

## ICU Management Protocol No. 1

# ADMISSION, DISCHARGE CRITERIA AND TRIAGE

## ADMISSION CRITERIA

The Intensive Care Unit is an expensive resource area and should be reserved for patients with reversible medical conditions with a reasonable prospect of substantial recovery.

Patients with the following conditions are candidates for admission to the General Intensive Care Unit. The following conditions include, but are not limited to:

### A. Respiratory

1. Acute respiratory failure requiring ventilatory support
2. Acute pulmonary embolism with haemodynamic instability
3. Massive haemoptysis
4. Upper airway obstruction

### B. Cardiovascular

1. Shock states
2. Life-threatening dysrhythmias
3. Dissecting aortic aneurysms
4. Hypertensive emergencies
5. Need for continuous invasive monitoring of cardiovascular system (arterial pressure, central venous pressure, cardiac output)

### C. Neurological

1. Severe head trauma
2. Status epilepticus
3. Meningitis with altered mental status or respiratory compromise
4. Acutely altered sensorium with the potential for airway compromise
5. Progressive neuromuscular dysfunction requiring respiratory support and / or cardiovascular monitoring (myasthenia gravis, Guillain-Barre syndrome)
6. Brain dead or potentially brain dead patients who are being aggressively managed while determining organ donation status

**D. Renal**

1. Requirement for acute renal replacement therapies in an unstable patient
2. Acute rhabdomyolysis with renal insufficiency

**E. Endocrine**

1. Diabetic ketoacidosis complicated by haemodynamic instability, altered mental status
2. Severe metabolic acidotic states
3. Thyroid storm or myxedema coma with haemodynamic instability
4. Hyperosmolar state with coma and/or haemodynamic instability
5. Adrenal crises with haemodynamic instability
6. Other severe electrolyte abnormalities, such as:
  - Hypo or hyperkalemia with dysrhythmias or muscular weakness
  - Severe hypo or hypernatremia with seizures, altered mental status
  - Severe hypercalcemia with altered mental status, requiring haemodynamic monitoring

**F. Gastrointestinal**

1. Life threatening gastrointestinal bleeding
2. Acute hepatic failure leading to coma, haemodynamic instability
3. Severe acute pancreatitis

**G Haematology**

1. Severe coagulopathy and/or bleeding diathesis
2. Severe anemia resulting in haemodynamic and/or respiratory compromise
3. Severe complications of sickle cell crisis
4. Haematological malignancies with multi-organ failure

**H. Obstetric**

1. Medical conditions complicating pregnancy
2. Severe pregnancy induced hypertension/**e**clampsia
3. Obstetric haemorrhage
4. Amniotic fluid embolism

## **I Multi-system**

1. Severe sepsis or septic shock
2. Multi-organ dysfunction syndrome
3. Polytrauma
4. Dengue haemorrhagic fever/ dengue shock syndrome
5. Drug overdose with potential acute decompensation of major organ systems
6. Environmental injuries (lightning, near drowning, hypo/hyperthermia)
7. Severe burns

## **J Surgical**

1. High risk patients in the peri-operative period
2. Post-operative patients requiring continuous haemodynamic monitoring/ ventilatory support, usually following:
  - vascular surgery
  - thoracic surgery
  - airway surgery
  - craniofacial surgery
  - major orthopaedic and spine surgery
  - general surgery with major blood loss/ fluid shift
  - neurosurgical procedures

### **Patients who are generally not appropriate for ICU admission**

1. Irreversible brain damage
2. End stage cardiac, respiratory and liver disease with no options for transplant
3. Metastatic cancer unresponsive to chemotherapy and/or radiotherapy
4. Brain dead non-organ donors
5. Patients with non-traumatic coma leading to a persistent vegetative state

## **DISCHARGE CRITERIA**

The status of patients admitted to an ICU should be reviewed continuously to identify patients who may no longer need ICU care. This includes:

- A. When a patient's physiologic status has stabilised and the need for ICU monitoring and care is no longer necessary
- B. When a patient's physiological status has deteriorated and / or become irreversible and active interventions are no longer beneficial, withdrawal of therapy should be carried out in the intensive care unit. Patient should only be discharged to the ward if bed is required.

Discharge will be based on the following criteria:

1. Stable haemodynamic parameters
2. Stable respiratory status (patient extubated with stable arterial blood gases) and airway patency
3. Oxygen requirements not more than 60%
4. Intravenous inotropic/ vasopressor support and vasodilators are no longer necessary. Patients on low dose inotropic support may be discharged earlier if ICU bed is required.
5. Cardiac dysrhythmias are controlled
6. Neurologic stability with control of seizures
7. Patients who require chronic mechanical ventilation (eg motor neuron disease, cervical spine injuries) with any of the acute critical problems reversed or resolved
8. Patients with tracheostomies who no longer require frequent suctioning

## **TRIAGE**

Due to the limited number of ICU beds, triaging may be necessary. The following factors will be taken into consideration in triaging:

- Diagnosis
- Severity of illness
- Age and functional status
- Co-morbid disease
- Physiological reserve
- Prognosis
- Availability of suitable treatment
- Response to treatment to date
- Recent cardiopulmonary arrest
- Anticipated quality of life

### References:

1. Task Force of the American College of Critical Care Medicine, Society of Critical Care Medicine: Guidelines for intensive care unit admission, discharge, and triage. *Crit Care Med* 1999; 27(3):633-638
2. Society of Critical Care Medicine Ethics Committee: Consensus Statement on the Triage of Critically Ill Patients. *JAMA* 1994; 271(15):1200-1203
3. Sprung CL, Geber D, Eidelman LA et al: Evaluation of triage decisions for intensive care admission. *Crit Care Med* 1999; 27(6):1073-1079
4. Truog RD, Brook DW, Cook DJ et al: Rationing in the intensive care unit. *Crit Care Med* 2006; 34(4):958-963