LAKERIDGE HEALTH	**Critical Care Admission, Discharge and Transfer Guidelines**	
	Manual: Guidelines	Document No.:
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	Cross Reference to: First Available and Appropriate Bed Policy, , Procedural Sedation by Non-Anesthetist Health Care Provider, Bowmanville Critical Care Unit Physician Responsibilities of Practice Policy, Infection Control Policy and Procedures, Health Records Moving with Patients within Lakeridge Health (all sites) – Health Information Management	
	Document Applies to: All LH Staff and Physicians	

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PREAMBLE

Critical care is a pivotal service that has the potential to "make or break" other hospital services. If critical care is not available, surgeries can be delayed or cancelled, wait times for surgeries and emergency services increased and patient safety substantially reduced in our hospital. The demand for critical care is increasing dramatically due to an aging population, new drugs and life-support technologies, and increasing public expectations. In response to these challenges, the Ministry of Health and Long-Term Care (MoH) organized Ontario's critical care services so that patients have timely and equitable access to the level of care that is appropriate to the severity of their condition. At an individual hospital level the MoH recommends that there be a unified approach to the utilization of critical care resources. This includes developing admission and discharge criteria, prioritizing patients, matching resources to priorities, and defining and tracking quality, safety and performance indicators (MoH, 2005).

PURPOSE

Lakeridge Health promotes evidence-based practices and standards in critical care. The purpose of the Critical Care Admission, Discharge and Transfer Guidelines is to ensure all patients have timely access to a seamless continuum of critical care services.

PROGRAM PHILOSOPHY

The Critical Care Program at Lakeridge Health is committed to:

1. Providing the highest possible standards for quality patient care and critical care service;
2. Provide a safe and comfortable environment for the patient and their relatives;
3. Ensuring the appropriate admission, discharge and transfer of patients to critical care services;

4. Designing and implementing systems to improve care delivery to the critically ill patient across the organization;
5. Exploring ways to prevent the development of critical illness including primary prevention;
6. Providing an academic environment for medical, nursing and health discipline students in Critical Care.

DEFINITIONS

The Ministry of Health and Long-Term Care categorize critical care services by level of acuity ranging from most acute (Level 3) to least acute (Level 1). Categorizing critical care services by level of acuity clarifies the scope of individual critical care units and the appropriate level of resources needed to provide care in each unit (MoH, 2005).

Level 1: Service to meet the needs of patients at risk of their condition deteriorating, or those recently relocated from higher levels of care, whose needs can be met on an acute ward with additional advice and support from a critical care team.

Level 2 (Bowmanville Critical Care Unit): Service to meet the needs of patients who require more detailed observation or intervention including support for a single failed organ system, short-term ventilation (less than 48hrs), post-operative care, or patients "stepping down" from higher levels of care.

Level 3 (Oshawa Critical Care Unit): The goal of comprehensive critical care is to prevent unnecessary suffering and premature death by treating reversible illnesses for an appropriate period of time. Patients most likely to benefit from Level 3 critical care are those with reversible or potentially reversible, life-threatening disorders of vital systems including:

- Patients requiring advanced respiratory support, i.e. requirement for tracheal intubation and mechanical ventilation; or patients who may deteriorate rapidly and require mechanical ventilation;
- Patients requiring acute support for two or more organ systems;
- Patients with chronic impairment of one or more organ systems who require support for a reversible failure of another organ system;
- Patients requiring "extended recovery" will be considered for admission. Extended recovery is required where a patient needs mechanical ventilation for a limited period of time while anesthetic drugs are eliminated from the body or for reversal of the immediate sequelae of surgery and anesthesia (e.g. hypothermia), which is distinct from critical care where the patient requires multiple organ support.

CRITICAL CARE PROGRAM RESOURCES AND DECISION MAKING

1. The Oshawa CCU is staffed and equipped to provide Level 3 care for 18 Ministry of Health of Ontario (MoH) resourced beds.
2. The Bowmanville CCU is staffed and equipped to provide Level 2 care for 6 MoH resourced beds.
3. Staffing un-resourced critical care beds to create critical care surge capacity may have to be considered. The staffing of the unit above its funded complement will not be routinely undertaken for elective cases, but will be undertaken for emergencies.
4. When there are more patients requiring critical care services then available MoH resourced beds (i.e. critical care surge), every effort will be made to ensure that the staffing requirements can be met through the unit's own nursing staff rotations and/or corporate float pool.

5. The decision to open or staff un-resourced critical care beds should be made by the Director, Emergency and Critical Care (delegate) in collaboration with the on call Intensivist and Patient Care Manager (delegate).
6. The empty third station in the Oshawa CCU will be used to accommodate critical care surge capacity patients in the short term until a CCU bed is imminently available or until a decision is made to transfer a patient to another centre.
7. When the CCUs are full and an emergency or acute patient requires admission to one of these units, the Intensvist/MRP and Charge Nurse should assess the patients within the unit to determine the level of care they require. Identifying flexible ways of staffing the critical care beds should be carried out.
8. If there is not a critical care bed available the Patient Care Manager (designate) and Operations Supervisors/Bed Allocation Office will be informed of the issue. When a bed is unavailable for a critically ill patient, critical care staff will offer support where possible and contingency arrangements will be made.
9. When the number of critically ill patients in the hospital exceeds the resources of the critical care program, the program will follow the Ontario Critical Care Surge Capacity Management Plan.

CRITICAL CARE PROGRAM FUNCTIONAL ASPECTS

A. Level 3 Critical Care Unit Overview

1. The Level 3 CCU is a "closed" model of critical care. In the "closed" model the Intensivist or Cardiologist directs the care of patients admitted to the CCU. The intensivist is also responsible for all admission, discharge and transfer decisions for the CCU with the exception of non-intubated patients who are admitted specifically for the management of cardiac condition, whose care is directed by the Cardiologist. In the event that a patient with a cardiac condition is intubated, the Intensivist will direct the care with the assistance of the Cardiologist. Patients who are admitted to the CCU for management of a cardiac condition but also have active disease affecting other organ systems may be followed by the Cardiologist or the Intensivist as appropriate.
2. Although the CCU is a "closed" model by definition, multidisciplinary input is vital to the patient care. The Intensivist is directly responsible for advanced support of the critically ill patients and will act as Most Responsible Physician (MRP) in consultation with appropriate specialties. The Cardiologist is MRP for non-intubated patients admitted specifically for cardiac conditions.
3. The unit will admit both elective and emergency adult patients (age 18 and over) requiring level 2 and level 3 supports. Patients should be expected from the corporate programs and through CritiCall.
4. The assignment of patients to a critical care bed is a joint responsibility of the Critical Care Program clinical team and Operations Supervisors/Bed Allocation Office.
5. The Intensivist (or Cardiologist when appropriate) must approve all admissions to the Level 3 CCU. Any critically ill patient should be referred to the Intensivist or Cardiologist even if the unit is known to be full. Situations change on an hourly basis as does potential bed availability.
6. Patients requiring Level 3 critical care service take priority over Level 2 admissions into the CCU. In the event that there is only one CCU bed available, Level 2 admissions to the last bed must be cleared by the Operations Supervisors/Bed Allocation Office and the on call Intensivist.
7. If a CCU bed is not available, then that patient is stabilized in a safe area and transfer to the nearest available critical care bed is arranged. The Patient Care Manager (designate) and Operations Supervisors/Bed Allocation Office should be informed of the issue. On the occasion PACU is expected to bedspace the most stable CCU patient Anesthesia on

call is to be notified and consulted. Additional PACU nursing resources should be considered.

8. The Intensivist or Cardiologist who accepts a patient for admission to the CCU will liaise with the CCU Charge Nurse before the patients' arrival in the unit. The Charge Nurse will decide to which bed the patient should be admitted.
9. When the number of patients already in the CCU reaches the maximum that can be safely staffed, the Charge Nurse will inform the Intensivist or Cardiologist who will be responsible for decisions regarding critical care triage management. The Patient Care Manager (designate) and Operations Supervisors/Bed Allocation Office will be informed of the issue.
10. The CCU is responsible for notifying the Operations Supervisors/Bed Allocation Office of any potential or planned transfers at all times as per the Corporate Bed Management Policy. In addition, the CCU Charge Nurse/delegate will contact the Operations Supervisors/Bed Allocation Office at 0800 and 2000 daily to provide a critical care bed status update.
11. In the unlikely event of any dispute over the care of a particular patient, the matter should be resolved in the spirit of ajudication, coordinated by the Section Chief, Critical Care and Director, Emergency and Critical Care Services with escalation to the Department Chief, Emergency and Critical Care, and if not available, the Chief of Staff.

B. Level 2 Critical Care Unit Overview

1. The Bowmanville Level 2 CCU is a closed model of critical care, with the Intensivist or General Internal Medicine (GIM) physician as the Most Responsible Physician (MRP).
2. The MRP is responsible for the day to day management of the patient. Although the Bowmanville CCU is a closed unit by definition, multidisciplinary input is vital to the patient care. The MRP is directly responsible for supporting the care of the CCU patients (e.g. respiratory and cardiovascular therapy) and will act as team leader in consultation with appropriate specialties.
3. The unit will admit both elective and emergency adult patients (age 18 and over) requiring Level 2 supports. Level 2 patients should be expected from the corporate programs and through CritiCall.
4. The assignment of patients to a critical care bed is a joint responsibility of the Critical Care Program clinical team and Operations Supervisors/Bed Allocation Office.
5. Any appropriate Level 2 patient should be referred to the CCU MRP even if the unit is known to be full. Situations change on an hourly basis as does potential bed availability.
6. If a CCU bed is not available for a patient, then that patient is stabilized in a safe area and transfer to an available Level 2 bed is arranged through CritiCall. The Patient Care Manager (designate) and Operations Supervisors/Bed Allocation Office should be informed of the issue. On the occasion PACU is expected to bedspace the most stable CCU patient Anesthesia on call is to be notified and consulted. Additional PACU nursing resources should be considered.
7. The MRP who accepts a patient for admission to the CCU will liaise with the CCU Charge Nurse before the patients' arrival in the unit. The Charge Nurse will decide to which bed the patient should be admitted.
8. When the number of patients already in the CCU reaches the maximum that can be safely staffed, the Charge Nurse will inform the Patient Care Manager/designate who will be responsible for decisions regarding critical care management.
9. The assignment of patients to a critical care bed is a joint responsibility of the clinical team and Operations Supervisors/Bed Allocation Office.
10. The CCU Charge Nurse/delegate will contact the Operations Supervisors/Bed Allocation Office at 0800 and 2000 daily to provide a bed status update. The CCU is responsible for notifying the Operations Supervisors/Bed Allocation Office of any potential or planned transfers at all times as per the Corporate Bed Management Policy.

12. In the unlikely event of any dispute over the care of a particular patient, the matter should be resolved in the spirit of ajudication, coordinated by the Critical Care Section Chief and Director, Emergency and Critical Care Services with escalation to the Department Chief, Emergency and Critical Care, and if not available, the Chief of Staff.

CRITICAL CARE ADMISSION GUIDELINES

A. Clinical Admission Criteria: The following guidelines do not necessarily indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate, including admission to a different level of care.

Clinical Criteria	***Level 2 Services***	***Level 3 Services***
Neurological Conditions	Patients with established, stable stroke who require frequent neurologic assessments or frequent suctioning or turning; Patients with chronic but stable neurologic disorders, such as neuromuscular disorders, who required frequent nursing interventions.	Acute stroke that has been treated with thrombolytic agents; Status epilepticus; Acute change in mental status that is perceived as life-threatening; Neuromuscular weakness with acute or impending respiratory failure; Irreversible brain injury and (pending) brain death for patients who may be potential organ donors.
Clinical Criteria	***Level 2 Services***	***Level 3 Services***
Cardiovascular Conditions	Low-probability myocardial infarction; rule out myocardial infarction; Hemodynamically stable myocardial infarction; Any hemodynamically stable dysrhythmia requiring infusion of an antiarrhythmic agent Any hemodynamically stable patient without evidence of myocardial infarction but requiring temporary or permanent pacemaker; Mild-to-moderate congestive heart failure without shock (Killip Class I, II); Hypertensive urgency without evidence of end-organ damage.	Any medically unstable condition that requires intravenous infusion of a vasoactive agent for more than a short period of time Any condition that might benefit from hemodynamic monitoring Life-threatening arrhythmias Arterial occlusion with limb ischemia at rest Acute coronary syndromes complicated by numerous or severe co-morbid conditions Elective Cardioversion Temporary transvenous or transcutaneous cardiac pacing.
Clinical Criteria	***Level 2 Services***	***Level 3 Services***
Respiratory	Medically stable patients requiring	Patients requiring mechanical

Conditions	short term invasive mechanical ventilation less than 48 hours (note: ventilator/BiPAP care is the direct responsibility of the LB CCU Intensivist/GIM physician). Hemodynamically stable patients with evidence of compromised gas exchange and underlying disease with the potential for worsening respiratory insufficiency who require frequent observation and/external mechanical ventilation (i.e. BiPAP)	ventilation for primary respiratory disease (i.e. pneumonia, asthma, pulmonary fibrosis etc).
Clinical Criteria	***Level 2 Services***	***Level 3 Services***
Electrolyte and Endocrine Conditions	Diabetic ketoacidosis patients requiring constant intravenous infusion of insulin, or frequent injections of regular insulin during the early regulation phase after recovery from diabetes ketoacidosis	Hypovolemia with hemodynamic instability; Life-threatening electrolyte and acid-base abnormalities; Acute renal failure with potential need for dialysis; Any condition that requires hemofiltration or emergent hemodialysis.
Post operative Care	The postoperative patient who, following major surgery, is hemodynamically stable but may require fluid resuscitation and transfusion due to major fluid shifts; The postoperative patient who requires close nurse monitoring during the first 24 hrs; The postoperative patient who requires short term invasive mechanical ventilation less than 48 hours note: ventilator/BiPAP care is the direct responsibility of the LB CCU Intensivist/GIM physician).	Patients who do not meet the usual criteria for CCU admission will receive postoperative care in the CCU if they have any of the following conditions: Any condition or surgical procedure with a high risk of postoperative complication; An intraoperative adverse event; Surgical patients that are mechanically ventilated patients may be transferred directly to the CCU with consultation to the Intensivist and the CCU Charge Nurse and with appropriate resources (i.e. CCU bed and nurse); Patients who have an unprotected airway may be transferred directly to the CCU post- operatively in consultation with the CCU Charge Nurse. The Recovery Room nurse is responsible for remaining with the patient until the airway is stable.
Clinical Criteria	***Level 2 Services***	***Level 3 Services***
Miscellaneous Conditions	Any patient requiring frequent neurologic, pulmonary, or cardiac monitoring for drug ingestion or overdose who is hemodynamically stable; GI bleeding with minimal	Admission to the CCU may be necessary for initiation of specialized techniques that require close supervision, ie Cardioversion, and for patients requiring frequent neurologic, pulmonary, or cardiac

	orthostatic hypotension responsive to fluid therapy; Variceal bleeding without evidence of bright red blood by gastric aspirate and stable vital signs; Acute liver failure with stable vital signs.	monitoring i.e. drug ingestion or overdose

B. Patients <u>not</u> appropriate for Level 2 Critical Care:

- **Patients who have evidence of new organ failure and/or decompensation despite appropriate therapy**
- Patients who require comprehensive critical care; advanced or prolonged respiratory support alone; or basic respiratory support together with the support of at least two organ systems
- Complicated acute myocardial infarction with temporary pacemaker, angina, hemodynamic instability, significant pulmonary edema or significant ventricular dysrhythmias
- Patients requiring invasive hemodynamic monitoring with a pulmonary artery catheter
- Patients in status epilepticus
- Patients from whom aggressive modalities of care are being withheld or have been withdrawn, such that they are receiving only comfort measures

C. Prescheduled Surgical Admission Guidelines

There must be an agreed clear process for scheduling operation dates for patients who are likely to require augmented levels of care postoperatively. The process for scheduling a patient requiring critical care services should:

1. Ensure that target times for the procedures are met including cancer target times;
2. Accurately match the level of critical care service to the patients anticipated need;
3. Take account of the needs and processes of all surgical specialties;
4. Ensure that beds are available to permit surgery to proceed without delay;
5. Minimize the chances of cancellation of surgery on the day;
6. Critical care surgical patients should be booked as far in advance as possible. The surgical bookings office will send the critical care surgical patient list to the CCU three days in advance of the elective procedure, in addition to sending the list daily.
7. The Surgical Patient Care Manager/delegate will contact the Operations Supervisors/Bed Allocation Office prior to the surgical procedure to confirm bed availability.
8. In the event that cancellation of surgical patients is inevitable, because no critical care bed is likely to become available then the Corporate Bed Management Policy (pending) will be followed.

D. Elective Medical Admission Guidelines

Elective Cardioversion procedures will be performed in the Oshawa Campus Critical Care Unit and will be scheduled through Central Registration (refer to Elective Cardioversion Policy - pending). The attending physician (MRP) is responsible for arranging a secondary physician to assist with procedural sedation and airway management (refer to Procedural Sedation by Non-Anesthetist Health Care Provider Policy).

E. CritiCall Admission Guidelines

Level 3 Critical Care

1. All admission referrals must be discussed with the Intensivist who will collaborate with the Operations Supervisors/Bed Allocation Office and CCU Charge Nurse.

2. If the patient requires surgery then the patient must be accepted by the Intensivist **and** the Surgeon before the transfer. If the patient is already post operative, then the patient should be accepted by the Intensivist, who then consults the on call surgeon.
3. New dialysis patients must be accepted by the Intensivist and the on call Nephrologist before the transfer.
4. Admission of the patient should be organized by the referring facility.
5. Microbiological considerations: follow infection control policy and procedures.

Level 2 Critical Care

1. All admission referrals must be discussed with the Bowmanville CCU Intensivist/GIM physician who will collaborate with the LB CCU Charge Nurse and Operations Supervisors/Bed Allocation Office.
2. If the patient requires surgery or is post operative then the patient must be accepted by the Surgeon on call before the transfer.
3. Admission of the patient should be organized by the referring facility.
4. Microbiological considerations: follow infection control policy and procedures.

CRITICAL CARE TRANSFER GUIDELINES

F. Intra-facility Transfer Guidelines

Every effort will be made to manage the safe and efficient transfer of critically ill patients between sites. If a physician wishes to transfer a patient to the Level 3 CCU from another site, the MRP must contact the LHO Intensivist directly. If a physician wishes to transfer a patient to the Bowmanville Level 2 CCU from another site, the MRP must contact the LB Intensivist/General Internist Medical physician on call to transfer care (see related Lakeridge Health Policy: Bowmanville Critical Care Unit Physician Responsibilities of Practice).

1. The decision to transfer a patient to a Level 3 Critical Care Unit should be made by the MRP or consultant providing coverage in their absence (see **Appendix A** – Algorithm for General Internal Medicine (GIM) Consult). This decision should take into account the patient's and family's wishes, the patient's chronic health status, and the likelihood of eventual recovery. Every effort should be made to transfer a stable LHO CCU patient to LHB CCU before calling CritiCall. If no Level 3 bed can be arranged at LHO, CritiCall should be contacted.
2. The MRP, in discussion with the Charge Nurse and the receiving physician, will be responsible for the decision and subsequent order to transfer/discharge the patient.
3. The MRP will provide a comprehensive written/electronic case summary as well as discussion with the appropriate personnel on the receiving service and will arrange appropriate transfer orders.
4. A nurse to nurse transfer of care between the sending and receiving site will occur at the time of the patient's transfer/departure.

G. Inter-facility Transfer Guidelines

When patients are transferred to another institution the critical care program will arrange for or provide:

- Copies of relevant histories, consultations and progress notes
- Copies of diagnostic studies
- Direct contact with the receiving physician regarding transfer
- A nurse to nurse transfer of accountability between the sending and receiving facility at the time of the patient's transfer/departure

DISCHARGE GUIDELINES

Patients in the Critical Care Program will be assessed by the medical and nursing teams on a regular basis to ensure that patients fit for discharge are identified as soon as clinically appropriate. If delays or problems occur with the discharge arrangements, the CCU Charge Nurse must contact the Patient Care Manager (or designate) for assistance. Discharge of critical care patients to appropriate general unit beds should follow the Corporate Bed Management Policy (pending). Discharge of a patient from critical care services is the responsibility of the Intensivist or MRP. Patients will be discharged from the critical care program when:

1. Organ support is no longer required or an appropriate level of organ support can be provided elsewhere.
2. The level of invasive monitoring within the critical care program is no longer required (i.e. patient no longer meets the admission criteria and is now hemodynamically stable).
3. A Level 2 CCU patient's physiological status has deteriorated and active life support is required or highly likely, the patient will be transferred to the Lakeridge Health Level 3 Critical Care Unit (or appropriate facility via CritiCall).
4. A decision to discontinue active therapy is made (i.e. terminally ill patients whose prognosis no longer benefits from critical care services).
5. Inadequate ward staffing is not an indication for continued stay in the critical care program, but where appropriate a planned time for discharge will be accommodated. When a decision to discharge a patient from the critical care services is made, the CCU discharge takes priority for accommodation as per the Corporate Bed Management Policy (pending).
6. It is the responsibility of the critical care MRP to notify the receiving service of a patient's discharge from critical care. A medical and nursing discharge summary will be completed by the critical care team before discharge and will accompany the patient to the inpatient unit. The patient's primary nurse will ensure that a verbal report is given to the receiving nurse using Lakeridge Health Transfer of Accountability guidelines (pending).

QUALITY ASSURANCE

Compliance with these guidelines will be monitored by the Critical Care Council who will receive audit data on a quarterly basis taken from the Critical Care Information System databases. The data will audit transfer times, delayed discharges and out of area transfers.

References

Guidelines on Admission and Discharge for Adult Critical Care Units (1998). *Society of Critical Care Medicine;26*(3).

Inventory of Critical Care Services (2006). *An Analysis of LHIN Level Capacities.*

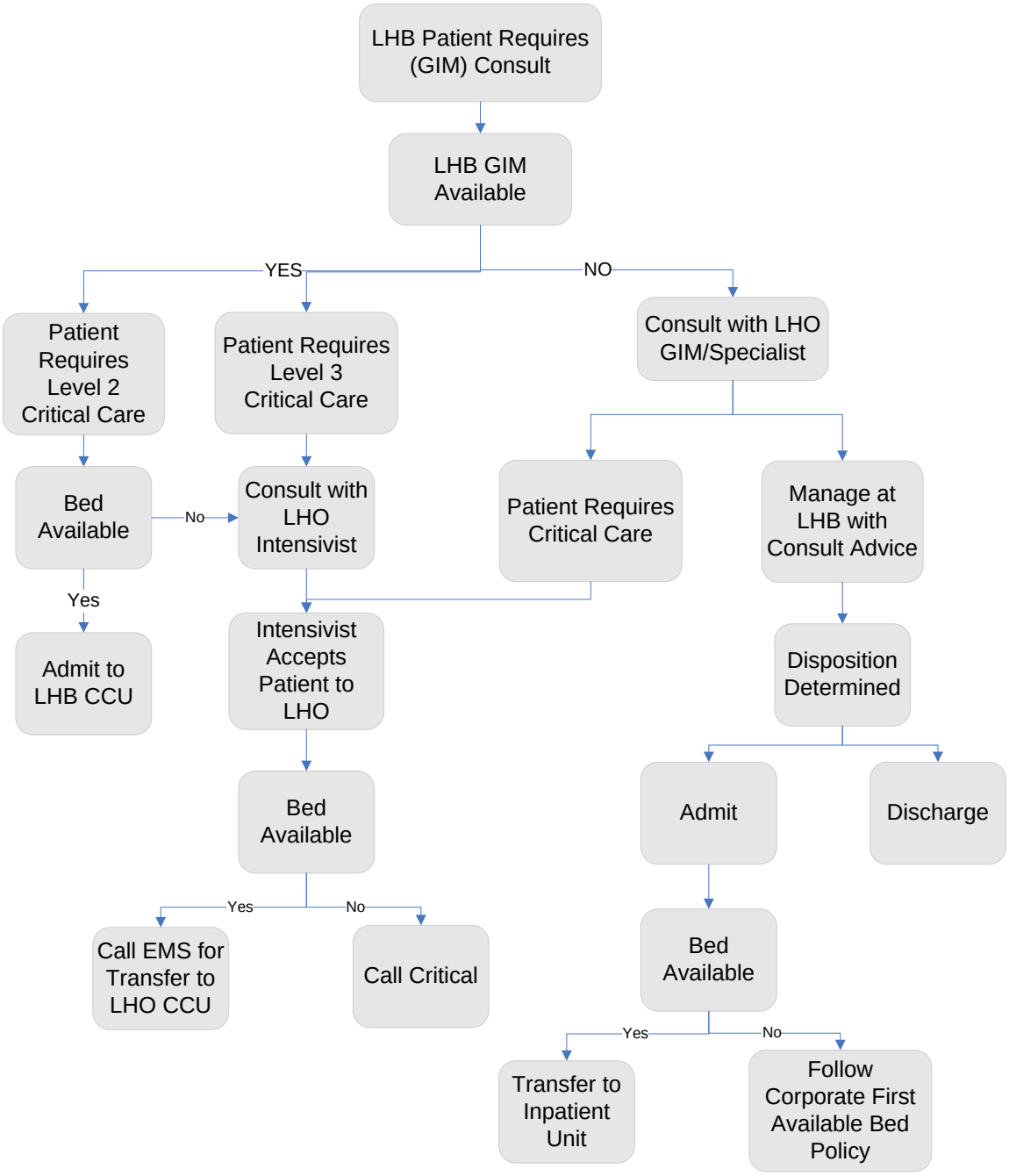
Lakeridge Health Privileged Staff Manual: *The Most Responsible Physician Policy and The Physician On Call Policy* (2004).

Levels of Critical Care for Adult Patients Standards and Guidelines (2002). *Intensive Care Society Standards.*

Ministry of Health (2005). *Final Report of the Ontario Critical Care Steering Committee*

Appendix A Algorithm General Internal Medicine Consult (Bowmanville Campus)

Algorithm for General Internal Medicine (GIM) Consult



For challenges with transfers call the Operation Supervisor/
Bed Allocation Office ext. 3277.
If situation does not get resolved, please call Locating at ext. 3200
and request Administrator on-call be paged.
For Physician issues contact the appropriate Section Chief.
If situation does not get resolved, please contact Chief of Department

Supporting documents:
- Critical Care Admission, Discharge & Transfer Guidelines
- Corporate First Available Bed Policy