

GOALS AND OBJECTIVES FOR CRITICAL CARE MEDICINE

Critical Care Medicine

Overview:

Critical care medicine encompasses the diagnosis and treatment of a wide range of clinical problems representing the extreme of human disease. Critically ill patients require intensive care by a coordinated team, including a general internist, subspecialists, and allied health professional staff. Most often, the general internist provides care in coordination with other physicians, especially those trained in critical care. However, in some settings, the general internist may be the primary provider of care and may also serve as a consultant for critically ill patients on surgical services. Therefore, the general internist must have command of a broad range of conditions common among critically ill patients and must be familiar with the technologic procedures and devices used in the intensive care setting. The care of critically ill patients raises many complicated ethical and social issues, and the general internist must be competent in such areas as end-of-life decisions, advance directives, estimating prognosis, and counseling of patients and their families.

Clinical Training and Education in Critical Care Medicine

Residents in internal medicine, under the supervision of Pulmonary and Critical Care Medicine fellows and faculty specialists, participate in the care of inpatients in monitored settings. Residents in internal medicine participate in the Pulmonary and Critical Care Medicine service's clinical conferences and six weeks are devoted each year to core didactic instruction in Pulmonary and Critical Care Medicine topics.

Common Clinical Presentations:

- Acute abdominal pain
- Acute chest pain
- Acute intoxication
- Acute liver failure
- Acute renal failure
- Altered mental status, coma
- Hypotension, shock
- Life-threatening arrhythmia
- Massive gastrointestinal bleeding
- Massive hemoptysis
- Respiratory distress or failure
- Severe hypertension
- Status epilepticus

SITE-SPECIFIC CLINICAL COMPETENCIES IN INTERNAL MEDICINE

Clinical Training and Education in Critical Care Medicine (Cont'd):

Procedure Skills:

- Advanced cardiac life support
- Arterial puncture for arterial blood gas
- Bedside pulmonary function
- Mechanical ventilation (basic)
- Placement of arterial and central venous lines
- Placement of nasogastric tube
- Insertion of temporary pacemaker (optional)
- Placement of endotracheal tube (optional)
- Placement of pulmonary artery catheter (optional)

Primary Interpretation of Tests:

- Hemodynamic monitoring
- Pulse oximetry
- Telemetry monitoring

Ordering and Understanding Tests:

- Bronchoscopy
- Computed tomography, magnetic resonance imaging of chest, abdomen
- Coronary angiography
- Echocardiography
- Electroencephalography

Clinical Conditions:

Altitude illness

Burns, smoke inhalation

Cardiac

- Acute myocardial infarction
- Acute pericarditis
- Aortic dissection
- Cardiopulmonary arrest
- Congestive heart failure
- Dysrhythmias
- Hypertensive crisis
- Shock
- Acute valvular disruption
- Myocardial contusion

SITE-SPECIFIC CLINICAL COMPETENCIES IN INTERNAL MEDICINE

Clinical Training and Education in Critical Care Medicine (Cont'd):

Decompression illness, air embolism

Near drowning

Drug or alcohol overdose

Drug or alcohol withdrawal

Endocrine

- Diabetic ketoacidosis, hyperosmolar nonketotic diabetic coma
- Adrenal insufficiency
- Thyroid storm, myxedema coma

Gastrointestinal

- Acute pancreatitis
- Gastrointestinal bleeding
- Hepatic failure

SITE-SPECIFIC CLINICAL COMPETENCIES IN INTERNAL MEDICINE

Clinical Training and Education in Critical Care Medicine (Cont'd):

Hematologic

- Bleeding disorder
- Disseminated intravascular coagulation

Hypothermia, hyperthermia

Infectious

- Nosocomial infection
- Septic shock

Management of critical illness

- Multi-organ failure
- Prognosis/outcomes
- Withdrawal of support

Neurologic

- Coma
- Delirium
- Meningitis
- Status epilepticus
- Stroke
- Acute spinal cord injury
- Head trauma
- Neuromuscular disease with respiratory failure

Nutrition

Pulmonary

- Airway management (intubation, tracheostomy)
- Status asthmaticus
- Upper airway obstruction

Renal

- Acid-base disturbances
- Acute renal failure
- Electrolyte imbalance

SITE-SPECIFIC CLINICAL COMPETENCIES IN INTERNAL MEDICINE

Clinical Training and Education in Critical Care Medicine (Cont'd):

Respiratory

- Chronic obstructive pulmonary disease (exacerbated)
- Hypercapnia
- Hypoxia
- Pneumonia
- Pneumothorax
- Pulmonary embolism
- Tuberculosis
- Adult respiratory distress syndrome
- Hemoptysis
- Chest trauma