CCSO Critical Care Services Ontario

Early Mobility in Critical Care: A Toolkit for Adult Care Providers

A Guide for Ontario Hospitals – May 2022

Public Information

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About Critical Care Services Ontario

Established in 2005, Critical Care Services Ontario (CCSO) led the implementation of Ontario's first Critical Care Strategy and now centrally coordinates and develops integrated system solutions for critical care (Adult, Paediatric, and Neonatal) and specialty programs aligned with critical care (Neurosurgery, Trauma and Burns, and the Life or Limb Policy). CCSO's work is the result of an ongoing collaboration between critical care providers, hospital administrators, partners from the Ministry of Health and other health system leaders.

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1. Introduction

1.1. Project Background

1.1.1. Early Mobility in Critical Care Pilot Project

In partnership with Unity Health Toronto, Critical Care Services Ontario (CCSO) launched the Provincial Early Rehabilitation in Critical Care (PERCC) pilot project in 2018 to develop and implement an early mobility protocol in critical care. The goal of the project was to develop a structured early mobility protocol for implementation in critical care units as a step towards early rehabilitation in critical care. The term 'early mobility' in critical care units supports the initiation of care processes within 48 hours of medical stability, which may include activities such as range of motion, sitting, standing, and ambulation.

Two hospital sites were included in the PERCC pilot project, St. Michael's Hospital and St. Joseph's Health Centre, both of which are part of Unity Health Toronto. The two pilot sites adapted the Johns Hopkins Activity and Mobility Promotion (AMP) Program and used the Carol Hodgson Intensive Care Unit (ICU) Mobility Scale to inform opportunities to implement early mobility in their ICUs, and to develop a written early mobility protocol.

1.2. Orientation to the Early Mobility Toolkit

The toolkit summarizes the evidence-based mobility protocol developed as part of the PERCC pilot project, which included St. Michael's Hospital and St. Joseph's Health Centre. The toolkit also includes lessons learned from the pilot sites surrounding the planning and implementation of an early mobility protocol in the ICU, which can be applied in critical care units across Ontario and beyond.

1.2.1. Target Audience

This toolkit is intended for use by frontline healthcare providers working in adult critical care including nursing staff, respiratory therapists, physiotherapists, physiotherapy assistants, occupational therapists, unit managers, nursing administrators, and medical directors who are directly or indirectly involved with patient care in a critical care environment.

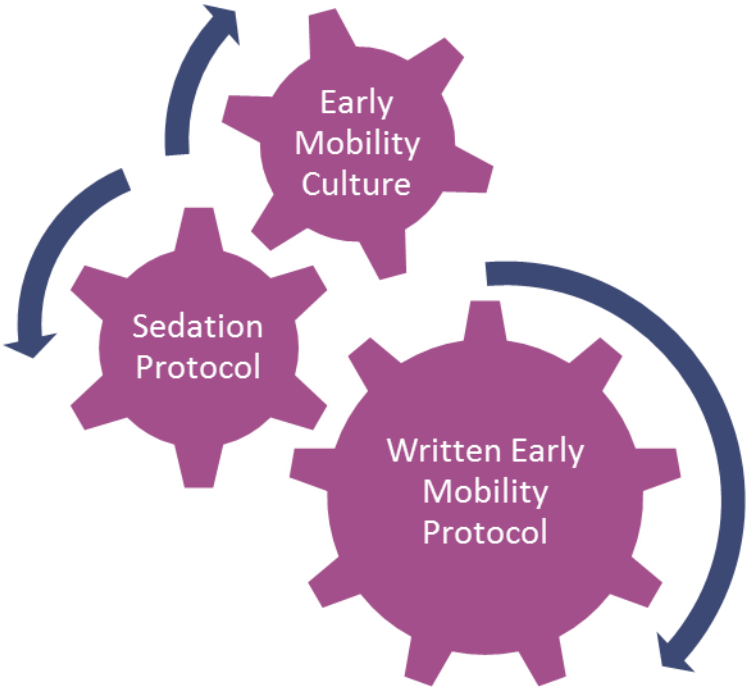
1.2.2. Structure of the Toolkit

The toolkit contains three main sections to guide the planning and implementation of an early mobility protocol.

Section	Description
Considerations During the Planning Phase (Section 2 of this document)	Considerations and strategies during the planning phase that would enable the implementation of an Early Mobility Protocol in the ICU.
Implementing an Early Mobility Protocol (Section 3 of this document)	Introduction and instructions on how to use the Early Mobility Protocol Tools.
Evaluating the Early Mobility Protocol (Section 4 of this document)	Assessing initiatives to advance and/or refine early mobility protocols for adaptability and sustainability.

1.3. Background and Context: Early Mobility in Critical Care

Critical illness, with prolonged bed rest and immobility, leads to physical deconditioning and weakness. This can be associated with increased duration of mechanical ventilation and prolonged length of stay in a critical care unit. The term 'early rehabilitation' in critical care units supports the initiation of care processes that may include early mobility, early weaning from mechanical ventilation, physiotherapy, occupational therapy, speech-language pathology, and delirium management. Incorporating early mobility and early rehabilitation into patient care in the ICU is associated with a decrease in critical care length of stay, and a decrease in the duration of mechanical ventilation (Engel et al., 2013; Kayambu et al., 2013; Kho *et al*., 2016; Pohlman *et al.*, 2010). Initially, ICUs did not operate with a culture of early mobility as it was assumed inappropriate for critical care patients, owing to the level of medical instability as well as fear of dislodging life-sustaining equipment. Over time, literature has demonstrated that early mobility is safe and improves patient outcomes for critical care patients, as well as having benefits to care efficiencies. (Bourdin *et al*., 2010; Mendez Tellez *et al.*, 2012).



It is beneficial for ICU patients to have critical care units implement a formal written early mobility protocol that includes physical therapy, multidisciplinary rounds, and written daily goals that are developed with the patient (Bakhru *et al.*, 2015). In addition, it is beneficial to use a sedation protocol, such as the Riker Sedation Agitation Scale (SAS) to complement the early mobility protocol. The Johns Hopkins Activity & Mobility Promotion (AMP) Program is an example of an intervention that uses a written early mobility protocol to achieve improved patient outcomes. The AMP Program is a multi-disciplinary approach to early intervention in adult critical care with a focus on managing sedation to enable mobility (Johns Hopkins Medicine, n.d.; Johns Hopkins Medicine, n.d. b). Despite evidence in the literature supporting the benefits of early mobilization for critical care patients in the ICU, there is no widespread protocol for early mobilization implemented in Level 3 and Level 2 critical care units in Ontario.

2. Considerations During the Planning Phase

2.1. Creating a Guiding Team

Implementation of an early mobility protocol in the ICU will require strong collaboration within the ICU, within the organization, and across disciplines. The involvement of the appropriate team members to lead implementation will enable a culture of mobility in the organization. The inclusion of senior leadership and champions to support decision-making and approval processes, and to provide organizational influence will drive implementation readiness (Damschroder et al., 2009).

- Establish an early mobility planning and implementation team that includes:
  - ICU senior administrator at the Vice President-level
  - Unit manager
  - ICU Physician champion
  - ICU Nurse champion
  - Physiotherapist champion (if not practicing in ICU, must have access to partnerships with physiotherapists with expertise in critical care mobility)

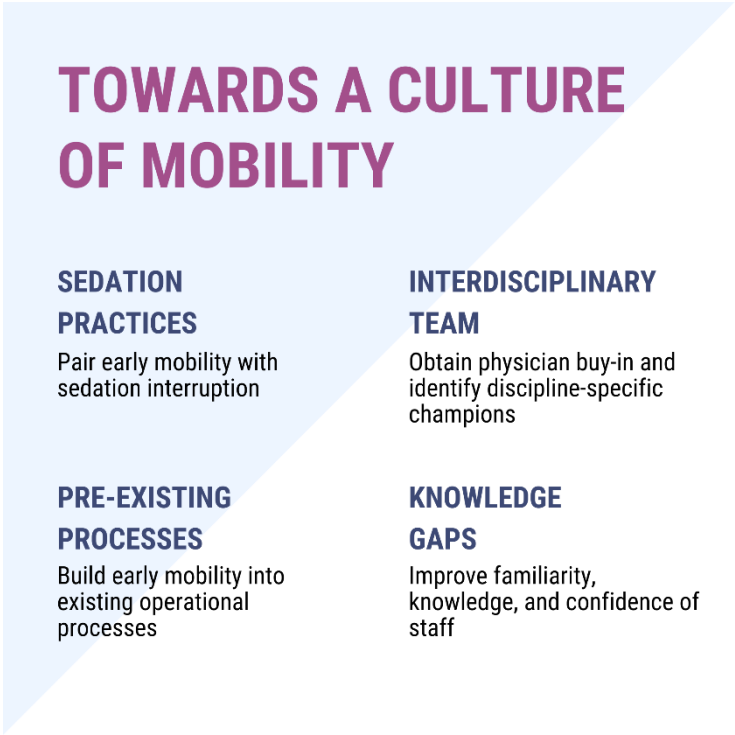
- Develop and maintain a formal governance structure for the implementation team to support ongoing decision-making.
- Have clear guidelines to outline the roles and responsibilities of ICU team members to facilitate accountability and empowerment.
- Consider leveraging the network beyond the organization to foster broader buy-in, such as consulting the Local Critical Care Network (LCCN) in the planning and implementation of the organization's early mobility protocol, as well as establishing and reporting back on metrics for monitoring and evaluation. Suggestions for program performance management metrics and evaluation indicators are highlighted in Section 4.2: Performance Measurement and Report Back.

2.2. Mobility Culture

Creating a culture of mobility is imperative to the implementation of an early mobility protocol. Prior to implementing an early mobility protocol in the ICU, it is important to identify existing clinical sedation and other organizational practices that may hinder implementation to develop strategies that would enable the rollout and adoption of early mobility protocols.

2.2.1. Current State

Understanding the ICU's current mobility culture from both a clinical and organizational perspective is an important step in assessing your ICU's readiness for implementation. A survey can be used during the initial planning phase to understand the unit's current mobility culture by gathering staff thoughts on mobility in the ICU. An example of the survey used by the PERCC pilot implementation can be found in Appendix A. Understanding the current state will help to identify challenges and opportunities for implementation of an early mobility protocol in the ICU, as well as guide education and equipment needs prior to the rollout of an early mobility protocol.



2.2.2. Common Organizational Challenges and Mitigation Strategies

The influence of the interdisciplinary team, pre-existing ICU culture, pre-existing processes, as well as the extent of staff knowledge of early mobility are important considerations when planning to implement an early mobility protocol.

The table below identifies strategies to leverage the influence of the interdisciplinary team and pre-existing processes, as well as strategies to address knowledge gaps:

Considerations	Implementation Enabling Strategies
Influence of the interdisciplinary team	Change Agents that will work closely with the Guiding Team: • Obtain buy-in from the interdisciplinary team, which includes buy-in from the physician on the team • Identify discipline-specific champions to facilitate interdisciplinary team collaboration • Identify early mobility/rehab champions • Involve patients' family members in the care process
Influence of pre-existing processes	• Build the program into existing operational processes • Leverage pre-existing initiatives related to Patient Safety and Quality Improvement in your organization
Knowledge gaps (in alignment with education needs identified in Section 4.3.1 Staffing Changes)	Change Agents that will work closely with the ICU that is implementing an early mobility protocol to: • Identify a physiotherapist champion to facilitate education sessions ○ Ideally, the physiotherapist champion will be familiar with complex critical care mobility. If not, they should be partnered with an experienced physiotherapist practicing in ICU • Leverage the expertise of the physiotherapist champion to educate staff prior to the rollout of an early mobility protocol.

2.2.3. Sedation Practices

Frequent use of sedation leading to delirium and increased bed rest poses a barrier to early mobility in the ICU (Bourdin et al., 2010; Engel et al., 2013; Mendez-Tellez et al., 2012; Parry et al., 2017). It is therefore important to understand the ICU's current sedation practices to identify whether current practices limit early mobility, and to develop mitigation strategies. The literature supports that it is safe to pair early mobility with sedation interruption (Bourdin et al., 2010; Engel et al., 2013; Mendez-Tellez et al., 2012).

The PERCC project pilot sites developed a 3-Day Point Prevalence Data Collection Form on Sedation Practices, which can be found in *Appendix B*. This data collection form can be used to assess the ICUs' readiness to implement an early mobility protocol by understanding whether current sedation practices will enable early mobility.

Changing sedation practices to enable early mobility requires a culture shift within the ICU. Some mitigating strategies include (Engel et al., 2013):

- Continuous education to describe the benefits of maintaining light levels of sedation for patients so that they can actively participate in mobility activities;
- Reducing doses of sedation without causing added discomfort to the patient;
- Medical team buy-in to implement and sustain change in sedation practices that enable early mobility;
- Champions within the ICU will reinforce change in sedation practices that enable early mobility.

2.2.4. Equipment

Consult the ICU team, as well as the hospital rehabilitation team to plan for the equipment required to support early mobility activities in the ICU. Below is a list of suggested equipment to support early mobility activities. The type of equipment required will depend on your hospital's patient profile in the ICU and current inventory and is not limited to the following:

Equipment suggestions to enable early mobility in the ICU	
Lifts	☐ Ceiling or portable
Chairs	☐ Bedside chair with high back ☐ Tilt recline wheelchair (moderately ill, fair trunk control) ☐ Broda chair (poor trunk control)
Mobility Aids	☐ High wheeled walker ☐ Low wheeled walker ☐ Cane

For some ICUs, procurement of equipment to enable early mobility in the ICU will require additional funding resources.

3. Implementing an Early Mobility Protocol

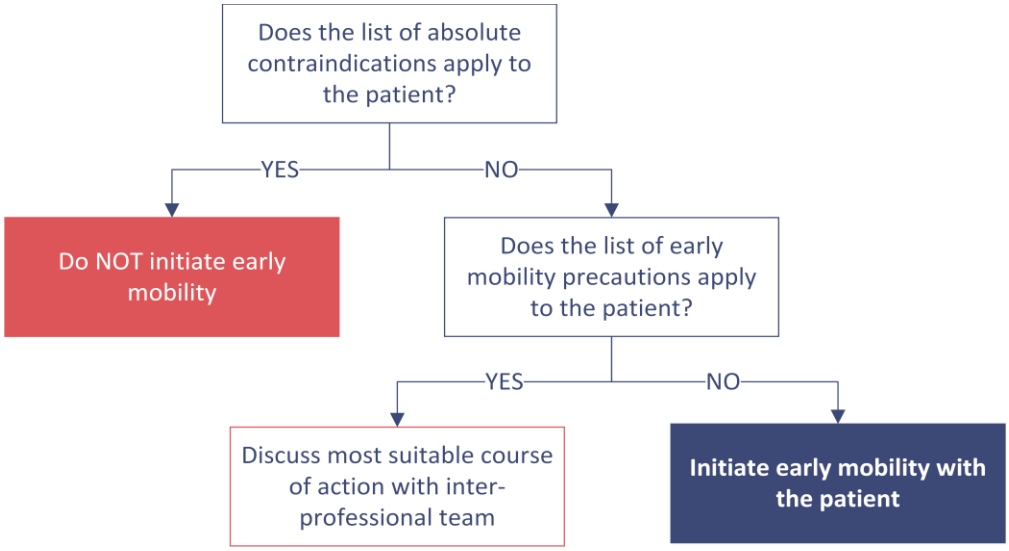
3.1. Screening for Eligibility for Early Mobility

"Early mobility" in the context of this early mobility protocol refers to active mobility: mobilizing the patient in sitting, standing, and walking. Not all patients are candidates for early active mobility. The *Risk Assessment Form* in Appendix C walks through neurological, respiratory, cardiovascular, and other considerations to understand whether a patient is a candidate for safe early active mobility.

The *Risk Assessment Form* can be used by any staff who requires guidance around mobilizing a patient (e.g. physiotherapist (PT), registered nurse (RN), clinical assistants, and personal support worker (PSW)) and should be used each time before a provider chooses to mobilize the patient. Some staff may find it unnecessary to use this *Risk Assessment Form* due to their level of expertise and comfort with early mobility.

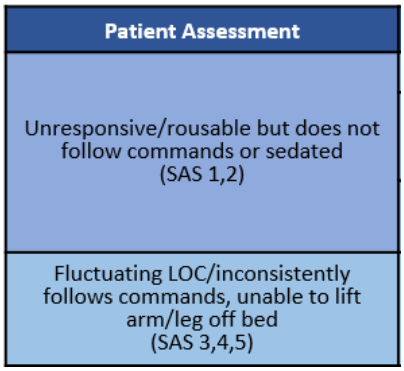
To use the Risk Assessment Form:

1. Review the list of "Early Mobility Absolute Contraindications"
    - If it applies to the patient, early mobility is contraindicated and active mobility should NOT be initiated.
2. Review the list of "Early Mobility Precautions"
    - If it applies to the patient, an inter-professional discussion should be initiated to decide on the most suitable course of action.



The Risk Assessment Form is not an exhaustive list, and there may be situations that are not listed in the tool that could limit or prevent mobility. If a healthcare professional is unsure, communication with the Most Responsible Physician (MRP) should take place to determine the appropriateness of mobility; your organization or the MRP may have other contraindications/precautions that are not listed in the *Risk Assessment Form.*

3.2. Early Mobility Guideline Table



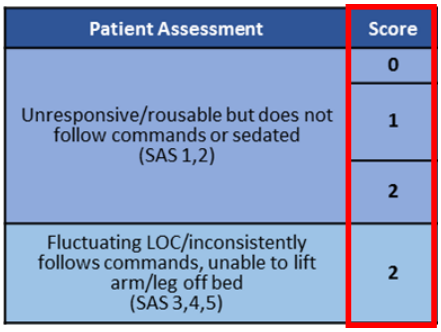
Patient Assessment
Unresponsive/rousable but does not follow commands or sedated (SAS 1,2)
Fluctuating LOC/inconsistently follows commands, unable to lift arm/leg off bed (SAS 3,4,5)

If a patient is a candidate for early mobility, the *Early Mobility Guideline Table* found in Appendix D will determine the extent to which a patient can be mobilized, and provides guidance on establishing a target mobility score and mobility score for the day.

Using the "Patient Assessment" column in the table, the RN and/or PT can leverage the Sedation-Agitation Scale (SAS)/Richmond Agitation-Sedation Scale (RASS) score, patient's ability to follow commands, level of consciousness, and patient's strength of upper- and lower-extremities to determine the target mobility score and mobility score for the day.

If the patient cannot be mobilized based on contraindications, precautions, or orders, in accordance with protocol implementation still score the patient, but do NOT mobilize the patient.

3.2.1. Target Setting



Patient Assessment	Score
Unresponsive/rousable but does not follow commands or sedated (SAS 1,2)	0
	1
	2
Fluctuating LOC/inconsistently follows commands, unable to lift arm/leg off bed (SAS 3,4,5)	2

Establish the target score for the day by using the corresponding *Early Mobility Guideline Table* score. The target score considers patient assessment, sedation, patient's strength, and ability to follow commands.

Additional considerations in setting the target mobility score include:

- The previous day's mobility score which can help inform the target mobility score for the day.
- Clinical reasoning around progressing the patient from one score to the next (if a previous mobility score had been established).
- Patient's baseline level of function (i.e. required one person to assist a patient to a wheelchair at long-term care versus patient was independently ambulatory at home prior to ICU admission).
- Patients who are at their baseline mobility score can still participate in goal setting by increasing the frequency of mobility throughout the day.
- Mobility scores and frequency can be influenced by timing with meal times or family visits.
- Discussion with physiotherapists and interdisciplinary team.

Today's Target	
Max Mobility Score:	
# of times per day:	

Using the *My Daily Activity Chart* provided in Appendix E, record the patient's target mobility score in the "Target Max Mobility Score" box. Based on clinical judgment, determine the number of times this action can be performed and note this besides "Target # of times to be completed".

Yesterday	
Max Mobility Score:	
# of times per day:	

Repeat this process to complete "Yesterday's Max Mobility Score" and # of times this "Max Mobility Score" was achieved.

Note: this is only applicable if there was a mobility score generated for the patient on the previous day; leave this section blank if a mobility score was not generated for the patient on the previous day.

The *My Daily Activity Chart* provided in Appendix E will provide both the patient and family with information on the current mobility level and mobility goals. The *My Daily Activity Chart* can be displayed on a whiteboard that is wiped clean and reused. The *My Daily Activity Chart* should be displayed in a visible location inside the patient's room to observe their progress. Having a chart displayed both inside and outside the patient's room can also allow the chart to be observed on rounds.

Review the "target mobility score" and "number of times per day" with the patient and family to discuss goals, and to track mobility, as well as to address questions or concerns from the patient and family.

3.2.2. Move to Improve: Setting Daily Mobility Goals in the ICU

The *Move to Improve* pamphlet, available in Appendix F, is an information pamphlet for patients and families that describes mobility and the importance of mobility for the patient. It is a brochure that can be used in conjunction with discussing the *My Daily Activity* chart goals with the patient and family.

3.3. Assist Patient with Mobility

When mobilizing the patient, consider how to progress the patient from one level to the next:

- If the patient follows simple commands, and can lift leg/arm, consider attempting to dangle with 1 to 2 staff's assistance.
- If the patient can sit unsupported at the edge of the bed, and straighten each knee to command, consider standing with 1 to 2 staff's assistance.
- If the patient can stand and march on the spot, consider stepping to a chair, and ambulation with/without gait aid.
- If the patient cannot stand and march on the spot, consider using a mechanical lift to the chair.
- If the patient becomes medically unstable during mobility, assist the patient back to the bed and notify the MRP.
- If an adverse event occurs, assist the patient back to bed, then notify the MRP and document accordingly.
    - Below are some examples of adverse events observed during the PERCC pilot:

Patient lines/tubes become dislodged	**Sudden change in blood pressure**	**Oxygen desaturation**	**Patient experiences syncope or pre-syncopal symptoms**
Falls or near fall events	**Patient bleeding**	**Patient agitation, irritability, or aggression**	**Malfunctioning equipment**

At the end of the shift when the mobility events have been completed, document the maximum mobility score achieved, and the number of times achieved on the *My Daily Activity Chart* under "Actual Achievement".

Actual Achievement	
Max Mobility Score:	
# of times per day:	

4. Evaluating the Early Mobility Protocol

4.1. Learn from Experience

4.1.1. Staff Experience

Sites can leverage the protocol and this toolkit to adapt the early mobility protocol to fit the needs of their ICU. It is important to note that there will be variation in staffing resources and staff experience in early mobility across hospital sites. It is therefore imperative to include staffing experiences to guide opportunities for improvement in the implementation of an early mobility protocol in the ICU. Develop and formalize opportunities to solicit feedback from staff to improve the implementation based on ICU needs. This could be in the form of a survey, rounds, or as part of education and outreach.

The following topics should be included in the feedback structure to identify gaps, and challenges, and to inform opportunities:

- Staff comfort levels with mobilizing patients over time;
- Staff perception of the influence of the initiative on the number of therapy patients can receive;
- Staff perceptions on the impact of the initiative on:
  - Patient care and outcomes
  - Availability of help and support for staff in the unit
  - Equipment needs
- Staff engagement levels

4.1.2. Patient and Family Experience

The clinical benefits of early mobility are well documented in the literature, however, the perceptions of the patients and their families are often not factored into the implementation of the early mobility experience. Including patient and family engagement will help the unit to:

1. Understand the patient or family experience while the patient undertakes mobility activities.
2. Obtain insight into supports that the patient and/or their family believe they need for the mobility initiative to be effective.
3. Understand the patient and family perception of the benefits of participating in early mobility activities during care in ICU and beyond.

The experience of the patients and their families can inform opportunities to improve program design, such as opportunities for staff education to enhance patient safety, and empower staff and communication materials, etc.

An example of the Patient and Family Guide and Tool developed as part of the PERCC pilot initiative can be found in Appendix G.

It is important to include the patient and family perspective in the early mobility protocol design, however, the pilot site experience acknowledges that administering a survey is challenging for patients and families due to patients' delirium or level of consciousness, as well as having the family present in the ICU during early mobility interventions.

4.2. Performance Measurement and Report Back

The identification of meaningful metrics to monitor and evaluate the implementation of the early mobility initiative in the ICU enables an understanding of the reach and effectiveness of the initiative. Monitoring and evaluation of key metrics provides opportunities to drive quality improvement opportunities, as well as enables data-supported communications for the organization.

Below are suggested questions, metrics, and indicators that could be leveraged for monitoring and evaluation:

Example: How effective was the recruitment process?

Metrics	Indicators
# patients admitted to ICU • Number of unique admissions to selected ICUs during a reporting period # patients screened • Number of unique admissions to select ICU screened for contraindications # eligible patients • Number of unique admissions to select ICU without contraindications	• % patients screened • % eligible patients enrolled • % patients deemed ineligible

Example: How often were patients that were eligible for the initiative mobilized?

Metrics	Indicators

Total # patient days mobilized
• The total number of days each unique eligible patient was mobilized from admission to ICU to discharge from ICU
 	
# eligible patients 	
• The number of unique admissions to select ICU without contraindications
 	
Context around why eligible patients were not mobilized
• Describe barriers to mobilization, such as:
  ○ Lack of available staff to assist with mobilization
  ○ Lack of time to mobilize patients
  ○ Lack of equipment to enable mobilization
  ○ Clinical judgment/medical reasoning
  ○ Patient declined
	• % patient days mobilized

Example: How do adverse events impact the ability to mobilize patients? (Alignment of the protocol with literature and to support ongoing buy-in)

Metrics	Indicators

# eligible patients 	
• Number of unique admissions to select ICU without contraindications
 	
# of incidences of adverse events 	
• Number of unexpected events which occur during the implementation of the early mobility guideline that interrupts and prevents the continuation of mobilizing the patient
 	
Context around the adverse events that took place
• Description of the adverse events, such as:
  ○ Staff injury
  ○ Compromised airway, lined and/or tubes
  ○ Deviation from expected patient response to early mobility
	• % of eligible patients experiencing an adverse event

Example: How soon are patients being mobilized?

Metrics	Indicators
Admission date and time • Date and time of patient admission to ICU Screening date • Date admitted ICU patient was screened for contraindication for eligibility for early mobility First mobilization date • The date that the eligible patient was mobilized for the first time since admission to ICU	• Time to Mobilization (Days)

4.3. Incorporating Evolving Considerations

4.3.1. Staffing Changes

Changes to staffing can impact the level of expertise of the team, and the comfort of staff in being able to implement early mobility activities. It is important to continue to offer education to staff and to allow a forum through which staff can ask questions and discuss early mobility protocols with a physiotherapist.

It was noted through the PERCC pilot implementation of the early mobility protocol that individual education enabled staff to ask specific questions that could be addressed fully, which can be a missed opportunity during group education.

Providing an orientation to the early mobility protocol in your ICU should be included in onboarding education for new staff. The orientation can include:

ORIENTATION

Overview of Early Mobility in Your ICU

- Risk Assessment
- Early Mobility Guideline
- Goal Setting
- Education Pamphlet for Patient and Family
- Staff Safety

Data Collection

- Templates
- Processes

Example Case Studies

- Walk-through Examples for:
  - Eligibility Screening
  - Determining Patient's Mobility Score
- Examples of Adverse Events
- Examples of When a Patient Should Not be Mobilized

Contact Information

- Who to Contact for Further Education and Guidance
- Who to Contact for Process-Specific Information
- Hours of Availability
- How to Contact the Individuals

4.3.2. Organizational Changes

Competing priorities in the organization can impact buy-in to sustain an early mobility protocol. Regularly communicating the vision, goals, and outcomes of the early mobility initiative with senior leadership and relevant stakeholders can support continued buy-in (Johnson et al., 2004). By leveraging performance metrics, the ICU can communicate the benefits of an early mobility protocol to patient outcomes and experiences.

5. Conclusion

Implementing early mobility in the ICU has been demonstrated in the literature to be safe and beneficial to patients. The Provincial Early Rehabilitation in Critical Care pilot project in 2018 to 2020 developed an early mobility protocol that can be leveraged in ICUs that are considering implementing early mobility. Gaining an understanding of the specific education, equipment, and staffing and data collection needs of your organization's ICU is essential to inform how the early mobility protocol can be adapted to enable its successful implementation and sustainability.

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Appendices

Appendix A: Planning for Early Mobility in the ICU Survey

Survey: Mobilization of patients in the ICU

We would like to know your opinion regarding the mobilization of patients in the Intensive Care Unit (ICU) setting. Please answer questions for patients in the ICU. For purposes of this survey, "mobilizing" patients includes sitting at the edge of the bed to walking. Provide responses that most accurately reflect your opinion based on your experience working in the ICU over the past month.

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	N/A
1. Generally, patients are too sick to be mobilized.						
2. I have received training on how to safely mobilize patients.						
3. Increasing mobilization of patients will lead to adverse events.						
4. A Physiotherapist should be the primary care provider to mobilize patients.						
5. I understand which patients are appropriate to refer to Physiotherapy.						
6. We don't have the proper equipment to mobilize patients.						
7. The physical functioning of patients is regularly discussed among the patient's healthcare providers.						
8. Our Nurse-to-patient staffing ratio is 1:1 or 1:2. This is adequate to mobilize patients on my unit.						
9. Our Physiotherapist-to-patient staffing ratio is 1:17. This is adequate to mobilize patients on my unit.						
10. It is beneficial to mobilize patients at least once a day.						
11. Increasing mobilization of patients will be more work for Nurses.						
12. Increasing mobilization of patients will be more work for Physiotherapists.						
13. Unit leadership in the ICU is supportive of patient mobilization.						

14. Increasing the frequency of mobilizing patients increases my risk for injury.						
15. Patients who are appropriate to be mobilized usually have the correct Physician order (i.e. AAT, WBAT).						
16. Patients typically have an appropriate Physiotherapy order.						
17. Patients want to be mobilized.						
18. I believe that patients who are mobilized will have better outcomes.						
19. I know when it is safe to mobilize patients.						
20. Family members of patients are frequently interested to help the patient engage in mobilization.						
21. I feel confident in my ability to mobilize patients.						
22. I have time to mobilize patients during my shift/workday.						
23. Patients/families will be more satisfied if the patient is mobilized.						
24. I feel satisfied when patients are mobilized.						
25. What is your clinical role in the ICU?	Specify:_____					
26. Specify the number of years you cared for patients in the ICU:	_____ Years					
27. Do you feel there are other issues regarding patient mobility that were not covered in this survey?	Yes _____ No _____ If Yes, Please Specify:					

Appendix B: 3-Day Point Prevalence Study Data Collection Template

Point-prevalence study on sedation practices/management data collection form

Instructions: The following data is to be collected retrospectively from 07:00 yesterday to 07:00 today.

Operational Definitions:
Sedation includes: Benzodiazepines, Propofol, Dexmedetomidine, Antipsychotics
Analgesic includes: Opioids

Facility Name: _____ Patient #: _____

Date of prevalence survey: ___/___/_____ **Date/Time of ICU Admission**:_____

Type of Adult ICU: _____

Patient-focused:

1. **Did the patient receive continuous IV sedation?** ☐ Yes ☐ No

If Yes – Time frame of continuous sedation: _____
A. If Yes to continuous IV sedation, was sedation interrupted? ☐ Yes ☐ No ☐ No data
B. If Yes to continuous IV sedation, was sedation titrated? ☐ Yes ☐ No ☐ No data
C. Reason for continuous IV sedation: _____

If No
A. What was the sedation delivery method? (check all that apply):
☐ IV bolus ☐ Oral/enteral ☐ No sedation

2. Was a sedation scale used? ☐ Yes ☐ No

If Yes, please state:
A. Highest SAS/SAM: _____ ☐ No data
B. Lowest SAS/SAM: _____ ☐ No data
C. How many times was the SAS/SAM documented: _____

3. Was a sedation target ordered/documented? ☐ Yes ☐ No

4. Did the patient receive analgesia? ☐ Yes ☐ No

If Yes, check all that apply:

A. ☐ Oral
B. ☐ IV continuous, time frame _____
C. ☐ IV PRN
D. ☐ PCA
E. ☐ Subcutaneous
F. ☐ Patch
G. ☐ Epidural

5. Was the patient screened for delirium? ☐ Yes ☐ No

A. If Yes, did the patient screen positive for delirium? ☐ Yes ☐ No
B. What was the delirium score? _____ ☐ No data

6. Were physical restraints used? ☐ Yes ☐ No

If Yes, please state:

A. Reason for use of restraints: _____
B. Time frame of the use of restraints (time point(s) when restraints applied and removed): _____
C. Was there a trial release? ☐ Yes ☐ No

7. Was the patient ventilated? ☐ Yes ☐ No ☐ Both ventilated and not ventilated

Route of airway:

☐ Endotracheal ☐ Nasotracheal ☐ Tracheostomy ☐ Non-invasive ☐ Supplemental oxygen

Appendix C: Risk Assessment Form

Risk Assessment and Areas of Concern for Mobilization	
Early Mobility	The term 'early mobility' in critical care units supports initiation of care processes within 48 hours of medical suitability (absence of contraindications), that may include activities such as range of motion, sitting, standing and walking.
Early Rehabilitation	The term 'early rehab' in critical care units include early mobility and supports initiation of care processes that may include early weaning from mechanical ventilation, delirium management, activities of daily living, and others. This requires careful coordination from an interprofessional care team.
Passive Mobility	Passive range of motion, maximal assist with turning in bed, or transfer to a chair via lift.
Active Mobility	Mobilizing with the patient in sitting, standing and walking.
Absolute Contraindications	Active mobility is contraindicated.
Precautions	Initiate an interprofessional team discussion to decide on the most suitable course of action.
Note: The patients' ability to mobilize may fluctuate. Patients are to be assessed at the beginning of every shift and as their health status changes for their ability to mobilize. If the patient presents with any of the following precautions, an interprofessional discussion is required to determine the appropriate course of action. Notify the MRP if any of the following occur during mobilization. When applying mobility orders for patients, consider the following contraindications and precautions. The MRP may also provide a contraindication to early mobility that may not be listed on this table.	

Early Mobility Absolute Contraindications	Early Mobility Precautions
	Neurological
• Uncleared / unstable spines • Elevated ICP not in desired range • SAH with unsecured aneurysm • Use of paralytics	• Sedation (SAS, RASS) • Severe agitation or combative (SAS 6-7, RASS +3,+4) • Open external ventricular or lumbar drain • Vasospasm • Active seizures • Within 24 hours of tPA administration • Epidural or peripheral nerve block
	Respiratory
• Unsecure airway: where the patient will, or is at increased risk to, lose the patency of their airway • Prone position	• SpO2: less than 88% (resting), or undetermined cyanosis • Respiratory rate: less than 5 or greater than 40 • PEEP greater than 10 cmH_2O • FiO2: greater than 60% • Uncontrolled airway irritability • BiPAP • Uncontrolled asthma • Untreated pneumothorax causing respiratory instability
	Cardiovascular
• Uncontrolled dysrhythmia requiring new medications or unstable rhythm • Intra-aortic balloon pump or arterial femoral sheath • Transvenous pacemaker/externally paced with no underlying rhythm	• HR less than 40 or greater than 130 • Mean arterial pressure: less than 65 or greater than 110 • A significant change in blood pressure • New Myocardial Infarction or acute cardiac ischemia • Administration of a new vasopressor, or increasing in vasopressor dose • Untreated deep vein thrombosis or pulmonary embolus • Widened mediastinum • Platelets less than 30 • Hemoglobin of less than 70 or known active bleeding
	Other
• Open chest/abdomen without VAC or binder • Unstable fracture • **NOTE**: Other contraindications may exist specific to a given condition / setting/unit	• Femoral vascular access • Femoral sheath / cordis • Ulcers / skin grafts/wound preventing weight bearing / range of motion • **NOTE**: Other precautions may exist specific to a given condition/setting/unit e.g. weight bearing restrictions

Appendix D: Early Mobility Guidelines

Patient Assessment	Score	Mobility Activities	Related ADLs	
Unresponsive/rousable but does not follow commands or sedated (SAS 1,2)	0	Passively rolled or passively exercised by staff, but not actively moving	PROM may be incorporated into patient care (i.e. during washing, turns etc.)	
	1	Any activity in bed, including rolling, bridging, active exercises, cycle ergometry (bike in bed) and active assisted exercises; not moving out of bed or over the edge of the bed		
	2	Hoist, passive lift or slide transfer to the chair, with no standing or sitting on the edge of the bed. Up to chair for maximum 2 hours		
Fluctuating LOC/inconsistently follows commands, unable to lift arm/leg off bed (SAS 3,4,5)	2	As above	Encourage AAROM of all limbs, as well as participation in self-care activities	
Follows simple commands; moderate weakness in arm/leg (SAS 3,4,5)	3	May be assisted by staff, but involves actively sitting over the side of the bed with some trunk control	Perform ADLs (i.e. brush hair/teeth, face care, use of yaunker)	
Follows simple commands, mild weakness in arm/leg, able to move against gravity (SAS 4,5)	4	Weight bearing through the feet in the standing position, with or without assistance. This may include use of a standing lifter device or tilt table	Meals to be consumed in chair as able. If able to stand, commode for toileting	
	5	Able to step or shuffle through standing to the chair. This involves actively transferring weight from one leg to another to move to the chair		
Follows commands, able to move arm/leg against gravity (SAS 4,5)	6	Able to walk on the spot by lifting alternate feet (must be able to step at least 4 times, twice on each foot), with or without assistance	Use of toilet/shower Strengthening exercises	
	7	Walking away from the bed/chair by at least 5 metres assisted by 2 or more people		
	8	Walking away from the bed/chair by at least 5 metres assisted by 1 person		
	9	Walking away from the bed/chair by at least 5 metres with a gait aid but no assistance from another person. In a wheelchair bound person, this activity level includes wheeling the chair independently 5 metres away from the bed/chair		
	10	Walking away from the bed/chair by at least 5 metres without a gait aid or assistance from another person		
Follows simple commands; able to move against gravity (SAS 6)	3-7	As above	Encourage participation in self-care activities	

To use the *Early Mobility Guidelines Table* (Appendix D), follow the table across the chart for suggested activities; related Activities of Daily Living (ADL) are given as suggestions for each stage. The suggested activities for each level represent the highest level and do not exclude including activities at lower levels if appropriate.

The score identified from the *Early Mobility Guideline Table* will then be used to establish the patient's "target mobility score" and "mobility score for today" to include in the My Daily Activity Chart.

If the patient cannot be mobilized based on contraindications, precautions, or orders, please still score the patient, but do NOT mobilize the patient.

Appendix E: My Daily Activity Chart

Yesterday	
Max Mobility Score:	
# of times per day:	

Today's Target	
Max Mobility Score:	
# of times per day:	

Actual Achievement	
Max Mobility Score:	
# of times per day:	

My Daily Activity Date:_____

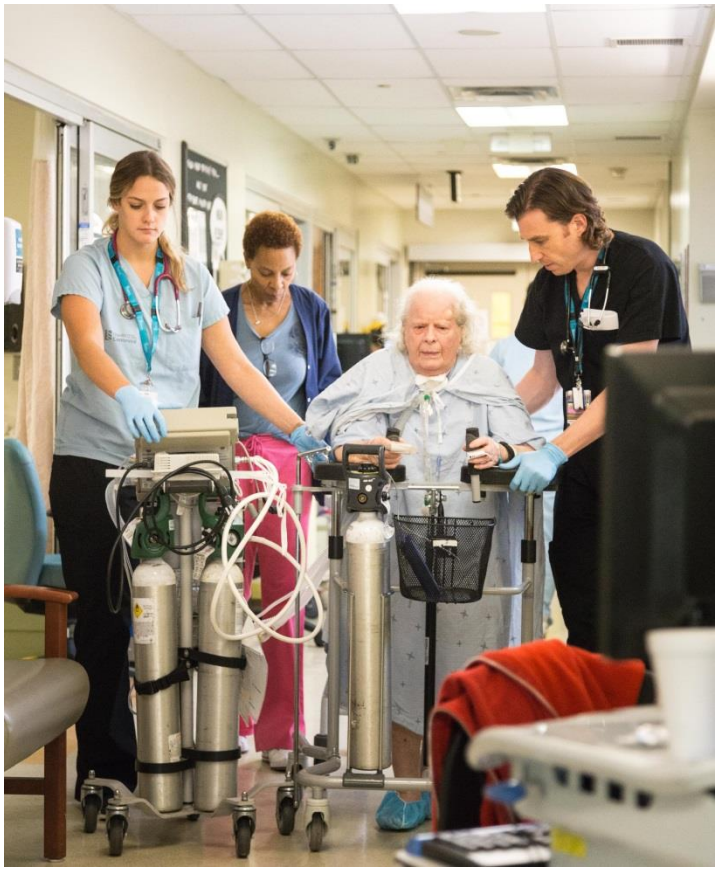
0	Passive Bed Exercises	
1	Active Bed Exercises	
2	Lift To Chair	
3	Sitting At Side Of Bed	
4	Standing	
5	Stepping To Chair	
6	Marching On The Spot	
7	Walk With 2 People	
8	Walk With 1 Person	
9	Walk Independently With Aid	
10	Walk Independently	

Patient/Family Information Booklet provided: **YES** **NO**

Appendix F: Move to Improve Patient and Family Pamphlet

Move to Improve: Setting daily mobility goals in the ICU

Information for patients and families

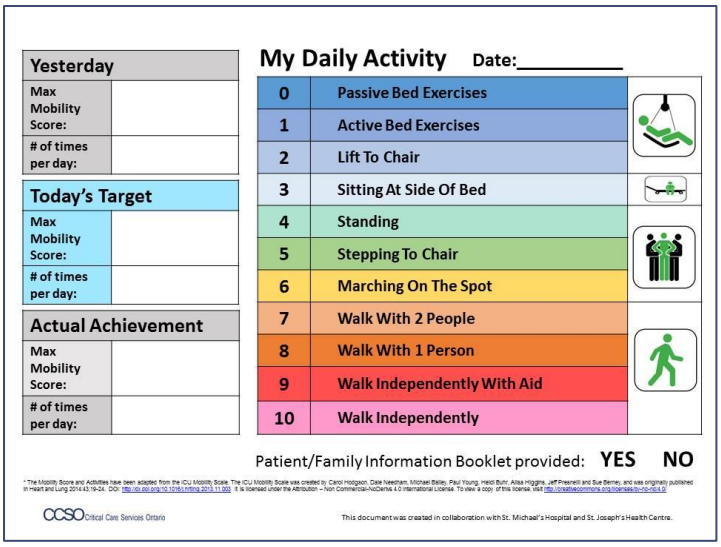


Each day, you and your health care team will set mobility goals (moving in and out of bed). Examples of mobility include:

- Moving your arms and legs in bed
- Brushing your teeth
- Sitting up in a chair
- Walking

Movement is important. Research has shown that improving mobility early in the ICU helps your recovery. Setting goals for each day can help your recovery.

A chart will be posted at your bedside to help us to set goals and track your mobility activities throughout the day.



Yesterday	
Max Mobility Score:	
# of times per day:	

Today's Target	
Max Mobility Score:	
# of times per day:	

Actual Achievement	
Max Mobility Score:	
# of times per day:	

My Daily Activity Date:_____

0	Passive Bed Exercises
1	Active Bed Exercises
2	Lift To Chair
3	Sitting At Side Of Bed
4	Standing
5	Stepping To Chair
6	Marching On The Spot
7	Walk With 2 People
8	Walk With 1 Person
9	Walk Independently With Aid
10	Walk Independently

Patient/Family Information Booklet provided: **YES** **NO**

Setting daily goals helps everyone to stay focused on your recovery!

If you have any questions or concerns, please talk to a member of the team.

Appendix G: PERCC Patient and Family Engagement Survey and Administration Guide

Critical Care Services Ontario

Provincial Early Rehabilitation in Critical Care (PERCC)

Patient and Family Engagement (PFE)

Survey and Administration Guide

Participating hospitals:

ST. MICHAEL'S UNITY HEALTH TORONTO

ST. JOSEPH'S UNITY HEALTH TORONTO

Survey Administration

Each participating unit will administer the PERCC Patient and Family Engagement Survey (PFES) on a continuous basis, as part of the PERCC pilot project, to a voluntary sample of the patients enrolled in the PERCC pilot study. The participating units will review the surveys and provide a summary of the feedback from the PFES on a quarterly basis to the PERCC Steering Committee for review.

The PFES may be administered in one of two ways:

1. By hospital staff: a staff member asks the patient/family the questions and records the responses (refer to the *'Guidance for Staff Administration'* section of this document), or

2. Self-administered by patient/family member: a staff member explains the purpose of the questionnaire to the patient/family member and gives them a copy of the questionnaire and relevant guidance sheet. The patient/family member would read the questions on their own and record their responses (refer to the *'Guidance for Patient and Family Administration'* section of this document).

Guidance for Staff Administration

Ideally, the staff administering the PERCC *Patient and Family Engagement Survey* (PFES) should not be the same as the staff responsible for the clinical implementation of the PERCC protocol.

- Staff will verbally administer the questions to the participant and document the responses on the survey form.
- Staff should solicit responses from the participant and provide explanations as needed, but should not prompt responses.

Staff may use the following explanatory notes to help ensure that participants understand each question in the PFES:

Question 1: Define the options for the patient/family member and document the most appropriate response.

Patient: The person admitted to hospital and undergoing treatment.

Family member: You are related to the patient as an immediate family member. This includes patient's partner and caregiver.

Question 2: Document the degree to which the patient/family member feels that the staff member-(s) conducting the exercises explained the early mobility initiative and confirmed the patient's / family member's comprehension on an ongoing basis.

Question 3: Document the degree to which the patient/family member states they felt included in the decision-making with regard to their mobility activities

Question 4: Document what the patient/family member states went well during the early mobility activities.

Question 5: Document any difficulties/obstacles/problems the patient/family member states they experienced during the early mobility activities.

Question 6: Document what the patient/family member states would have improved their experience or better motivated them through the early mobility activities.

Question 7: Indicate how the PFES was administered.

Guidance for Patient and Family Self-Administration

If you are a patient or family member completing this survey, please refer to the explanatory notes below before recording your responses.

Question 1: Select the most appropriate response.

Patient: You are the person admitted to hospital and undergoing treatment.
Family member: You are related to the patient as an immediate family member. This includes patient's partner and caregiver.

Question 2: Indicate the degree to which you feel that staff member(s) conducting the exercises explained the early mobility initiative to you and confirmed your comprehension on an ongoing basis.

Question 3: Indicate the degree to which you felt included in the decision-making with regard to your mobility activities.

Question 4: Describe what went well during your early mobility activities.

Question 5: Describe any difficulties/obstacles/problems you experienced during your early mobility activities.

Question 6: Indicate what would have improved your experience or better motivated you through your early mobility activities.

Question 7: Indicate how the PFES was administered.

Questionnaire for Patients/Families Participating in the Provincial Early Rehabilitation in Critical Care (PERCC) Project

1. You are: ☐ Patient ☐ Family member

2. You had a clear understanding of why the hospital wanted you/your family member to participate in mobility exercises while still in the ICU.

☐ Strongly disagree ☐ Disagree ☐ Neither agree nor disagree ☐ Agree ☐ Strongly agree

3. Did you feel included in determining the daily activity goals?

☐ Felt very excluded ☐ Felt somewhat excluded ☐ Neither included nor excluded ☐ Felt somewhat included ☐ Felt very included

4. Please share your positive experiences with the early mobility activities.

5. Please share some of the challenges you experienced with the early mobility activities.

6. Please share what would have improved your experience with the early mobility activities.

7. This questionnaire was:
   ☐ Self-administered by patient/family* ☐ Staff administered

Thank you for taking the time to answer these questions.

Your responses will assist us in the development of future initiatives to improve care and patients' outcomes during and after their stays in ICUs throughout the province.

Acknowledgment

The **Early Mobility in Critical Care: Toolkit for Adult Acute Care Providers** summarizes the evidence-based mobility protocols developed as part of the Provincial Early Rehabilitation in Critical Care (PERCC) pilot – an initiative to develop a structured early mobility protocol for implementation in critical care units as a step toward early rehabilitation in critical care. The Toolkit also includes the lessons learned from the pilot sites, Unity Health Toronto (St. Joseph's Health Centre and St. Michael's Hospital) surrounding the planning and implementation of an early mobility protocol in the ICU, which can be applied in critical care units across and beyond Ontario.

This Toolkit is intended to support frontline healthcare providers working in critical care who are directly or indirectly involved with patient care in a critical care environment and interested in implementing early mobility in their units. This Toolkit was developed in consultation with Subject Matter Experts that participated in the PERCC pilot as well as PERCC Steering Committee members.

We would like to extend our sincere gratitude to the Subject Matter Experts, pilot sites, and the PERCC Steering Committee members for their dedication, leadership, innovation, and providing guidance and feedback towards the development of the Toolkit.

Subject Matter Experts

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- Fionna Yau, Clinical Educator, Nursing, Unity Health Toronto, St. Michael's Hospital

Pilot Sites

- Unity Health Toronto, St. Joseph's Health Centre
- Unity Health Toronto, St. Michael's Hospital

PERCC Steering Committee Members

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- Dr. Bernard Lawless (Co-chair), Provincial Lead, Critical Care Services Ontario
- Dr. Andrew Baker, Chief, Critical Care and Anesthesia, Unity Health Toronto, St. Michael's Hospital
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