


SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 1
REFERENCE # 01-01-0050	Of: 11

1.0 INTRODUCTION

1.1 As with any other treatment, the decision to admit a patient to the Intensive Care Unit should be based on the concept of potential benefit.

1.2 Patients who are too well to benefit or those with no hope of recovering to an acceptable quality of life usually should not be admitted (see Priority 4 below).

1.3 Age by itself should not be barrier to admission to Intensive Care Unit but it should be recognized that increasing age is associated with diminishing physiological reserve and increased chances of serious co-existing disease.

1.4 It is important to respect patient autonomy and patients should not be admitted to Intensive Care Unit if they have a clearly stated, or written, desire not to receive intensive care.


2.0 ADMISSION PRIORITIZATION

2.1 Priority 1

Critically ill, unstable patients in need of intensive treatment and monitoring that cannot be provided outside of ICU. Usually, these treatments include ventilatory support, continuous vasoactive drug infusions, etc. Priority 1 patients generally have no limits placed on the extent of the therapy they receive. Examples may include post-operative, or acute respiratory failure patients requiring mechanical ventilatory support and shock or hemodynamically unstable patients receiving invasive monitoring and/or vasoactive drugs.

2.2 Priority 2

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 2
REFERENCE # 01-01-0050	Of: 11

These patients require intensive monitoring and potentially may need immediate intervention. No therapeutic limits are generally stipulated for these patients. Examples include patients with chronic co-morbid conditions who develop acute severe medical or surgical illness.


2.3 Priority 3

These are unstable patients who are critically ill but have a reduced likelihood of recovery because of underlying disease or nature of their acute illness. Priority 3 patients may receive intensive treatment to relieve acute illness; however, limits on therapeutic efforts may be set, (such as no intubation or cardiopulmonary resuscitation). Examples include patients with metastatic malignancy complicated by infection, cardiac tamponade or airway obstruction.

2.4 Priority 4

- 2.4.1 These are patients who are generally not appropriate for ICU admission. Admission of these patients should be on an individual basis, under unusual circumstances and at the discretion of the Intensive Care Department Chairman or his alternate. These patients can be placed into the following categories.
- 2.4.2 Little or no anticipated benefit from ICU care based on low risk or active intervention that could not safely be administered in a non-ICU setting (too well to benefit from ICU care). Examples include patients with peripheral vascular surgery, hemodynamically stable, diabetic ketoacidosis, mild congestive heart failure, conscious drug overdose, etc.
- 2.4.3 Patients with terminal and irreversible illness facing imminent death (too sick to benefit from the ICU care). For example, severe irreversible brain damage, irreversible multi-organ system failure,

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 3
REFERENCE # 01-01-0050	Of: 11

metastatic cancer unresponsive to chemotherapy and/or radiation therapy (unless the patient is on a specific treatment protocol), patients with decision making capacity who decline intensive care and/or invasive monitoring and who receive comfort care only, brain dead non-organ donors, patients in a persistent vegetative state, patients who are permanently unconscious, etc.

Riyadh Military Hospital

3.0 ADMISSION BY DIAGNOSTIC CATEGORY

3.1 Diagnosis Model


This model uses specific conditions or diseases to determine appropriateness of ICU admission.

3.1.1 Cardiac System

- Acute myocardial infarction with complications
- Cardiogenic shock
- Complex arrhythmias requiring close monitoring and intervention
- Acute congestive heart failure with respiratory failure and/or requiring hemodynamic support
- Hypertensive emergencies
- Unstable angina, particularly with dysrhythmias, hemodynamic instability, or persistent chest pain
- S/P cardiac arrest
- Cardiac tamponade or constriction with hemodynamic instability
- Dissecting aortic aneurysms
- Complete heart block

3.1.2 Pulmonary System

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 4
REFERENCE # 01-01-0050	Of: 11

- Acute respiratory failure requiring ventilatory support
- Pulmonary emboli with hemodynamic instability
- Patients in an intermediate care unit who are demonstrating respiratory deterioration
- Need for nursing/respiratory care not available in lesser care areas such as floor or intermediate care unit
- Massive hemoptysis
- Respiratory failure with imminent intubation


3.1.3 Neurologic Disorders

- Acute stroke with altered mental status
- Coma: metabolic, toxic, or anoxic
- Intracranial hemorrhage with potential for herniation
- Acute subarachnoid hemorrhage
- Meningitis with altered mental status or respiratory compromise
- Central nervous system or neuromuscular disorders with deteriorating neurologic or pulmonary-function
- Status epilepticus
- Brain dead or potentially brain dead patients who are being aggressively managed while determining organ donation status
- Vasospasm
- Severe head injured patients

3.1.4 Drug Ingestion and Drug Overdose

- Hemodynamically unstable drug ingestion
- Drug ingestion with significantly altered mental status with inadequate airway protection
- Seizures following drug ingestion

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 5
REFERENCE # 01-01-0050	Of: 11

3.1.5 Gastrointestinal Disorders

- Life threatening gastrointestinal bleeding including hypotension, angina, continued bleeding, or with comorbid conditions
- Fulminant hepatic failure
- Severe pancreatitis
- Esophageal perforation with or without mediastinitis


3.1.6 Endocrine

- Diabetic ketoacidosis complicated by hemodynamic instability, altered mental status, respiratory insufficiency, or severe acidosis
- Thyroid storm or myxedema coma with hemodynamic instability
- Hyperosmolar state with coma and/or hemodynamic instability
- Other endocrine problems such as adrenal crises with hemodynamic instability
- Severe hypercalcemia with altered mental status, requiring hemodynamic monitoring
- Hypo or hypernatremia with seizures, altered mental status
- Hypo or hypermagnesemia with hemodynamic compromise or dysrhythmias
- Hypo or hyperkalemia with dysrhythmias or muscular weakness
- Hypophosphatemia with muscular weakness

3.1.7 Surgical

- Post-operative patients requiring hemodynamic monitoring/ventilatory support or extensive nursing care

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 6
REFERENCE # 01-01-0050	Of: 11

3.1.8 **Miscellaneous**

- Septic shock with hemodynamic instability
- Hemodynamic monitoring
- Clinical conditions requiring ICU level nursing care
- Environmental injuries (lightning, near drowning, hypo/hyperthermia)
- New/experimental therapies with potential for complications

Riyadh Military Hospital

3.2 **Objective Parameters Model**

3.2.1 Objective criteria have been requested, expected and reviewed from individual hospitals as part of the Joint Commission on Accreditation of Healthcare Organizations' review process of special care units in the past. While the review process has recently been changed (13), it is understandable that hospitals would continue to incorporate objective parameters as part of the admitting criteria.

3.2.2 The criteria listed, while arrived at by consensus, are by necessity arbitrary. They may be modified based on local circumstances. Data demonstrating improved outcome using specific criteria levels are not available.


3.4 **Vital Signs**

- Pulse < 40 or > 150 beats/minute
- Systolic arterial pressure < 80 mm Hg or 20 mm Hg below the patient's usual pressure
- Mean arterial pressure < 60 mm Hg
- Diastolic arterial pressure > 120 mm Hg
- Respiratory rate > 35 breaths/minute

3.5 **Laboratory Values (Newly Discovered)**

- Serum sodium < 110 mEq/L or > 170 mEq/L

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 7
REFERENCE # 01-01-0050	Of: 11

- Serum potassium < 2.0 mEq/L or > 7.0 mEq/L
- PaO₂ < 50 mm Hg
- pH < 7.1 or > 7.7
- Serum glucose > 800 mg/dl
- Serum calcium > 15 mg/dl
- Toxic level of drug or other chemical substance in a hemodynamically or neurologically compromised patient

3.5 **Radiography/Ultrasonography/Tomography (Newly Discovered)**

- Cerebral vascular hemorrhage, contusion or subarachnoid hemorrhage with altered mental status or focal
- Neurological signs
- Ruptured viscera, bladder, liver, esophageal varices or uterus with hemodynamic instability
- Dissecting aortic aneurysm

3.6 **Electrocardiogram**


- Myocardial infarction with complex arrhythmias, hemodynamic instability or congestive heart failure
- Sustained ventricular tachycardia or ventricular fibrillation
- Complete heart block with hemodynamic instability

3.7 **Physical Findings (Acute Onset)**

- Unequal pupils in an unconscious patient
- Burns covering > 10% BSA
- Anuria
- Airway obstruction
- Coma
- Continuous seizures
- Cyanosis
- Cardiac tamponade

4.0 DISCHARGE CRITERIA

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 8
REFERENCE # 01-01-0050	Of: 11

The status of patients admitted to an ICU should be revised continuously to identify patients who may no longer need ICU care.

- 4.1 When a patient's physiological status is stabilized and the need for ICU monitoring and care is no longer necessary.
- 4.2 When a patient's physiological status has deteriorated and active interventions are no longer planned, discharge to a lower level of care may be appropriate.
- 4.3 Discharge criteria from the ICU should be similar to the admitting criteria for the next level of care.

5.0 TRIAGE


Under ideal conditions, patients will be admitted or discharged strictly on their potential to benefit from ICU care. Unfortunately, on occasions the number of potential ICU patients exceeds the available beds. Method of prioritizing or triaging patients may follow the guidelines given for prioritization for admissions. The ICU Consultant-on-call in conjunction with the MRP will be the only people to be responsible to carry out triage.

6.0 OVERFLOW

When the ICU is full and a bed is needed, the ICU Chairman or the Consultant-on-call should liaise with the other critical care areas to determine their bed status and the possibility of "borrowing a bed". Priorities should be based on patient need and if necessary, may involve any of the other critical care areas in the hospital.

7.0 TYPES OF ADMISSION

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 9
REFERENCE # 01-01-0050	Of: 11

7.1 EMERGENCY ADMISSIONS

7.1.1 Patients from the Emergency Department or the wards who are considered by the MRP to require intensive care will be seen by one of the intensivists on Duty in the Emergency Department or the ward where they will be evaluated to determine their need for admission to the Intensive Care Unit. No patient will gain automatic admission to the ICU, without being assessed in this manner.

7.1.2 Where possible, the “Code” status of all patients assessed should be documented.

7.1.3 Early referral to the ICU team is encouraged to allow for better assessment and earlier institution of therapy.

7.2 POST OPERATIVE ADMISSIONS


7.2.1 Elective Surgery

Certain patients having major elective procedures benefit from admission to the ICU post-operatively. These patients should have a bed booked in the ICU pre-operatively and their post-operative care discussed, where possible, with a member of the ICU staff. The ICU team must make every effort to prevent cancellation of such surgical cases.

7.2.2 Emergency Surgery

Where an ICU bed is required for an emergency case, the ICU should be notified as soon as possible (preferably by the attending Anesthetist or Surgeon) so that a bed is available and the patient can be transferred

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 10
REFERENCE # 01-01-0050	Of: 11

directly from the OR to the ICU. The hand-over of care by the attending Anesthetist/Surgeon to the intensivists on Duty should occur in the ICU.

7.3 ADMISSIONS FROM OTHER HOSPITALS

Eligible patients from other hospitals who may benefit from intensive care in the KFNGH may be admitted directly to the ICU following consultation with the MRP from the receiving service, i.e., Internal Medicine, Surgery, or other specialty and the Intensivists on Duty and Hospital Admission Officers. If there is doubt about suitability for ICU care, they should be assessed by the MRP and the ICU team in the Emergency Department and a decision made there about correct placement.


Transfers must occur within 24 hours of acceptance. If there is a delay, transfer must be reorganized and the status of the patients reassessed and updated prior to reacceptance.

7.3.1 Mechanically Ventilated Patients

Ventilated patients or patients who are hemodynamically unstable, may be admitted directly to the ICU, but the details about the patient and care given must be available on admission to the ICU so that appropriate investigations and therapy can be commenced without delay. Some such patients may benefit from a rapid assessment in the ER prior to transfer to the ICU.

7.3.2 Non-Ventilated Patients

Director of Department	Director of Medical Administration	Program Director

SUBJECT: Admission Criteria for ICU	
DEPARTMENT: Intensive Care Services	Page: 11
REFERENCE # 01-01-0050	Of: 11

Patients from other hospitals who are not being ventilated, or who are hemodynamically stable will be accepted in consultation with the MRP. These patients should be assessed in the Emergency Department and admitted either to the ICU or a hospital ward – depending on their condition. A bed must be available in both the ICU and ward prior to transfer.

Riyadh Military Hospital

Intensive Care Services

copyright 2009

Director of Department	Director of Medical Administration	Program Director