

MICU Admission Criteria

January 4, 2008

1.0 PURPOSE:

- 1.1 To delineate the scope of service and criteria for admission to the MICU.
- 1.2 To assure that patients with intensive medical conditions can be cared for in an appropriate environment.
- 1.3 To identify select patients that will most likely benefit from the intensive care environment.

2.0 POLICY:

- 2.1 Definition of Terms: Medical Director, Attending Physician, and Nursing Director shall be interpreted to mean that person or designee.
- 2.2 All members of the Memorial Hermann Hospital Medical Staff may request admission of their patient to the MICU.
 - 2.2.1 Admission to the MICU may require approval of the Medical Director.
 - 2.2.2 Upon admission, all patients meeting MICU criteria will require an intensivist as primary or consulting physician.
 - 2.2.3 Admission to the MICU is limited to those patients with a primary medical diagnosis. Exceptions will be made for in-house patients who require emergent ICU care and for whom an appropriate service specific ICU bed is not available.
 - 2.2.4 The MICU physician team will provide medical care management for all patients designated as teaching status.
 - 2.2.5 The MICU physician team will write admission orders after assessment of a new admission or transfer within one hour.
- 2.3 Admission to the MICU is reserved for those patients with reversible medical conditions who have a reasonable prospect of substantial recovery.
 - 2.3.1 Critically ill, unstable patients in need of intensive treatment and monitoring that cannot be provided outside of the ICU environment. In general, these treatments include ventilator support, and/or continuous vasoactive drug infusions. These patients have no limits placed on the extent of therapy they are to receive.
 - 2.3.2 Patients requiring intensive monitoring and may potentially need immediate intervention or management of an acute illness.
 - 2.3.3 Patients with terminal and irreversible illness who are facing imminent death are not candidates for admission to the MICU.
 - 2.3.4 Patients who could safely receive care in non-ICU environments that are at low risk for active interventions are not candidates for admission to the MICU.
- 2.4 All patients must have clearly defined, measurable goals and a documented interdisciplinary treatment plan that reflects the need for admission and continued stay in the intensive care.
- 2.5 Continued stay in the MICU will depend upon the patient's condition, response to treatment interventions, and available resources.

- 2.6 Decisions regarding triage status will consider patient's continued benefit of the ICU setting and active interventions.
 - 2.6.1 Triage decisions will be made explicitly, and without bias.
 - 2.6.2 Triage decisions may be made without patient or family consent, and can be made despite potential untoward outcomes.
- 2.7 Presence of any one (or more) of the following clinical criteria constitutes appropriate reason(s) for consideration for MICU admission. Exceptions to the admission criteria will be made after discussion with the Medical Director, Nursing Director and Attending Physician. A collaborative process will be used to allocate ICU resources. The Medical Director shall make the final decision regarding admission of patients when resources are limited.

3.0 CLINICAL CRITERIA:

3.1 Respiratory Criteria

- 3.1.1 Acute respiratory failure requiring ventilatory support
- 3.1.2 Pulmonary emboli with hemodynamic instability or for thrombolitics
- 3.1.3 Patients who are demonstrating respiratory deterioration with Dyspnea and or
 - 3.1.3.1 Patients with escalating oxygen demand requiring >50% facemask due to an acute process
 - 3.1.3.1 PCO₂ >55 mm Hg or PaO₂ <50 mm Hg (or)
 - 3.1.3.2 Respiratory rate > 35 breaths per minute (or)
 - 3.1.3.3 Cyanosis (or)
 - 3.1.3.4 PH <7.1 or >7.7
- 3.1.4 Massive hemoptysis
- 3.1.5 Respiratory failure with imminent intubation or unstable airway
- 3.1.6 Status asthmaticus
- 3.1.7 ARDS
- 3.1.8 Acute respiratory arrest
- 3.1.9 Nebulizer/MDI treatments < q2 hours
- 3.1.10 High-flow oxygen blender
- 3.1.11 New Tracheostomy <24 hours
- 3.1.12 Smoke inhalation with carboxyhemoglobin >30% and change in mental status
- 3.1.13

3.2 Hematological Criteria

- 3.2.1 Life threatening gastrointestinal bleeding with Heart Rate >120 and SBP<90 mm HG
- 3.2.2 Active internal/external bleeding with Hgb decreasing > 1gm/h
- 3.2.3 Replacement of blood components requiring use of a Rapid Infusion Pump
- 3.2.4 Active and ongoing blood loss requiring blood component replacement greater than 2 units in a 12 hour period.

3.3 Cardiovascular Criteria

- 3.3.1 Invasive hemodynamic monitoring (Pulmonary Artery Catheter)
- 3.3.2 Complex arrhythmias requiring close monitoring and frequent interventions
- 3.3.3 Acute congestive heart failure with respiratory failure
- 3.3.4 Status post cardiac arrest
- 3.3.5 Hypertensive emergencies requiring continuous monitoring and frequent intervention
- 3.3.6 IV titration of antiarrhythmic or antihypertensive agents
- 3.3.7 Transcutaneous pacemaker or urgent temporary pacemaker insertion
- 3.3.8 Unstable arrhythmia requiring intervention
- 3.3.9 Pulse <40 or >150 beats per minute
- 3.3.10 SBP <80 mm Hg or 20 mmHg below the patient's usual pressure or MAP <60 or DBP >120

3.4 Toxic Ingestion

- 3.4.1 Corrosive ingestion
- 3.4.2 Recurrent Activated charcoal lavage
- 3.4.3 Drug Toxicity monitoring
- 3.4.4 Hemodynamically unstable drug ingestion
- 3.4.5 Drug ingestion with significantly altered mental status and with inadequate airway protection.
- 3.4.6 Seizures following drug ingestion.

3.5 Endocrine

- 3.5.1 DKA requiring an insulin drip
- 3.5.2 Thyroid storm or myxedema coma with hemodynamic instability
- 3.5.3 Hyperosmolar state with coma and/or hemodynamic instability (BS >800 mg/dL and Serum Osmolality >350mOsm/kg)
- 3.5.4 Severe hypercalcemia with altered mental status (Ca <5.0mg/dL or >15.0mg/dL)
- 3.5.5 Hypo or hypernatremia with seizures or altered mental status (Na <120mEq/L or >160mEq/L)
- 3.5.6 Hypo or hyperkalemia with dysrhythmias or muscular weakness (K > 6.0 or < 2.0)
- 3.5.7 Hypophosphatemia with muscular weakness (PO₄ < 1.0 mg/dL)
- 3.5.8 Other endocrine disorders such as adrenal crisis with hemodynamic instability
- 3.5.9 Impending renal failure (Urine output <25mL/h and BUN > 45mg/dL, Creatinine >3.0 mg/dL) with hemodynamic instability or refractory acidosis
- 3.5.9 IV fluid challenge/resuscitation >4 L/12 hours
- 3.5.10 1:1 fluid replacement therapy
- 3.5.11 CRRT
- 3.5.12 Infusion of 3% NaCl
- 3.5.13 Protracted vomiting with severe metabolic and electrolyte abnormalities

3.6 Disease Management Criteria

- 3.6.1 Pancreatitis
- 3.6.2 Severe Sepsis
 - 3.6.2.1 Evidence of known sepsis criteria
 - 3.6.2.2 Serum lactate of greater than or equal to 4 mmol/L
 - 3.6.2.3 More than one organ system dysfunction
- 3.6.3 Shock (septic, cardiogenic)
- 3.6.5 Multi-organ failure
- 3.6.6 Organ Donation
- 3.6.7 Fulminant hepatic failure
- 3.6.8 Environmental injuries (lightning, near drowning, hypo/hyperthermia)
- 3.6.9 New/experimental therapies with potential for complications

3.7 Neurological Criteria

- 3.7.1 Coma: metabolic, toxic, or anoxic
- 3.7.2 Meningitis with altered mental status or respiratory compromise
- 3.7.3 Central nervous system or neuromuscular disorders with deteriorating pulmonary function
- 3.7.4 Brain dead or potentially brain dead patients who are being aggressively managed while determining organ donation status
- 3.7.5 Stuporous/obtunded with progressing deficits
- 3.7.6 Status epilepticus
- 3.7.7 NVS \leq 2 hours
- 3.7.8 Neuromuscular blocking agents
- 3.7.9 Drug induced coma

3.8 Nursing Intervention Criteria

- 3.8.1 Extensive, complex dressing changes
- 3.8.2 Multiple nursing interventions at least every 1-2 hours
- 3.8.3 Vital Sign or Pain Assessment $< q$ 2 hours
- 3.8.4 Procedure or diagnostic studies requiring multiple patient transports
- 3.8.5 Patients requiring behavioral restraint i.e. leather restraints

4.0 PROCEDURE:

- 4.1 Admission to the MICU is initiated when Bed Control Management is notified of the need for an MICU bed.
- 4.2 Bed Control Management will notify the Nursing Director of the admission request.
- 4.3 Nursing Director will assign first available bed.
- 4.4 Nursing Director will assign critical care staff based on patient acuity and nursing competency.
- 4.5 Nursing Director will advise the medical team that a bed assignment has been made.

- 4.6 Responsible physician requesting MICU bed will notify ICU team of intended admission and patient status (includes assessment, diagnosis, problem, plan, interventions, outcomes and all other pertinent data).
- 4.7 Responsible nursing staff will notify ICU nurse of patient status (includes assessment, diagnosis, problem, plan, interventions, outcomes and all other pertinent data)
- 4.8 When clinical resources are limited, the Nursing Director, in collaboration with the Attending Physician and Medical Director, will review resource utilization. The Medical Director is responsible for making the final decision to resolve bed allocation concerns.

APPROVED:

Tammy Campos, RN, MSN
Director of MICU

Bela Patel, M.D.
Medical Director, Medical Intensive Care Unit