

## Ontario's Critical Care Information System (CCIS) Hospital Accountability Statement

### 1. Purpose

To clarify expectations, accountabilities, and timelines in relation to hospitals entering information into the Ontario's Critical Care Information System (CCIS). Data entry in CCIS is required as per the Hospital Service Accountability Agreement (HSAA).

### 2. Scope

The following accountability conditions apply to all hospitals that are funded by the Ontario Ministry of Health (MOH) and provide level 3 and/or level 2 critical care services, and/or host MOH funded Critical Care Response Teams (CCRTs). Please note that CCIS is currently undergoing enhancement via the CCIS Modernization Project with the aim of automating data collection of the current CCIS data set where possible. A subsequent version of the Ontario CCIS Hospital Accountability Statement will be published post CCIS Modernization Project.

### 3. Background

The CCIS provides near-real time information on every patient admitted to level 3 and level 2 critical care units in Ontario's acute care hospitals. The system captures data on bed availability, critical care service utilization and patient outcomes. CCIS also captures patient-specific data from CCRTs. This provides consistent and reliable information on the utilization of critical care resources across the province. The system provides an important medium for monitoring and managing the province's critical care resources more effectively, and for highlighting opportunities to implement quality improvement initiatives at individual hospitals and across the sub regions.

CritiCall Ontario's Provincial Hospital Resources System (PHRS) is the provincial bed and resource registry which is used by CritiCall Ontario to provide a 24-hour-a-day emergency referral service for physicians across Ontario. An interface exists between PHRS and the CCIS Bed Availability Tool (BAT), which allows for critical care bed information to be automatically transferred from BAT to CritiCall Ontario's PHRS ICU screens. BAT is used in real time by CritiCall Ontario agents to help make informed decisions about placement of patients when hospitals experience a capacity issue (e.g. Moderate surge, Natural Disasters, Pandemic, PanAm games, etc.), or patients need a higher level of care (e.g. for 'Life or Limb').

**Therefore, every effort must be made to ensure accountabilities to data entry are followed and that CCIS data is kept current.**

### 4. Accountabilities

#### 4.1. Service inventory changes in CCIS:

- a) Hospitals/units are required to submit a 'Service Inventory Change Request Form' to CCSO within 30 days of any changes to the hospitals critical care capacity, e.g., increase in critical care beds. Changes to the inventory in CCIS will **not** be made without prior approval of CCSO.

#### **4.2 Data entry accountabilities of critical care units**

- a) Adhere to CCIS data entry requirements as outlined in the *CCIS Adult, Pediatric and Neonatal Data Collection Guide*.
- b) Input data on **all** inpatients occupying a level 3 or a level 2 critical care bed. Data on patients being cared for by critical care physicians or nursing staff physically located outside of the critical care unit (e.g., minor surge location) must also be entered into CCIS.
- c) The admission and discharge time should be entered into CCIS as soon as possible and no later than within 2 hours of the patient admission and discharge time. The Bed Availability Tool (BAT) automatically appears with updated information every time a user admits, or discharges or reserves a bed for a patient.
- d) Units are required to:
  - i) Manually update 'Not Available' data on BAT any time there is a status change (e.g., Not Staffed, Shortage of Equipment, etc.), or minimum once in a 24-hour period if there is no status change.
  - ii) Record data on Life Support Interventions (LSI) once per 24-hour calendar day, prior to 05:00 hours to reflect patient activities or interventions for the previous 24 hours. It is mandatory that LSI data is entered on the day of the patient's discharge from ICU.
  - iii) Record data on Antimicrobial Stewardship (AMS), COVID-19 and Influenza-like Illness (ILI) for all patients per documentation guidelines.
  - iv) Collect data on Multi Organ Dysfunction Score (MODS) data for adults at the time of admission and record the information into CCIS by 23:59 hours the following day.
  - v) Collect data on Pediatric Index of Mortality-2 (PIM 2) data on admission and record the information into CCIS by 23:59 hours (paediatric patients only).
  - vi) Record data on Paediatric Logistic Organ Dysfunction (PELOD) once per 24-hour calendar day, prior to 23:59 the following day.
  - vii) Record each diagnosed incident of *C. difficile*, (Ventilator Associated Pneumonia (VAP), Central Line Infection (CLI), and Unplanned Extubation for all patients during their stay in critical care units.
  - viii) Update patient 'Awaiting Transfer' status when the physician determines that the patient no longer requires critical care services, regardless of whether there is a bed available for transfer. Note: Refer to the Adult, Paediatric and Neonatal Data Collection Guides located in the CCIS Document library to ensure data entry accountabilities are met.

#### **4.3 Critical Care Response Teams (CCRTs)**

- a) MOH funded adult and paediatric CCRTs are required to enter a set of indicators into CCIS, as outlined in the '*CCIS CCRT/PCCRT Data Collection Guide*'.
- b) CCRT Leads and Co-Leads are required to ensure data is entered into CCIS within 24 hours after consult or follow up with a patient. Submission of accurate and timely data to the CCIS is the responsibility of each CCRT.
- c) CCRT monthly statistics must be entered into CCIS within 10 business days following the last day of the month.
- d) Qualification for ongoing funding is predicated on meeting the accountability requirements identified in the MOH funding letter.
- e) CCRT data entered into CCIS will be used for program evaluation by CCSO.

#### **4.4. Data Quality**

- a) Hospitals/units are responsible to ensure that training is arranged for all staff entering data in CCIS. This training is available through CritiCall Ontario.
- b) Ensuring accurate and timely entry of data into CCIS is the responsibility of each unit/hospital.
- c) Participating in data accuracy audits/quality improvement initiatives as requested by CCSO is required for each unit/hospital that enters data into CCIS.

#### **4.5. Performance Management and Quality Improvement**

- a) Hospital senior leadership and ICU leaders must review and assess CCIS data with their respective Ontario Health Sub-Regional Critical Care Leaders on a quarterly basis as a part of their ongoing efforts to improve patient safety and access to care.
- b) Hospital senior leadership and ICU leaders must review the quarterly CCIS reports and the critical care scorecard reports in order to monitor unit/hospital/Regional/Sub-regional performance, recognize success and facilitate conversations regarding improvements and decision-making, informed by data.
- c) A set of CCIS/CCRT reports can also be accessed through the Reports Portal functionality in CCIS at a hospital level to monitor performance and process.

#### **4.6. Privacy and Security**

- a) The CCIS is a health registry and in keeping with the Personal Health Information Protection Act (PHIPA), privacy policies and related procedures are in place to protect the personal health information (PHI) being entered into the system. All CCIS-related privacy and security policies and procedures are available in the CCIS Document Library.
- b) In requesting access to the CCIS for staff, hospitals are attesting to the fact that their users have undergone internal privacy/security training and awareness.
- c) CCIS users are responsible for protecting all PHI entered into the CCIS and for complying with the CCIS Password Policy.

## Appendix A

### **Definitions for Adult Level 3 and Level 2 Critical Care Units in Ontario**

For institutions that combine Level 2 and Level 3 critical care service in one geographic area (i.e. unit), the unit designation reflects the capabilities of care provided consistent with the level of care expectations.

#### **Level 3 Adult (includes Level 3 Advanced and Basic)**

A Level 3 unit is capable of providing the highest level of service to meet the needs of patients who require advanced or prolonged respiratory support, or basic respiratory support together with the support of more than one organ system. This is generally considered a “full service” Critical Care unit despite the fact some specialized services may not be available (e.g. dialysis). All Level 3 units are capable of invasive ventilatory support.

#### **Level 2 Adult (includes L2 Advanced and Basic)**

A Level 2 unit is capable of providing service to meet the needs of patients who require more detailed observation or intervention including support for a single failed organ system, short-term non-invasive ventilation, post-operative care, patients “stepping down” from higher levels of care or “step ups” from lower levels of care. These units provide a level of care that falls between the general ward and a “full service” critical care unit (Level 3).

For more information, please review CCSO’s Adult Levels of Care Guidance Document:

<https://criticalcareontario.ca/wp-content/uploads/2020/11/Adult-LoC-Guidance-Document-Final.pdf>

### **Definitions for Paediatric Critical Care Units in Ontario**

A Level 2 and/or Level 3 unit, reporting into CCIS, that is staffed and equipped to provide care primarily to paediatric patients aged 1 month-18 years old who, because of their illness require constant care, observation and specialized monitoring and therapies.

### **Definitions for Neonatal Level 3 and Level 2 Intensive Care Units in Ontario**

The Neonatal Intensive Care Unit (NICU), reporting into CCIS, is staffed, and equipped to provide specialized care to infants who are born prematurely or who may have complex illness or conditions that complicate their ability to transition to an extrauterine life thereby increasing the risk for complications and impact long term outcome.

#### **Level 3 NICU (includes Level 3a and 3b units):**

Provision of care to infants of any gestational age and birth weight, including surgical services for neonates. Able to provide all modalities of ventilation high frequency ventilation and inhaled nitric oxide. Access to a comprehensive range of subspecialty consultants if they are not available on site.

#### **Level 2 NICU (Includes Level 2a, 2b, 2c units):**

Provision of care to infants with a gestational age from  $\geq 34$  0/7 and birth weight of  $> 1800$  grams (Level 2a) to infants who are born with a gestational age of  $\geq 30$  0/7 weeks and a birth weight of  $> 1000$  grams (Level 2c). These units provide service for infants with moderate illness or who are convalescing after intensive care. There is the ability to provide short term ventilator support for infants whose condition is expected to resolve within 24 hours up to 7 days or prior to transfer to a higher level of care.

For more information, please review CCSO’s NICU Levels of Care Guidance Document:

[https://criticalcareontario.ca/wp-content/uploads/2021/10/NICU-Levels-of-Care-Update\\_Guidance-Documents\\_FINAL-2021.pdf](https://criticalcareontario.ca/wp-content/uploads/2021/10/NICU-Levels-of-Care-Update_Guidance-Documents_FINAL-2021.pdf)