Adult Intensive Care Unit Classifications and Capabilities in Ontario: Guidance Document

Ontario Health | November 2025

Ontario Health

Version Control

Adult Intensive Care Unit (ICU) Classifications and Capabilities in Ontario			
Document	Version	Date	Detail
Adult Critical Care Levels of Care	1.0	November 2020	Original Document
Adult ICU Classifications and Capabilities in Ontario	2.0	November 2025	Refinements to the terminology used to classify adult ICUs

Publicly Available Information for Hospital and System Stakeholders

About Us

Established in 2005, Critical Care Services Ontario (CCSO), now a part of Ontario Health, led the implementation of the provinces 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). Our approach to supporting healthcare system transformation is grounded in evidence-informed best practice and is the result of an ongoing collaboration between critical care providers, hospital administrators, the Ministry of Health, and other health system leaders.

Email: criticalcareinfo@ontariohealth.ca Website: ccso.ca

Table of Contents

Purpose

The Adult Intensive Care Unit (ICU) Classifications and Capabilities Guidance Document aims to clarify and align the classification of Intensive Care Units (ICUs), made up of Critical Care (CC) Beds, across hospitals in Ontario.

This document clarifies and standardizes the terminology used to classify adult ICUs and CC Beds across Ontario hospitals, providing clear definitions for Level 2 ICUs, Level 3 ICUs, and Specialized Monitoring Units. By providing clear definitions and standardized terminology, this document will support hospitals and Ontario Health Regions in managing patient flow, surge capacity, and overall service quality more effectively. This guide recognizes that critical care capabilities are delivered through coordinated unit level resources, rather than individual bed features.

Key objectives:

- **create standardized terminology of care capabilities to support patient flow between organizations;**
- **develop a descriptive provincial adult ICU inventory to facilitate flow and surge operations; and,**
- **establish minimum requirements for ICUs and CC Beds across the province.**

About this Document

The goal of this document is to support a consistent understanding of ICU classification and capabilities by describing the core requirements that ICUs should have in place as a standard for critical care service. The information provided within this document is not meant to override clinical decision making.

This document defines the expectations and requirements of hospitals with designated critical care units including:

1) **governance and clinical leadership;**
2) **staffing and human resources;**
3) **infrastructure and equipment;**
4) **clinical capabilities and scope; and,**
5) **performance and quality assurance.**

Critical care is provided through a collaborative interprofessional team-based approach. A high degree of multidisciplinary and interprofessional collaboration with relevant clinical programs in the hospital will support critical care program success. The Adult ICU Classifications and Capabilities Guidance Document lay the foundation for a provincial standard to support continuous improvement to quality patient outcomes in Ontario.

The Adult ICU Classifications and Capabilities align with and support the concept of integrated regional care by ensuring designated critical care programs have a regional approach to providing critical care services in collaboration with their Ontario Health Region. Designated ICUs are expected to coordinate and integrate critical care services within their hospital and with acute care partners. Critical care unit leaders are also encouraged to collaborate with other critical care programs within and across Ontario Health Regions to help inform and develop standardized approaches to equitable access to critical care services.

Use of Adult ICU Classifications and Capabilities in Ontario Hospitals

All critical care units are required to comply with all the standards detailed within this document that align with their designation as a Level 2 or Level 3 ICU.

Acknowledgement by each hospital of the governance and staffing, that align with all Level 2 or Level 3 ICU classification criteria and capabilities or Specialized Monitoring Unit is required for all units in the provincial inventory.

A designated critical care unit that does not achieve or maintain the expectations and requirements associated with their critical care unit designation will be expected to collaboratively engage with Ontario Health in identifying support needed and explore pathways forward. Any gaps identified should be discussed with Ontario Health's Regional Critical Care Clinical Leads.

This process aims to safe-guard existing critical care resources to a common standard of care capabilities and preserve the provincial critical care bed inventory. It is dedicated to ensuring that the minimum standards for Level 2 and Level 3 ICUs are consistent for all patients across hospitals in Ontario. This approach will strengthen system coordination and planning, ultimately enhancing the quality of critical care services provided throughout Ontario.

Classifications and Capabilities

The Adult ICU Classifications and Capabilities define Level 2 and Level 3 ICUs and provides a definition for Specialized Monitoring Units (SMU). The classifications and capabilities outline the governance, staffing, infrastructure, clinical capabilities, and performance requirements for each level. Each level builds on a baseline of critical care services and plays an important role in providing safe and appropriate care to all Ontarians.

Specialized Monitoring Unit (SMU) Description

SMUs are not considered ICUs. SMUs contain Specialized Monitoring Beds that provide a higher level of monitoring and support than a standard ward bed and may serve a hospital function and/or subspecialty system function (e.g., post-surgical unit). SMUs typically do not function as a system resource for external corporations requesting critical care patient transfer via CritiCall Ontario.

Requirements that apply to SMUs:

Governance: There is typically a single gatekeeper for the unit during times of capacity pressure. There may be multiple Most Responsible Physicians (MRPs) within the unit.

Human Resource Component:

- Units typically maintain a nurse-to-patient ratio greater than that of a typical ward. Nursing ratios are based on patient acuity and unit environment.

SMUs:

provide a higher level of monitoring and support than a standard ward bed;

may serve a hospital function and subspecialty system function (e.g., post-surgical unit);

are not typically capable of mechanical non-invasive or invasive ventilation; and,

do not typically function as a system resource for external corporations requesting critical care patient transfer via CritiCall Ontario.

Level 2 ICU Classification and Capabilities

A Level 2 ICU provides critical care capabilities including advanced respiratory support and temporary invasive mechanical ventilation. The unit has specialized staff with critical care expertise. Level 2 ICUs have unit-level capabilities that enable all beds to function at Level 2 or higher.

Requirements that apply to Level 2 ICUs:

Governance: Closed unit model.

Human Resource Component:

- The unit is staffed by nurses who meet the Critical Care Nursing Standards in Ontario.
- Nursing ratios are based on patient acuity and unit environment.
- There is access to multidisciplinary personnel (e.g., respiratory therapists, physiotherapists, dieticians, pharmacists, etc.) when needed, and as part of the ICU care team.

Unit Composition: All beds are level 2 or higher.

Level 2 CC Beds are expected to meet all capabilities:

- provide temporary invasive mechanical ventilation;
- provide advanced respiratory support through high-flow oxygen, CPAP, and Bi-PAP
- provide continuous EKG and oximetry monitoring;
- provide single continuous infusion agents for cardiovascular support; and,
- act as a critical care system bed in terms of patient flow and surge patient transfers coordinated through CritiCall Ontario.

Level 3 ICU Classification and Capabilities

Building on the requirements of a Level 2 ICU, a Level 3 ICU provides comprehensive critical care services including mechanical invasive ventilation and multiple vasoactive drug support. Level 3 ICUs may contain a mix of Level 3 CC Beds and Level 2 CC Beds, with greater than 60% of beds in the ICU being Level 3 CC Beds.

Requirements that apply to Level 3 ICUs:

Governance: Closed unit model.

Human Resource Component:

- The unit is staffed by nurses who meet the Critical Care Nursing Standards in Ontario.
- Nursing ratios are based on patient acuity and unit environment.
- There is inclusion of multidisciplinary personnel (including dedicated respiratory therapists 24/7, physiotherapists, pharmacists, dieticians, etc.) as members of the ICU care team, assigned to the unit.
- There is timely access to medical and surgical specialists who are able to provide bedside patient care within 30 minutes for consultation, or as per staff by-laws governed by the hospital.

Unit Composition: Greater than 60% of beds will be Level 3 beds.

Level 3 CC Bed are expected to meet all capabilities:

- provide mechanical invasive ventilation;
- provide non-invasive mechanical ventilation support such as CPAP and Bi-PAP via tracheostomy or mechanical circulatory support;
- provide multiple intravenous vasoactive/inotropic and/or rhythm controlling drugs used simultaneously;
- arterial line monitoring capabilities; and,
- act as a critical care system bed in terms of patient flow and surge patient transfers coordinated through CritiCall Ontario.

Intensive Care Unit Types

In addition to Adult ICU Classifications and Capabilities, ICUs are also classified based on the type of care provided within the unit, as outlined below:

Medical-Surgical ICU (MS-ICU) is a specialized ICU which focuses on the care of patients experiencing conditions from a wide range of medical or surgical issues requiring critical care.

Cardiac (Medical) Intensive Care Unit (CM-ICU) is a specialized ICU which focuses on the care of patients experiencing medical cardiac conditions requiring critical care.

Cardiac (Surgical) Intensive Care Unit (CS-ICU) is a specialized ICU which focuses on the care of patients experiencing surgical cardiac conditions requiring critical care.

Other Specialized ICU is a specialized ICU focusing on a distinct patient population such as Trauma, Burns, Neurosurgery, or Transplant requiring critical care.

Appendix A: Adult ICU Classifications and Capabilities Supplementary Guidelines

Supplementary rationale and supporting evidence are provided below to facilitate hospital and regional discussions related to Adult ICU Classifications and Capabilities.

Governance and Clinical Leadership

A designated ICU provides comprehensive critical care services including assessment, diagnosis, treatment, monitoring, and coordination of care.

Rationale and Supporting Evidence: Clear governance and medical leadership structures are essential for maintaining quality critical care services and ensuring appropriate patient management. The closed unit model has been demonstrated to improve patient outcomes in critical care settings through coordinated care delivery.[1]

Additional Guidance: Regional coordination responsibilities include participation in regional planning tables and networks, surge planning, transfer protocols, and collaborative quality improvement initiatives across the critical care system.

Human Resources

ICUs maintain appropriate staffing levels and expertise to deliver safe, effective care at their designated level.

Rationale and Supporting Evidence: Appropriate staffing with critical care expertise is fundamental to patient safety and outcomes. Studies demonstrate that dedicated, experienced critical care staff improve patient outcomes and reduce complications.[2]

Additional Guidance: The "knowledge and skill requirements" refers to nurses who have acquired critical care knowledge and skills through direct experience, and based on nurses who meet the Critical Care Nursing Standards in Ontario.

[1] Larson, D. M., Sharkey, A. M., Prachar, B. D., et al. (2021). Transition from an open to closed staffing model in the cardiac intensive care unit improves clinical outcomes. Journal of the American Heart Association, 10(5), e018182.
[2] Elmdni, R., Smith, A., Johnson, M., et al. (2025). The impact of nurse–patient ratios on patient outcomes in intensive care units. Nursing in Critical Care, 30(1), 45-54.

Appendix B: Frequently Asked Questions

Q1: What if a unit meets most but not all criteria for a specific level?

A1: Units are expected to meet all the criteria for their designated classification. However, if a unit meets most capabilities but has specific gaps, collaborative discussions will occur with the OH region and the respective Regional Critical Care Lead to understand site-specific considerations, identifying support needed and to explore pathways forward.

Any capability gaps should be documented in your Unit Capabilities Assessment Form for discussion with your Regional Critical Care Clinical Lead.

Q2: If an ICU meets Level 3 criteria but does not have 60% Level 3 CC Beds, how would the unit be classified?

A2: ICU classification is determined by both unit-level criteria and bed composition. This scenario typically requires discussion to understand whether bed classification needs adjustment or other site-specific considerations apply. OH Regional teams and Regional Critical Care Clinical Leads will work with hospitals to understand the circumstances and determine the most appropriate classification approach.

Q3: Do ICUs that have a unit type of Cardiac (Medical) ICU or Cardiac (Surgical) ICU follow the same classification criteria as Medical/Surgical ICUs?

A3: All ICUs follow the same classification criteria. The specialized patient population of the unit is reflected in the "Unit Type," which is separate from but complementary to the level classification.

Q4: How does this classification impact funding or resources?

A4: The primary purpose of the Adult ICU Classifications and Capabilities is to support a consistent understanding of ICU classification by describing the core requirements that ICUs should have in place as a standard for critical care service. The classification focuses on ensuring appropriate patient care delivery and system planning. Resource implications are addressed through separate provincial and regional planning processes.

Q5: What happened to the advanced and basic designations for units?

A5: The Advanced and Basic designations are no longer in use. Critical care units are now classified under updated categories: Level 2 and Level 3 ICUs. Additionally, a new category called Specialized Monitoring Unit has been introduced to recognize local units that provide monitoring and support.

Glossary of Terms

Bi-PAP: Bi-level Positive Airway Pressure

CPAP: Continuous Positive Airway Pressure

Closed Unit Model: A "closed unit" is an ICU where, at any given time, all patient admission discharge processes are restricted to an identified individual intensivist who is the most responsible physician and coordinates the medical care. At any one time all patients, have an identified individual intensivist physician as the most responsible physician. This contrasts with an "open unit" where other attending physicians can admit patients and consult with intensivists as needed.

Intensivist: is a physician who is credentialed at their hospital to practice critical care medicine in any Level 2 or Level 3 ICU. It is the responsibility of the hospital credentialing process to ensure that physicians have appropriate knowledge, judgement and skill as well as training to practice and be the most responsible physician in ICUs.

EKG: Electrocardiogram

HFO: High-flow Oxygen

MRP: Most Responsible Physician

System Bed: Critical Care (CC) beds can serve as a **system bed** resource for external corporations requesting critical care patient transfers that require this level of care. This is typically supported by CritiCall Ontario (e.g., transfer requests to support system access to care and/or surge). System beds act as a resource in terms of patient flow and surge or may support subspecialty system functions for patients requiring care.

References

Governance and Clinical Leadership

1. Larsson, I. E., Sahlsten, M. J., Sjöström, B., et al. (2021). Transition from an open to closed staffing model in the cardiac intensive care unit improves clinical outcomes. Journal of the American Heart Association, 10(5), e018182. doi.org/10.1161/JAHA.120.018182

Human Resources and Staffing

2. Elmdni, R., Smith, A., Johnson, M., et al. (2025). The impact of nurse–patient ratios on patient outcomes in intensive care units. Nursing in Critical Care, 30(1), 45-54. doi.org/10.1111/nicc.70054

Acknowledgments

We acknowledge the invaluable contributions and collaborative leadership of the following individuals and organizations whose expertise and dedication were instrumental in the development of the Adult Intensive Care Unit Classifications and Capabilities guide.

Dr. Akshai Iyengar, Regional Clinical Lead, Critical Care, Ontario Health, East Region
Dr. Andrew Baker, Provincial Clinical Lead, Critical Care, Ontario Health
Dr. Bram Rochwerg, Regional Clinical Lead, Critical Care, Ontario Health, West Region
Chad Johnson, Program Director - Emergency Services & ICU, Thunder Bay Regional Health Sciences Centre
Cindy VandeVyvere, Executive Director, Critical Care Services Ontario
Dr. Damon Scales, Regional Clinical Lead, Critical Care, Ontario Health, Toronto Region
Danielle Wells, Provincial Manager, Critical Care Services Ontario
Dr. David Neilipovitz, Regional Clinical Lead, Critical Care, Ontario Health, East Region
Dr. David Zelt, Vice President, Clinical, Ontario Health, East Region
Donna LaForce, Interim Vice President, Adult Regional Care, Hamilton Health Sciences
Dr. Dwight Prodger, Regional Clinical Lead, Critical Care, Ontario Health, West Region
Dr. Eli Malus, Regional Clinical Lead, Critical Care, Ontario Health, West Region
Erika MacPhee, Vice President - Clinical Operations & Critical Care, University of Ottawa Heart Institute
Dr. Frank Reinders, Regional Clinical Lead, Critical Care, Ontario Health, West Region
Heather Paterson, Executive Vice President - Clinical Operation, Niagara Health System
Heather Stewart, Associate Vice President Acute and Critical Hospital Services, Mackenzie Health
Dr. Ian Ball, Regional Clinical Lead, Critical Care, Ontario Health, West Region
Jeff Poy, Senior Business Analyst, Critical Care Services Ontario
Dr. Jennifer Everson, Vice President, Clinical, Ontario Health, West Region
Dr. John Muscedere, Regional Clinical Lead, Critical Care, Ontario Health, East Region
Dr. Josée Theriault, Regional Clinical Lead, Critical Care, Ontario Health, North East Region
Julie Dunning, Senior Business Analyst, Critical Care Services Ontario
Karen Riddell, Acting President and CEO, Chief Nursing Executive, Windsor Regional Hospital
Leanne Weeks, Vice President, Clinical and Chief Nursing Executive, Royal Victoria Regional Health Centre
Lisa Smith, Vice President, Medicine, and Chief Nursing Executive, Health Sciences North
Dr. Mark Bailey, Regional Clinical Lead, Critical Care, Ontario Health, Central Region
Dr. Michael Scott, Regional Clinical Lead, Critical Care, Ontario Health, North West Region
Dr. Mira Backo-Shannon, Vice President, Clinical Programs and Innovation, Ontario Health, Central Region
Monica Olanski, Vice President ICU Program, Women and Children's, St. Thomas Elgin General Hospital
Nasim Haque, Project Management Leader, Critical Care Services Ontario

Dr. Paul Preston, Vice President, Clinical, Ontario Health, North Regions
Dr. Randy Wax, Regional Clinical Lead, Critical Care, Ontario Health, East Region
Reg Hart, Interim Vice President & Chief Nursing Executive, Brockville General Hospital
Robin Horodyski, Vice President, Office of the Chief Clinical Executives, Ontario Health
Rose Cook, Vice President, Clinical Programs and Capacity Access and Flow, Ontario Health, Toronto Region
Sonya Canzian, Executive Vice President - Clinical Programs and Chief Nursing Executive; Health Professions Officer, Unity Health Toronto
Stephanie Pearsall, Vice President - Clinical Programs & Chief Nursing Executive, Cambridge Memorial Hospital
Dr. Subarna Thirugnanam, Regional Clinical Lead, Critical Care, Ontario Health, Central Region