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Admission and Discharge Guidelines for the Adult Critical Care Inpatient Unit			
Signing Authority	Regional Critical Care Committee		
Approval Date:	27-JAN-2020	Effective Date:	18-NOV-2020

SCOPE:

This policy and procedure pertains to all providers with admitting and discharge privileges into a Critical Care Inpatient Unit, the Registered Nurses (RNs) working in those units and the Critical Care Inpatient Unit Managers of the hospitals across the North Simcoe Muskoka Region (NSMR) who shall be involved with the care of Critical Care Inpatients. NSMR facilities include Collingwood G&M Hospital (CGMH), Georgian Bay General Hospital (GBGH), Muskoka Algonquin Healthcare (MAHC) which includes both the Huntsville and Bracebridge sites, Orillia Soldiers' Memorial Hospital (OSMH) and Royal Victoria Regional Health Center (RVH).

POLICY STATEMENT:

This policy shall ensure all critically ill patients are receiving appropriate care in the appropriate setting at the appropriate time. This policy describes the triage guidelines for admissions to, and discharges from an Intensive Care Unit (ICU) and at Royal Victoria Regional Health Centre includes the Cardiac Care Unit (CCU). For the remainder of this document, reference to ICU and CCU shall be referred to collectively as Critical Care Inpatient Units unless otherwise specified.

Triage for admission and discharge decisions shall be explicit, fair and just, and without biases of race/ethnicity, religion, sexual orientation or social background.

The efficient utilization of Critical Care Inpatient Unit beds and care of the critically ill or injured patients is best met by providing care with the appropriate technological supports, equipment and specialized health professional skill. Patients admitted into Critical Care Inpatient Units require care involving specialized competencies of critical care healthcare professionals and technologies not available elsewhere in the hospital; have clinical instability; and are at high risk for imminent decline.

Ongoing human resource planning is essential for the efficient provision of critical care services. The ultimate goal would be to have critical care nurses and physicians certified to work in critical care as well as have a full complement of allied healthcare team to care for the complex patients in the Critical Care Inpatient Units. With increased competency levels, trained critical care health professionals reduce preventable harm, improve patient safety and enhance consistency of care.

To ensure patients are receiving the highest quality of critical care, the cornerstones of: right care, right place, right time by the right provider shall be optimized for enhanced outcomes. Critical Care Inpatient Unit nurses reallocated to other patient care areas, shall endeavor to be returned to the critical care area, to optimize their skills and expertise when required in the Critical Care Inpatient Unit. Circumstances include but may not be limited to admissions, increases in acuity or other mitigating factors where the clinical demands of the Critical Care Inpatient Unit exceeds the existing resources.

The multi-professional team shall respect and recognize patient autonomy, including advanced directives, living wills or power of attorney designated as the substitute decision maker (SDM).

There may be times where the patient's illness is progressive and irreversible and invasive treatments available in a Critical Care Inpatient Unit are deemed non beneficial. In these situations patients shall be managed on another unit unless patient's end of life wishes includes organ donation with Trillium Gift of Life Network (See Organ and Tissue Donation Policy and Procedure)

Paediatric patients less than 16 years of age shall not be admitted to an Adult Critical Care Inpatient Unit.

Paediatric patients between 16-18 years of age shall only be considered for admission to the adult Critical Care Inpatient Unit on a case by case basis, as per the discretion of the physician with admitting privileges to the Adult Critical Care Inpatient Unit in consultation with the paediatrician.

The purpose of this policy is to provide guidance as to which patients require admission to a Critical Care Inpatient Unit and when they can be transferred or discharged from the Critical Care Inpatient Unit.

DEFINITION:

Critical Care Inpatient Unit Physician: The physician who is formally and legally responsible for admitting and/or discharging and/or is the most responsible provider (MRP) of a Critical Care Inpatient Unit patient.

Critical Care Inpatient Unit: Critical Care Inpatient Units are specialized areas that provide 24 hours/day seven day a week, high intensity care to critically ill or injured patients.

Minor Surge: An acute increase in demand for critical care services, up to 15% beyond the normal capacity (greater than100% and less than 115%), where response is localized to an individual hospital. A Minor Surge could result in unplanned admissions from the OR, deteriorating patients on the ward/floor/unit, or going into a minor surge state for the purpose of accepting life or limb threatened patients from a referring hospital.

Moderate Surge: A larger increase (greater than or equal to 115%) in demand for critical services, that impacts on a Local Health Integration Network (LHIN)/regional level, where an organized response at the LHIN/regional network level is required. A Moderate Surge occurs when a hospital in Minor Surge is no longer able to maintain services and needs to rely on the resources of other hospitals to assist with managing the surge. A Moderate Surge could also result from a single event (infectious or casualty) requiring the response of several hospitals in a region to respond to the increase in demand.

Major Surge: An unusually high increase in demand that overwhelms the health care resources of individual hospitals and regions for an extended period of time, where an organized response at the provincial or national level is required.

PROCEDURE:

General Admission Guidelines:
Critical care triage and admission processes shall meet the specific population needs while considering the limitations of the Critical Care Inpatient Unit.

- To optimize resources and improve outcomes it is recommended to guide admissions on the basis of a combination of the following:
  - patient care needs that can only be addressed by a critical care admission.
  - available clinical expertise.
  - prioritized according to the patient's condition.
  - diagnosis.
  - bed availability.
  - objective patient data at time of referral.
  - potential for patient to benefit from critical care intervention.

Patients admitted to Critical Care Inpatient Units across the NSMR shall require care involving specialized competencies of the health care professionals not available elsewhere in the hospital.

Critical Care Inpatient Unit health professionals are obligated to provide expert care to the critically ill patients until such a time where scope of service required to care for the patient is not available and transfer is completed or there is a change in the plan of care by the patient or the SDM.

Critically ill patients, accepted for admission into the Critical Care Inpatient Unit shall be transferred in an expeditious manner. Critical Care Inpatient Units shall endeavor to transfer patients from the Emergency Department to the Critical Care Inpatient Units within 90 minutes of admission unless otherwise specified in the appendix outlining your facility's admission and discharge details (*see appendices I-V*).

Admission to Critical Care Inpatient Units may include but is not limited to patients presenting with or have need for:

- hemodynamic instability requiring high volume blood and/or fluid resuscitation and/or hemodynamic supporting pharmacotherapy;
- septic shock;
- multiorgan dysfunction;
- invasive and/or intensive monitoring;
- the course of illness is anticipated to deteriorate and possibly require aggressive interventions (e.g. impending intubation);
- acute hypoxic or hypercarbic respiratory failure;
- respiratory distress and/or airway support requiring invasive or non-invasive ventilatory support;
- clinical instability (status epilepticus, hypoxemia and hypotension);
- receiving thrombolytic therapy, and or EVT treatment for symptoms of stroke require acute stroke care in a Critical Care Inpatient Unit for the first 24 hours;
- devastating brain injuries who are being aggressively managed while determining organ donation status;
- high risk of ischemic and/or arrhythmic events secondary to:
    - acute coronary syndromes;
    - cardiac arrest;
    - life threatening cardiac dysrhythmias;
    - hemodynamic instability;
    - unstable congestive heart failure;
    - cardiac tamponade;
    - retro-peritoneal bleed;
    - cardiomyopathies requiring intensive monitoring;
    - inflammatory and/or infectious mechanisms that require advanced critical care interventions (eg. Pericarditis requiring pericardiocentesis or pericardial window)
    - severe electrolyte imbalances requiring intensive cardiac monitoring;
    - major disruption to physiology, due to an overwhelming stress response to injury, or inadequate compensation to the response: e.g. major trauma, sepsis and shock;
    - ST-elevated Myocardial Infarction (STEMI) having not received thrombolytic therapy and are awaiting transfer for angiogram/angioplasty;
    - STEMI having not received thrombolytic therapy and are awaiting transfer for revascularization;
    - STEMI's post revascularization therapies (thrombolytic and non-thrombolytic);
    - Non-ST-elevated Myocardial Infarction (NSTEMI) having unstable chest pain requiring access to angiogram/angioplasty.
- unstable cardiac patients requiring any of the following:
    - invasive device support such as intra-arterial hemodynamic monitoring and/or intra-aortic balloon pump (IABP);
    - temporary transvenous or transcutaneous pacing;
    - advanced pharmacological therapy e.g. intravenous inotropes, antiarrhythmics, antifibrinolytics;

- arrhythmia management.

Note: Admission into the CCU at RVH shall endeavor to have a cardiac related primary diagnosis.

Procedure for Admission:

Operating Room: Planned and unplanned admissions

- Other than in an open ICU model (See appendix V for CMGH and MAHC details) a surgical patient requiring emergent admission post operatively into the Critical Care Inpatient Unit, the surgeon or anesthetist shall first contact the admitting physician for consultation and acceptance of the patient. The admitting physician may elect to assess the patient post operatively in the post anesthetic care unit (PACU) to determine need for transfer to the Critical Care Inpatient Unit setting.
- Elective surgical cases requiring critical care post operatively shall be booked and an appropriate Critical Care Inpatient Unit bed shall be arranged prior to proceeding with surgery. Surgery shall not proceed without a confirmed Critical Care Inpatient Unit bed.
- Surgeons with planned critical care admissions should check with the critical care admission area prior to the first case of the day to determine if a surge process has been initiated.

CritiCall Ontario/ Life or Limb:

Receiving Patients

- Calls from CritiCall requiring an admission shall be accepted by the physician with admitting privileges to the Critical Care Inpatient Unit provided that the Critical Care Inpatient Unit can provide the care and expertise required for that patient.
- All transfers require a direct sending physician-to- admitting physician conversation.
- Life or Limb conditions requiring a transfer in for care in the Critical Care Inpatient Unit shall be accepted and transferred within 4 hours of request. The Critical Care Inpatient Unit physician shall accept the patient unless the patient requires a service not offered at that facility. A life or limb transfer cannot be refused based on staffed bed availability.

Transferring Patients

- When a hospital in the NSMR does not have the clinical services required to care for a patient with a life or limb threatening condition and therapeutic options exist, the referring physician shall contact CritiCall Ontario to arrange transfer to another institution. If the condition requires a specific emergent intervention within 4 hours (endoscopy, interventional radiology, surgery), then the case will then be declared life or limb to CritiCall.

Moderate Surge conditions in the Critical Care Inpatient Unit:

1. Any patient awaiting a transition to a ward/floor/unit bed who has been waiting for transfer shall be transferred without delay to a suitable bed space in the hospital.

2. If no patient has already been deemed “transferred” then the Critical Care Inpatient Unit physician, in collaboration with the interprofessional team, shall decide upon the most appropriate course of action, and triage the most stable patient to the most appropriate care area.
3. At RVH, collaboration shall occur between the ICU and CCU to optimize bed resources and critical care expertise.
4. If an elective surgical post-op reservation is booked and the above triage process (steps 1-3) is not successful in securing a transfer, the Critical Care Inpatient Unit Resource/Charge RN shall notify the OR Resource / Charge RN and/or OR Manager and Manager of the Critical Care Inpatient Unit or covering hospital leader and bed allocation / Patient Flow that there isn’t a Critical Care Inpatient Unit bed available for the elective OR.
5. When the Critical Care Inpatient Unit must admit emergently to a reserved post op bed, and the above triage procedure (steps 1-3) to secure an additional Critical Care Inpatient bed is not successful, the Resource / Charge RN shall notify the OR Resource Nurse/ Charge RN and/or Manager, Manager of Critical Care Inpatient Unit or covering hospital leader and bed allocation / Patient Flow that there isn’t a bed available for the elective OR.
6. If there is no Critical Care Inpatient Unit bed available, then the patient must be attempted to be transferred to an appropriate facility with appropriate resources via CritiCall as directed by your facility’s surge guidelines

General Discharge Guideline:

- Patients admitted to Critical Care Inpatient Units shall be evaluated and considered for discharge from the Critical Care Inpatient Unit when it is determined that the need for critical care intervention is no longer required. All patients admitted to the Critical Care Inpatient Units shall be assessed for readiness for transfer or discharge in collaboration with the Critical Care Inpatient Unit physician when:
    - improvement in condition necessitates admission;
    - anticipation of prolonged medical stability;
    - establishment of status (e.g. End of Life Treatment or Palliation) such that critical care supervision or intervention is no longer required even if the patient remains critically ill;
    - elimination of need for mechanical ventilation/airway protection;
    - elimination of the need for invasive hemodynamic monitoring;
    - discontinuation of medications/treatments requiring hemodynamic monitoring; and
    - discontinuation of high intensity monitoring by nursing staff.
- Bed allocation services and/or Patient Flow services shall make it a priority to create capacity in the Critical Care Inpatient Unit when there is a minor surge or greater.
- Upon receipt of written transfer orders bed allocation services/admitting services/ Patient Flow shall be notified to determine bed availability.
- Upon transfer bed assignment, an organized and thorough verbal report and transfer of accountability shall occur between the Critical Care Inpatient Unit RN and the receiving

unit nurse. This report shall be conducted at the patient's bedside, in facilities where this practice is mandated, to encourage patient (and family with patient consent) inclusion.
- If not present, the patient's family and or SDM shall be notified of the transfer.
- If readmission to the Critical Care Inpatient Unit would be considered non-beneficial due to patient's course of illness or co-morbidities, this should be recorded in the patient's case notes by the Critical Care Inpatient Unit physician and discussed with the patient or SDM and with the team taking over the patient's care.
- All unnecessary invasive lines shall be removed prior to transfer. Peripheral intravenous (PIV) access is preferred to central venous access devices (CVAD) or a more appropriate choice of CVAD (ie: PICC line) when central venous access is required.
- 'After-hours' (1900 to 0700) discharges from a Critical Care Inpatient Unit shall be avoided unless in an emergency situation and no critical care bed is available.
- Adequate staff and resources shall be available to ensure patient is being transferred safely.
- Discharges from the ICU to the transition unit/ward shall be followed by the Critical Care Response Team (CCRT)/Critical Care Outreach Team (CCOT), where available, for a minimum of 48 hours.

Repatriations:
- Patients sent to another facility for treatment shall return back to the primary service area (PSA) hospital as soon as safely possible.
- Requests to repatriate a patient will be accepted by bed allocation services/ Patient Flow via CritiCall's Repatriation Portal and transfers will be assessed on ability to accept due to current capacity and resources.
- All repatriations shall follow direct physician-to-physician conversation.
- All repatriation from CritiCall/Life or Limb calls shall be repatriated within 48 hours or sooner to the appropriate unit. Notwithstanding by-pass agreements for specialized services (i.e. Stroke, STEMI).
- If multiple requests for repatriation arrive simultaneously, priority will be given to the Life or Limb requests first, based on the date of request.
- Out of country requests shall be given same considerations if the patient's permanent residence is within primary service area (PSA)/NSMR.

Specific admission and discharge processes are dependent upon whether the Critical Care Inpatient Unit has adopted an open or closed model of care. Please see Appendices for current ICU models across the NSMR.

CROSS REFERENCES:

Regional Critical Care Policy and Procedure: Organ and Tissue Donation.

REFERENCES:

Boulanger, J.M., et al (2018). Canadian Stroke Best Practice Recommendations for Acute Stroke Management: Prehospital, Emergency Department, and Acute Inpatient Stroke Care, 6th Edition, Update 2018. *International Journal of Stroke. 0(0),* 1-36.

College of Intensive Care Medicine (2011) *Minimum Standards for Intensive Care Units.* Retrieved September, 2018 from https://www.cicm.org.au/CICM_Media/CICMSite/CICM-Website/Resources/Professional%20Documents/IC-1-Minimum-Standards-for-Intensive-Care-Units.pdf

Critical Care Services Ontario website (2018). Retrieved from https://www.criticalcareontario.ca/EN/AboutUs/Pages/About-Us.aspx

Critical Care Services Ontario website (2019). Ontario's critical care surge capacity management plan. Retrieved from https://www.criticalcareontario.ca/EN/Surge%20Capacity%20Management/Ontario_Critical_Care_Minor_Surge_Toolkit_January2017.pdf

CritiCall Ontario. Retrieved September 2018. http://www.critiCall.org/

N McLaughlin, G.D. Leslie, T.A. Williams, G.J. Dobb,*(* 2007) Examining the occurrence of adverse events within 72 hours of discharge from the Intensive Care Unit; *Anesthesia and Intensive Care.Edgecliff:* August 2007. Vol 35 Iss 4;pg 486

Nates, J.L., Nunnally et al.(2016). ICU admission, discharge, and triage guidelines: a framework to enhance clinical operations, development of institutional policies, and further research. Critical Care Medicine. Retrieved from www.ccmjournal.org

Current models of Care for Critical Care Inpatient Units across the North Simcoe Muskoka Region

Model of Care	**Current Facilities within North Simcoe Muskoka Region using Model of Care**
Closed-Unit ICU, Intensivist Model (See appendix II)	Royal Victoria Regional Health Centre (RVH) Intensive Care Unit (ICU) Orillia Solders Memorial Hospital (OSMH) Intensive Care Unit (ICU)
Closed-Unit CCU, Cardiologist Model (See appendix III)	Royal Victoria Regional Health Centre (RVH) Cardiac Care Unit (CCU)
Closed Unit, Internist/Intensivist Model (See appendix IV)	Georgian Bay General Hospital (GBGH) Intensive Care Unit (ICU)
Open ICU Model (See appendix V)	Collingwood General and Marine Hospital (CGMH) Intensive Care Unit (ICU) Muskoka Algonquin Healthcare (MAHC) Intensive Care Unit (ICU)

Closed-Unit ICU, Intensivist Model:
Please follow the general *Admission and Discharge Guidelines* above unless otherwise specified or outlined below. (See appendix I for facilities within the NSMR currently utilizing this model).

Admission process:
The intensivist functions as the leader supported by a skilled interprofessional team and consults and collaborates with medical specialists to provide optimal care for the critically ill and injured.

- The Intensivist is the only provider who can admit to ICU.
- The Intensivist shall be the most responsible provider (MRP) and coordinate and manage the care of the patient during the ICU stay.
- The Intensivist accepts the patient prior to transfer from all areas of the hospital or from other hospitals via CritiCall through direct contact with the referring physician.
- The Intensivist shall directly notify the ICU Resource nurse of all admissions prior to transfer/admission to ICU.
- The ICU Resource nurse shall collaborate with Patient Flow [or Hospital Service Leader (HSL) for off hours] for all admissions and transfers.
- ICU shall endeavor to transfer patients from ED to ICU within 60 minutes of admission.
- All patients shall be reviewed daily, during rounds, with the interdisciplinary team and Intensivist to determine if the patient continues to require ICU support.

Discharge Process-

- The Intensivist shall transfer care to the assigned MRP who shall accept care of the patient prior to transfer. In the event the attending physician is unavailable, the Intensivist shall notify the designated on-call physician.
- Transfer orders shall be written by the Intensivist, and the patient shall be cared for, as guided by those orders, as a transfer/ward/floor patient in the ICU until a transfer bed is allocated. Delays in transfer bed availability shall be monitored and documented.
- The Intensivist shall remain the MRP for those transferred patients that remain in the ICU as a result of bed access delays.

Closed-Unit CCU, Cardiologist Model: Please follow the general *Admission and Discharge Guidelines* above unless otherwise specified or outlined below. (See appendix I for facilities within the NSMR currently utilizing this model)

The Cardiologist functions as the leader, supported by a skilled interprofessional team, and will consult and collaborate with medical specialists to provide optimal care for the critically ill cardiac patient.

Admission process-

- The Cardiologist is the only provider who can admit to CCU.
- The Cardiologist shall be the most responsible provider (MRP) and coordinate and manage the care of the patient during the CCU stay.
- The Cardiologist accepts the patient prior to transfer from all areas of the hospital or from other hospitals via CritiCall through direct contact with the referring physician;
- The Cardiologist shall directly notify the CCU Resource nurse of all admissions prior to transfer/admission to CCU.
- The CCU team Resource Nurse shall contact the appropriate department caring for the patient and promptly ascertain the current status and immediate care needs and arrange the transfer to CCU.
- The CCU Resource nurse shall collaborate with Patient Flow for all admissions and transfers.
- CCU shall endeavor to transfer patients from ED to CCU within 60 minutes of admission.
- All patients shall be reviewed daily, during rounds, with the interdisciplinary team and Cardiologist to determine if the patient continues to require CCU support.

Discharge process:

- The Cardiologist transfers care to the assigned MRP who accepts care of the patient prior to transfer. In the event the attending provider is unavailable, the Cardiologist shall notify the designated on-call provider.
- Transfer orders shall be written by the Cardiologist, and the patient shall be cared for, as guided by those orders, as transfer/ ward/ floor patients in the CCU until an inpatient transition bed is allocated. Delays in transition bed availability shall be monitored and documented.
- The Cardiologist shall remain the MRP for those transferred patients affected by bed access delays.

Closed Unit, Internist/Intensivist Model:

Please follow the general *Admission and Discharge guidelines* above unless otherwise specified or outlined below. (See appendix I for facilities within the NSMR currently utilizing this model)

Admission process:

The Internist/Intensivist functions as the leader supported by a skilled interprofessional team and consults and collaborates with medical specialists to provide optimal care for the critically ill and injured.

- The Internist/Intensivist is the only provider who can admit to ICU.
- The Internist/Intensivist shall be the most responsible provider (MRP) and coordinate and manage the care of the patient during the ICU stay with the help of other specialists (anesthesia, surgery, emergency).
- The Internist/Intensivist accepts the patient prior to transfer from the emergency department, other units of the hospital or from other hospitals via Critical through direct contact with the referring physician.
- The Internist/Intensivist shall directly notify the ICU Resource nurse of all admissions prior to transfer/admission to ICU.
- The ICU Resource nurse shall collaborate with bed allocation/ Patient Flow for all admissions and transfers.
- All patients shall be reviewed daily, during rounds, with the interdisciplinary team to determine if the patient continues to require ICU support.

Discharge Process:

- The Internist/Intensivist transfers care to the assigned MRP who accepts care of the patient prior to transfer. In the event the attending physician is unavailable, the Internist/Intensivist shall notify the designated on-call physician.
- Transfer orders shall be written by the Internist/Intensivist or accepting transfer MRP, and the patient shall be cared for, as guided by those orders, as transfer/ward/floor patients in the ICU until a transition bed is allocated. Delays in transition bed availability will be monitored and documented in accordance with RVH standard process.
- The Internist/Intensivist shall remain the MRP for those transferred patients that remain in the ICU affected by bed access delays.

Open and Semi-Closed ICU Model:

Please follow the general *Admission and Discharge guidelines* above unless otherwise specified or outlined below. (See appendix I for facilities within the NSMR currently utilizing this model)

Admission and discharge process- CMGH (Open)

- It is the responsibility of the physician/provider to notify the consultant, when appropriate.
- It is the responsibility of the admitting physician to notify the Resource RN to determine ICU bed availability.

Admission and discharge process- MAHC (Semi-Closed)

- All patients are to be admitted under a consultant (general internal medicine or surgery) or with prior discussion with general internal medicine on-call.
- It is the responsibility of the current most responsible physician to contact the consultant.
- Bed availability will be determined by the admitting physician in collaboration with the charge nurse or clinical lead.