoke model to address rural disparities; other population-specific changes). The information that follows reflects the full endorsement of the RCA.

### SPECIALIZED REHABILITATION:

The provision of rehabilitation occurs at different points in the continuum of care and may require a general or a specialized approach depending on the patient population requiring treatment. The University of Toronto's Physical Medicine and Rehabilitation group alongside the GTA Rehab Network identified the following rehabilitation populations that require a specialized approach. These populations include acquired brain injury (ABI), amputee, burn, cardiovascular, complex trauma, oncology, pediatric, pulmonary, spinal cord injury and stroke. These specialized rehabilitation programs should be developed, planned and continue to be provided regionally and/or provincially and be part of ongoing system-level planning and capacity building.

To support achievement of optimal clinical outcomes as per available evidence, it is strongly recommended that patients who require inpatient rehab receive treatment in a specialized rehab program even if it is not available locally. For certain populations, specialized rehabilitation, delivered by an interprofessional team with specific expertise, is required to ensure optimal patient outcomes across the age continuum.<sup>2</sup> However, for patients who require specialized community-based rehabilitation that is not available locally, a hybrid modified Hub and Spoke<sup>3</sup> model<sup>4</sup> can be used, if certain conditions are met within the local community. Such a model can help address rural disparities when there is low

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<sup>1</sup> [RISE brief 29: Examining intersections between Ontario Health Teams and Specialty service lines](#)

<sup>2</sup> The OHA has highlighted in its report, [A Principled Approach to Advancing Specialized Health Services Through Ontario's Integrated Care Planning](#) (Nov 2020), that a specialized health service is a service that provides highly focused care to a small proportion of patients within a defined geographical area, and which requires specific clinical expertise and resources in order to provide high-quality care promoting positive patient outcomes and experiences.

<sup>3</sup> The hub-and-spoke model, as applied in healthcare settings, is a method of organization involving the establishment of a main campus or hub, which receives the heaviest resource investments and supplies the most intensive medical services, complemented by satellite campuses or spokes, which offer more limited service arrays at sites.

<sup>4</sup> Elrod, J.K., & Fortenberry, J.L. (2017) The hub-and-spoke organization design revisited: a lifeline for rural hospitals. *BMC Health Service Res*, 17(Suppl 4): 795. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5751794/>

prevalence of a health condition within the local community (i.e., specialized rehab expertise is not available) or where the distance from the specialized provider is prohibitive.

The Hub and Spoke model is a viable option for the local community without specialized rehab expertise only if the satellite provider (i.e., the spoke) has the adequate resources to provide the treatment and rehab coordination required (i.e., the rehab therapists<sup>5</sup> to provide the number of sessions and intensity of therapy recommended). When this is available, the designated specialized rehab team (inpatient, outpatient or other specialized community team) will (1) serve as the Hub; (2) facilitate transitions to the community; and (3) provide its expertise to the local team. Virtual rehabilitation can be used to enable and augment this model of care where appropriate as determined on a patient-by-patient basis. (See Appendix A for key considerations on using virtual rehabilitation.) Efforts should be made to operationalize this Hub and Spoke model where needed including the availability of adequate resources in the local area to support this model. Consideration will also need to be given to funding for this expanded role as a regional rehab hub to support spoke providers to deliver care more locally, under the guidance of specialized rehab teams with expertise in a specific area.<sup>6</sup>

While the need for specialized expertise and the lower volumes of patients for some populations may preclude the provision of rehabilitation close to home, there should be reasonable access to services. Rehabilitation for high volume populations (e.g., [older adults with frailty](#), patients with cardiovascular issues, progressive neurological conditions, [musculoskeletal issues](#), or with injuries from minor trauma) should allow for the development of clinical expertise that is close to home across all OHTs.

This document provides rehabilitative care best practice guidance for Ontario Health Teams to assist in determining when the expertise of a specially trained interprofessional team with a focused skill set is necessary to provide safe, effective and efficient care.

#### PURPOSE:

The purpose of this document is to provide a guide that:

- delineates what services and resources are required to provide specialized rehabilitation
- differentiates when specialized rehabilitation services are needed to support one of the ten rehabilitation populations (acquired brain injury, amputee, burn, cardiovascular, complex trauma, oncology, pediatric, pulmonary, spinal cord injury and stroke)

#### GUIDING PRINCIPLES:

There are a few guiding principles of specialized rehabilitation service provision that are common across all ten populations addressed in this document:

- Service is provided by a specially trained interprofessional team with a focused skill set. Rehabilitation professionals include audiologists, dietitians, kinesiologists, occupational therapists, physical medicine and rehabilitation specialists (physiatrists), physiotherapists,

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<sup>5</sup> Refer to the college of regulated rehab professionals for the standards regarding the use of rehab assistants and provision of supervisory support.

<sup>6</sup> How the Hub and Spoke model will be operationalized will be addressed in future by the RCA in discussion with Ontario Health/Ministry of Health.

psychologists, rehabilitation nurses, respiratory therapists, social workers and speech-language pathologists, as well as other regulated health professionals.<sup>7</sup>

Note: The Ontario Ministry of Health provides [additional information](#) on other regulated health providers.

- Expertise is demonstrated in programs that see higher volumes of patients. A critical mass of patients must be seen to maintain expertise and clinical efficiency and effectiveness.
  - Critical mass is a threshold for the volume of cases that must be seen by a rehabilitation program to maintain expertise.
- Service provision requires clinical coherence with other programs or services across the continuum of care.
  - Clinical coherence is a relationship between specialized rehabilitation program/service and a complementary service(s) across the continuum that support comprehensive integrated patient care. For example, inpatient ABI rehabilitation has clinical coherence with acute neuro/neurosurgery, outpatient ABI clinics and community care.
- Service provision requires specialized resources including extensive capital and/or operating resources.
- Specialized rehabilitation programs should be funded equitably across the province to ensure there is sufficient capacity to meet evidence-based requirements for best practice rehabilitative care.
- As per the [Truth and Reconciliation Commission of Canada: Calls to Action # 22](#) (2015) regarding inclusion of Indigenous healing practices as discussed with the client: “We call upon those who can effect change within the Canadian health-care system to recognize the value of Aboriginal healing practices and use them in the treatment of Aboriginal patients in collaboration with Aboriginal healers and Elders where requested by Aboriginal patients.”

## HOW TO USE THIS RESOURCE:

The guidance document should be considered in entirety to provide a comprehensive understanding of specialized rehabilitation for the identified rehab populations. The tables that follow provide a description of what specialized rehabilitation provides for the population (Table A) and a description of the patient profile to facilitate determining the optimal rehabilitation sector/location (Table B). This resource will be used for the following rehabilitation populations:

- |                               |                  |                            |
|-------------------------------|------------------|----------------------------|
| • Acquired brain injury (ABI) | • Complex trauma | • Spinal Cord Injury (SCI) |
| • Amputee                     | • Oncology       | • Stroke                   |
| • Burn                        | • Pediatric      |                            |
| • Cardiovascular              | • Pulmonary      |                            |

To find specialized rehabilitation programs, see [Rehab Care Ontario](#).

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<sup>7</sup> Rehabilitative Care Alliance. (Nov 2020). [Patient and System-Level Benefits of Rehabilitative Care A primer to support planning by OHTs and Ontario Health](#).

## KEY ASPECTS OF SPECIALIZED REHABILITATION PROGRAMS FOR PATIENTS FOLLOWING A COMPLEX TRAUMA INJURY

Table A

The following section describes four guiding principles for specialized rehabilitation programs. In order to be considered a specialized rehabilitation program, all aspects of these principles need to be in place and should not be considered in isolation.

**Note:** A hybrid modified Hub and Spoke<sup>8</sup> model<sup>9</sup> can address rural disparities and meet the needs of people who require community-based rehabilitation when there is low prevalence of the health condition within the local community (i.e., specialized rehab expertise is not available) or the distance from the specialized provider is prohibitive. By using this model, organizations can partner with designated specialized rehab teams (inpatient, outpatient or other specialized community team) to collaborate on the care needs of patients with complex needs.<sup>10</sup> Consideration will need to be given to funding for the expanded role of regional rehab hub programs to support ‘spoke’ providers to deliver care more locally, under the guidance of specialized rehab teams with expertise in a specific area.

Guiding Principles for Specialized Services	REHABILITATION PROGRAM: COMPLEX TRAUMA REHABILITATION
<p><b>Requires team expertise and competency</b></p>	<ul style="list-style-type: none"> <li>• Knowledgeable in management/treatment of multiple trauma or polytrauma, nerve injuries</li> <li>• Wound care management</li> <li>• Acute and chronic pain management</li> <li>• Cognitive assessment and intervention</li> <li>• Psychosocial assessment and intervention</li> <li>• The interprofessional team utilizes skills and training from respective professions/roles and applies evidence-based practices to augment the recovery of patients with complex trauma through experience, communication and ongoing professional development. Interprofessional team members may include but are not limited to the following: physicians (including physical medicine and rehabilitation specialist), nurses, physical therapists, occupational therapists, occupational therapist assistants, physical therapist assistants, speech-language pathologists, social workers, dietitians, pharmacists, vocational therapists, recreational therapists, behavioural specialists, and spiritual care practitioners.</li> </ul>

<sup>8</sup> The hub-and-spoke model, as applied in healthcare settings, is a method of organization involving the establishment of a main campus or hub, which receives the heaviest resource investments and supplies the most intensive medical services, complemented by satellite campuses or spokes, which offer more limited service arrays at sites.

<sup>9</sup> Elrod, J.K., & Fortenberry, J.L. (2017) The hub-and-spoke organization design revisited: a lifeline for rural hospitals. *BMC Health Service Res*, 17(Suppl 4): 795. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5751794/>

<sup>10</sup> How the Hub and Spoke model will be operationalized will be addressed in future by the RCA in discussion with OH/MOH.

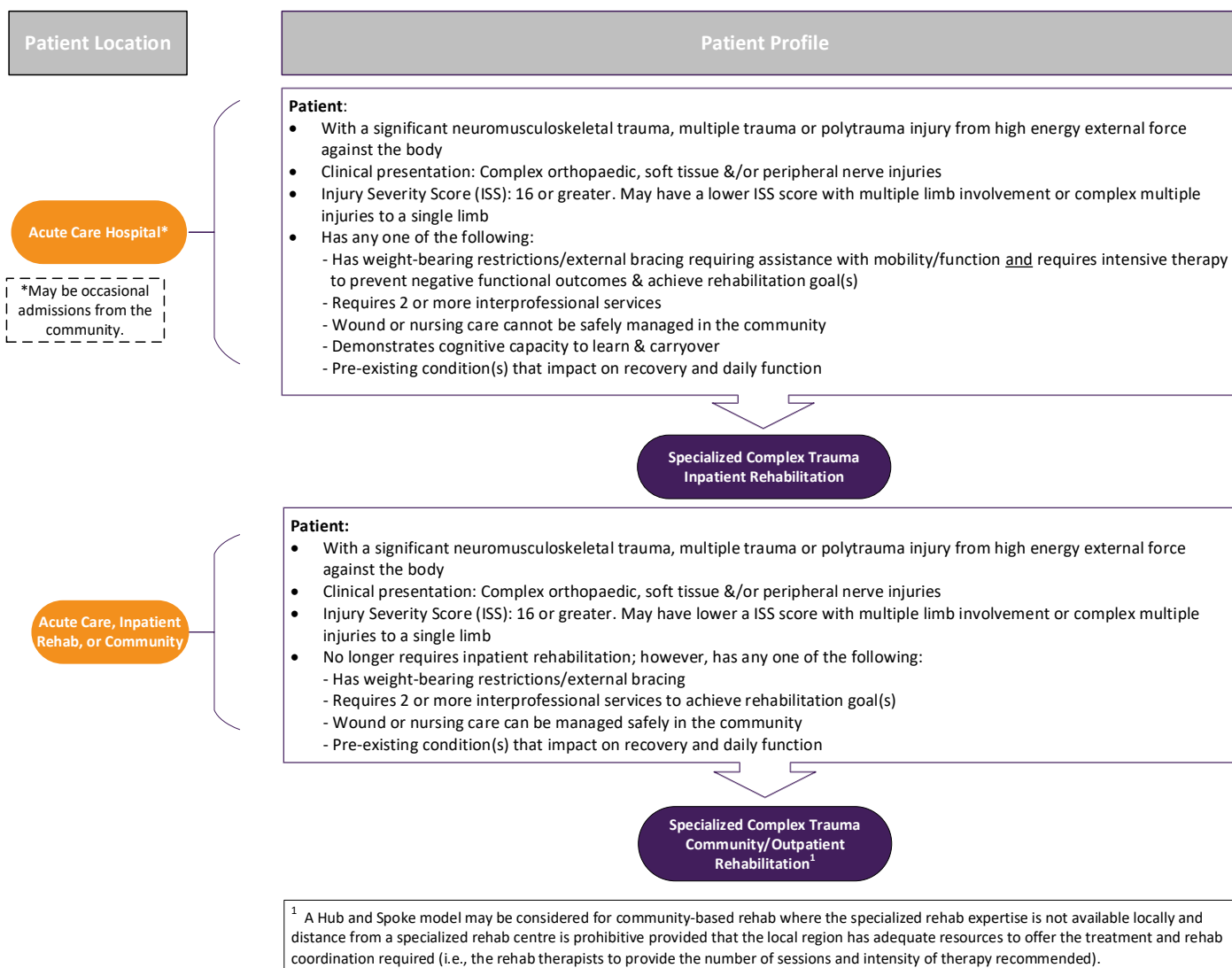
Guiding Principles for Specialized Services	REHABILITATION PROGRAM: COMPLEX TRAUMA REHABILITATION
<b>Provides services to a critical mass</b>	<ul style="list-style-type: none"> <li>Specialized Complex Trauma teams receive ongoing professional development to deliver current evidence-based Complex Trauma services.</li> <li>To be considered experts, rehabilitation clinicians should carry a caseload of patients requiring complex trauma rehabilitation on a regular basis to develop and maintain clinical skills to address patients' needs.</li> <li>The volume of patients seen in specialized inpatient and/or outpatient rehabilitation programs should be inclusive of all complex trauma related levels of complexity and needs to be sufficient to maintain expertise in the complex trauma rehabilitation population, resulting in effective and efficient care.</li> <li>Specialized complex trauma rehabilitation should be provided across multiple sectors/locations of care (e.g., inpatient rehabilitation and/or community-based/ outpatient rehabilitation including in-person, virtual rehabilitation or a hybrid of both).<sup>11</sup></li> </ul>
<b>Services require clinical coherence with other programs</b>	<ul style="list-style-type: none"> <li>Pain management services including neuropathic pain</li> <li>Electromyography (EMG)/electrophysiology clinic for peripheral nerve injury management</li> <li>Orthotist and prosthetist services for functional bracing</li> <li>Complex wound care program</li> <li>Mental health services including psychosocial/psychiatry support</li> <li>Vocational rehabilitation program</li> <li>Respiratory therapy consult for supplementary oxygen needs assessment</li> <li>Dietitian consult including for percutaneous endoscopic gastrostomy (PEG) tube</li> <li>Access to tertiary specialist across all fields including trauma surgery, intensive care unit (ICU), orthopaedics, plastic surgery, preferably from an accredited trauma centre</li> </ul>
<b>Services require specialized resources</b>	<ul style="list-style-type: none"> <li>EMG and ultrasound machines for procedures</li> <li>X-ray and laboratory services</li> <li>Braces, air casts and splints</li> </ul>

<sup>11</sup> May be in partnership across organizations with specialized rehab teams.

Guiding Principles for Specialized Services	REHABILITATION PROGRAM: COMPLEX TRAUMA REHABILITATION
	<ul style="list-style-type: none"> <li>• Wide variety of mobility equipment, assistive devices and specialty bed or seating surfaces (for skin integrity issues)</li> <li>• Funding for ongoing professional development of team members, which may include travel for sub-specialized topics</li> <li>• Consideration of addiction management services</li> </ul>

DETERMINING THE OPTIMAL SPECIALIZED REHABILITATION LOCATION BASED ON PATIENT PROFILE: COMPLEX TRAUMA INJURY

Overview – Complex Trauma Injury Rehabilitation (see Table B for details)





PATIENT PROFILE FOR THOSE REQUIRING SPECIALIZED COMPLEX TRAUMA REHABILITATION

Table B

The following section describes the patient profile for those who require specialized rehabilitation. It is not meant to reflect comprehensive admission criteria.

To achieve optimal functional outcomes, complex trauma rehabilitation requires a coordinated and collaborative interprofessional team approach that should be holistic and person-centred addressing the specific needs of the patient. Patients and families are viewed as partners in service delivery and the interprofessional team works in collaboration with them to deliver care.

LOCATION OF REHABILITATION	PATIENT PROFILE: COMPLEX TRAUMA REHABILITATION
<p><b>Inpatient Rehabilitation</b></p>	<p><b>Patient profile:</b></p> <ul style="list-style-type: none"> <li>• Patients with significant neuromusculoskeletal trauma, multiple trauma or polytrauma injury who clinically present with complex orthopaedic, soft tissue and/or peripheral nerve injuries sustained from high energy, external force(s) impact against the body, requiring inpatient rehabilitative care from an interprofessional team.<sup>12 13</sup> The Injury Severity Score (ISS) of patients with complex trauma is 16 or greater (i.e., indicative of severe injury).<sup>12 14 15</sup> However, a small subset of patients with multiple limb involvement (e.g., multiple fractures on both feet) or complex multiple injuries to a single limb may have a lower ISS score but would still qualify as having sustained multiple trauma.<sup>14</sup></li> <li>• In addition, any one of the following description or condition contributes to patients requiring inpatient rehabilitative care:             <ul style="list-style-type: none"> <li>○ Injuries with weight-bearing restrictions/external bracing components that require assistance with transfers, ambulation, donning/doffing, and require supervised intensive therapy to prevent negative physiologic or functional outcomes (i.e., contractures/deconditioning)</li> </ul> </li> </ul>

<sup>12</sup> University of Toronto Physical Medicine and Rehabilitation. Fellowship description for trauma rehabilitation. Available from [https://domapp.utoronto.ca/fellowship/dom\\_index.php?listall=1&divisions=15](https://domapp.utoronto.ca/fellowship/dom_index.php?listall=1&divisions=15)

<sup>13</sup> Lecky, F. et al. (2010). Epidemiology of Polytrauma. Damage Control Management in the Polytrauma Patient. In H.-C. Pape A. Petizman, C. Schwab, P. Giannoudis. (Eds). Damage control management in the polytrauma patient (pp. 439-450). Springer Science and Business Media. Available from <https://link.springer.com/content/pdf/10.1007%2F978-0-387-89508-6.pdf>

<sup>14</sup> University of Toronto Physical Medicine and Rehabilitation and GTA Rehab Network’s Specialized Rehab Initiative (Phase 1).

<sup>15</sup> National Institute for Health and Care Excellence (NICE). (2016). *Major trauma: service delivery for major trauma. NICE guideline 40*. Available from: <https://www.nice.org.uk/guidance/ng40/evidence/full-guideline-pdf-2313258877>

LOCATION OF REHABILITATION	PATIENT PROFILE: COMPLEX TRAUMA REHABILITATION
	<ul style="list-style-type: none"> <li>○ Need for 2 or more of interprofessional services and requiring assistance with self-care activities of daily living and ambulation</li> <li>○ Wound care or other nursing consideration cannot be safely managed in community.</li> <li>○ Demonstrate cognitive capacity to learn and carryover</li> <li>○ Pre-existing conditions (e.g., previous stroke, Parkinson’s disease, lower/upper limb amputation injury) in addition to the complex trauma injury, that impact on patients’ recovery and daily function</li> </ul> <p><b>Other Considerations:</b></p> <ul style="list-style-type: none"> <li>● Patients with brain injury, spinal cord injury or an amputation injury in addition to a complex trauma injury may need to seek the care of a specialized brain injury, spinal cord or amputation injury rehabilitation program. <ul style="list-style-type: none"> <li>○ Assessment to screen for clinical presentation of a brain injury in the inpatient rehabilitation setting is important. The rehabilitative program of a patient with concurrent complex trauma injury and brain injury depends on the health human resources of the rehabilitation team, severity of the brain injury and patient needs. To address cognitive-related treatment needs, a patient may require either a) a consultation from another specialized rehabilitation team, b) transfer to a specialized brain injury inpatient program, or c) referral to a specialized outpatient rehabilitation program following inpatient rehabilitation stay.</li> </ul> </li> <li>● Based on a systematic review, there is a gap in evidence regarding rehabilitation settings, components, intensity, duration and types of therapy, and long-term outcomes for patients who have experienced multiple trauma.<sup>16</sup></li> </ul>
<p><b>Community-Based/Outpatient Rehabilitation</b> Specialized complex trauma rehabilitation can be provided in-</p>	<p><b>Patient profile:</b></p> <ul style="list-style-type: none"> <li>● Patients with significant neuromusculoskeletal trauma, multiple trauma or polytrauma injury who clinically present with complex orthopaedic, soft tissue and/or peripheral nerve injuries sustained from high energy, external force(s) impact against the body, requiring outpatient rehabilitative care</li> </ul>

<sup>16</sup> Khan, F., Amatya, B., Hoffman, K. (2012). Systematic review of multidisciplinary rehabilitation in patients with multiple trauma. *British Journal of Surgery*, 99(Suppl 1), 88-96. <https://doi.org/10.1002/bjs.7776>

LOCATION OF REHABILITATION	PATIENT PROFILE: COMPLEX TRAUMA REHABILITATION
<p>person, virtually or as a hybrid of both.<sup>17</sup></p>	<p>from an interprofessional team.<sup>18 19</sup> The Injury Severity Score of patients with complex trauma is 16 or greater (i.e., indicative of severe injury).<sup>18 20 21</sup> However, a small subset of patients with multiple limb involvement (e.g., multiple fractures on both feet) or complex multiple injuries to a single limb may have a lower ISS score but would still qualify as having sustained multiple trauma.<sup>19</sup></p> <ul style="list-style-type: none"> <li>• Patient no longer requires supervised daily intensive therapy in an inpatient setting to prevent negative physiologic or functional outcomes (i.e., contractures/deconditioning); however, has any one of the following description or condition:             <ul style="list-style-type: none"> <li>○ Patient has injuries with weight-bearing restrictions/external bracing components</li> <li>○ Need for 2 or more of interprofessional services and requiring assistance with ambulation, self-care, home and community living skills as well as vocational re-integration</li> <li>○ Wound care or other nursing consideration can be safely managed in community.</li> <li>○ Pre-existing conditions (e.g., previous stroke, Parkinson’s disease, lower/upper limb amputation injury) in addition to the complex trauma injury, that impact on patients’ recovery and daily function</li> </ul> </li> </ul> <p><b>Other Considerations:</b></p> <ul style="list-style-type: none"> <li>• Patients with brain injury, spinal cord injury or an amputation injury in addition to a complex trauma injury may need to seek the care of a specialized brain injury, spinal cord or amputation injury rehabilitation program.             <ul style="list-style-type: none"> <li>○ Assessment to screen for clinical presentation of a brain injury in the outpatient rehabilitation setting is important. The rehabilitative program of a patient with concurrent complex trauma injury and brain injury depends on the available resources and competencies of the rehabilitation</li> </ul> </li> </ul>

<sup>17</sup> See Appendix A for key considerations for virtual rehabilitation

<sup>18</sup> University of Toronto Physical Medicine and Rehabilitation. Fellowship description for trauma rehabilitation. Available from [https://domapp.utoronto.ca/fellowship/dom\\_index.php?listall=1&divisions=15](https://domapp.utoronto.ca/fellowship/dom_index.php?listall=1&divisions=15)

<sup>19</sup> Lecky, F. et al. (2010). Epidemiology of Polytrauma. Damage Control Management in the Polytrauma Patient. In H.-C. Pape A. Petizman, C. Schwab, P. Giannoudis. (Eds). Damage control management in the polytrauma patient (pp. 439-450). Springer Science and Business Media. Available from <https://link.springer.com/content/pdf/10.1007%2F978-0-387-89508-6.pdf>

<sup>20</sup> University of Toronto Physical Medicine and Rehabilitation and GTA Rehab Network’s Specialized Rehab Initiative (Phase 1).

<sup>21</sup> National Institute for Health and Care Excellence (NICE). (2016). *Major trauma: service delivery for major trauma. NICE guideline 40*. Available from: <https://www.nice.org.uk/guidance/ng40/evidence/full-guideline-pdf-2313258877>

LOCATION OF REHABILITATION	PATIENT PROFILE: COMPLEX TRAUMA REHABILITATION
	<p>team, the severity of the brain injury and patient needs. To address cognitive-related treatment needs, a patient may require a referral to another specialized outpatient rehabilitation program.</p> <ul style="list-style-type: none"> <li>• Based on a systematic review, there is a gap in evidence regarding rehabilitation settings, components, intensity, duration and types of therapy, and long-term outcomes for patients who have experienced multiple trauma.<sup>22</sup></li> <li>• Access many years following the injury to support community independence is recommended (e.g., high-level cognitive rehabilitation, advanced gait training, advanced prosthetic training, vocational evaluation and other community re-entry programming).<sup>23</sup></li> </ul>

<sup>22</sup> Khan, F., Amatya, B., Hoffman, K. (2012). Systematic review of multidisciplinary rehabilitation in patients with multiple trauma. *British Journal of Surgery*, 99(Suppl 1), 88-96. <https://doi.org/10.1002/bjs.7776>

<sup>23</sup> U.S. Department of Veterans Affairs. (2014). *Polytrauma Rehabilitation Centre: Design Guide*. Report prepared by U.S. Department of Veterans Affairs Office of Construction & Facilities Management. Available from <https://www.cfm.va.gov/til/dGuide/dgPRC.pdf>

## APPENDIX A: KEY CONSIDERATIONS ON VIRTUAL REHABILITATION

There are several benefits of providing virtual rehabilitation for patients and clinicians. These include: reducing travel time for patients and increasing the ability to reach patients in more remote communities.<sup>1</sup> There are also challenges with providing virtual rehabilitation. These may include the lack of equipment and/or comfort with using technology, the absence of contextual factors that are more available during in-person sessions, limitations around safety (e.g., hands-on assistance with exercises), and limitations in the ability to conduct some assessments and interventions.<sup>1, 2, 3</sup> The following are key considerations for conducting virtual rehabilitation:

- Select patients carefully. Not every patient or every patient's goals are suitable and the decision to use a virtual format should be considered on a case-by-case basis using professional clinical judgement.<sup>4</sup>
- Confirm that the patient has the required technology and the needed support/assistance for virtual rehabilitation and that the patient's setting is in a safe, secure and confidential environment.<sup>5</sup>
- Follow professional regulatory college guidelines about obtaining consent; the collection, use and retention of personal health information; safety considerations and emergency planning, and having the proper skills and training to provide virtual rehabilitation.<sup>2, 4, 5</sup>
- Use the most effective and secure virtual platform to provide high quality and confidential virtual rehabilitation (e.g., use high-speed internet, a confidential setting, and a platform that is compliant with the [Personal Information Protection and Electronics Document Act \(PIPEDA\)](#)).<sup>5</sup>
- Have support processes in place to provide technical support and address technical issues for both the patient and provider and to address language, communication or other accessibility issues.<sup>4</sup>
- Consider use of virtual, in-person or a mix of the two formats (e.g., hybrid model) depending on the patient's resources, needs, and goals.
- Use indicators to evaluate the impact, effectiveness, quality and safety of virtual rehabilitation.<sup>4</sup>

### References:

<sup>1</sup> Bland, K., Bigaran, A., Campbell, K., Trevaskis, M., & Zopf, E. (2020). Exercising in isolation? The role of telehealth in exercise oncology during the COVID-19 pandemic and beyond. *Physical Therapy, 100* (10), 1713-1716. <https://doi.org/10.1093/ptj/pzaa141>

<sup>2</sup> McGuff, R., Cotie, L., Harris, J., Baer, C., Brisco, K., Chipperfield, D., Moran, B., Pike, R., Ross, M., Yeung, C., Blacquiére, D., Mountain, A., Gierman, N., Lindsay, P. (Eds.), on behalf of Heart and Stroke Foundation of Canada in collaboration with the Canadian Association of Cardiovascular Prevention and Rehabilitation. (2021). *Virtual Cardiovascular Prevention and Rehabilitation Implementation Toolkit*. Heart and Stroke Foundation of Canada. Available from <https://www.heartandstroke.ca/-/media/1-stroke-best-practices/vcr-toolkit-final-2021.ashx?rev=e2d73b476e6e4ef1abc09624992566d0>

<sup>3</sup> Turolla, A., Rossetini, G., Viceconti, A., Palese, A., & Geri, T. (2020). Musculoskeletal physical therapy during the COVID-19 pandemic: Is telerehabilitation the answer? *Physical Therapy, 100* (8), 1260-1264. <https://doi.org/10.1093/ptj/pzaa093>

<sup>4</sup> Rakover, J., Laderman, M., & Anderson, A. (2020). [Telemedicine: Centre Quality and Safety](#). *Healthcare Executive, 35*(5), 48-49.

<sup>5</sup> O'Neil, J. (n.d.) [Tele-Rehabilitation in times of COVID-19](#). Canadian Physiotherapy Association. <https://physiotherapy.ca/times-covid-19>

APPENDIX B: STAKEHOLDER ENGAGEMENT

UNIVERSITY OF TORONTO, TEMERTY FACULTY OF MEDICINE, DIVISION OF PHYSICAL MEDICINE & REHABILITATION <sup>a</sup>		
PM&R Specialist	Job Title and Affiliation	Specialized Rehab Population
Dr. Mark Bayley	Medical Director and Psychiatrist-in-Chief, University Health Network/Toronto Rehab and Altum Health Professor, University of Toronto <sup>a</sup> Vice-Chair, Coordinating Council, GTA Rehab Network Adjunct Scientist, Institute of Clinical and Evaluative Sciences, Sunnybrook Health Sciences Centre	All Populations
Dr. Larry Robinson	Program Chief, Rehabilitation Services, Sunnybrook Health Sciences Centre Director and Professor, Division of Physical Medicine and Rehabilitation, University of Toronto <sup>a</sup> Senior Scientist, Evaluative Clinical Sciences, St. John’s Rehab Research Program, Sunnybrook Research Institute	All Populations
Dr. Matthew Godleski	Physician (Physical Medicine and Rehabilitation Specialist), Sunnybrook Health Sciences Centre Assistant Professor, University of Toronto <sup>a</sup>	Burn Rehab

GTA REHAB NETWORK SPECIALIZED REHAB ADVISORY GROUP	
Organization	Member
Holland Bloorview Kids Rehabilitation Hospital	Joanne Maxwell
Sinai Health System/Hennick Bridgepoint Hospital	Wendy Cameron
Sunnybrook Health Sciences Centre/St John's Rehab	Dr. Larry Robinson (Co-Chair) Siobhan Donaghy
Unity Health Toronto/ Providence Healthcare	Anna Marie Sneath
University Health Network/ Toronto Rehab	Dr. Mark Bayley (Co-Chair) Joanne Kwong
West Park Healthcare Centre	Angela Dowd
GTA Rehab Network	Charissa Levy Sue Balogh Sanja Milicic lafrate Sharon Ocampo-Chan

GTA REHAB NETWORK SPECIALIZED REHAB WORKING GROUP: COMPLEX TRAUMA REHAB REHAB	
Organization	Member
Sinai Health System/Hennick Bridgepoint Hospital	Ginny Berrow Saba Memon
Sunnybrook Health Sciences Centre/St John's Rehab	Marva McCalla Jennifer Shaffer
University Health Network/ Toronto Rehab	Lakshmi Matmari Mandy McGlynn
West Park Healthcare Centre	Lisa Dalton Alma Osmanovic Julia Sterling
GTA Rehab Network	Charissa Levy Sharon Ocampo-Chan

RCA SPECIALIZED REHAB ADVISORY GROUP			
Organization	Member	Organization	Member
University Health Network/Toronto Rehab	Dr. Mark Bayley (Chair)	Ontario Physiotherapy Association	Gonxhe Kastrati Lisa Brice-Leddy
360 Concussion Care and University Health Network	Josh Shore	Orillia Soldier's Memorial Hospital	Amber Wright
Algoma Ontario Health Team	Victoria Aceti Chlebus	Phyvable Inc, Form & Function Health & Performance clinics	Dr. Jim Feng
Baycrest Health Sciences	Komal Shaikh	Providence Care	Patti Harvey

RCA SPECIALIZED REHAB ADVISORY GROUP				
Organization	Member	Organization	Member	
Central South Stroke Network/Hamilton Health Sciences Centre	Eileen Britt	RCA Patient/Care Partner Advisory	Brenda Martin	
CorHealth Ontario	Karen Harkness Shelley Sharp	SE Health	Kate Morris Amanda Smart	
GTA Rehab Network	Sharon Ocampo-Chan	St. Joseph's Health Care London	Stephanie Cornell	
Home & Community Care Support Services North East	Stephanie Fowler	St. Joseph's Care Group	Carolyn Freitag	
Health Sciences North	Colleen Bronicheski Dr Anthony Graham Darren Jermyn Carol Di Salle	St. Joseph's Continuing Care Centre	Leesa McNally	
Home and Community Care Support Services Waterloo Wellington/Cambridge Memorial Hospital	Connie Francoz	St. Mary's General Hospital	Sarah Beingessner	
Home and Community Care Support Services Champlain	Jeanne Bonnell	Stroke Network of Southeastern Ontario	Shelley Huffman	
Hôtel-Dieu Grace Healthcare	Jessica Modestino	Sunnybrook Health Sciences Centre	Beth Linkewich Jacqueline Minezes Siobhan Donaghy	
Humber River Hospital and 1 to 1 Rehab	Jessie Leung	Toronto West Stroke Network	Nicola Tahair	
Huron Perth Healthcare Alliance/Community Stroke Team	Chelsea Coghlin-Fewster	Trillium Health Partners	Gina Dolezel Amanda Reid Connie Routhier	Debbie Kirby Rey-Anna Reid
Lakeridge Health	Amanda Abdullah	University Health Network/Toronto Rehab	Miranda Hong	
London Health Sciences Centre	Deborah Willems	University Health Network/Toronto Rehab	Colleen Anderson Shannon Reid Edith Ng Carly Stier	



<b>RCA SPECIALIZED REHAB ADVISORY GROUP</b>			
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