Critical Care Rotation
Goals and Objectives

Department of Anesthesiology and Perioperative Medicine
AU Medical College of Georgia

Didactic Components
The teaching curriculum for CA-1, CA-2, and CA-3 residents includes the following areas:

- Principles of airway management
- Principles of resuscitation
- Monitoring of the critically ill patient
- Assessment of the seriously ill patient and general ICU care
- Cardiovascular, respiratory, renal, hepatic, and CNS physiology, pathophysiology and therapy
- Management of infections and hematologic disorders in the critically ill
- Critical care pharmacology
- Assessment and Management of pain, anxiety and delirium in the critically ill
- Use of antimicrobials and interventions to minimize infections in the ICU
- Metabolic, electrolytes, and endocrine emergencies in the critically ill
- Principles of mechanical ventilation
- Acute lung injury
- Discontinuation of mechanical ventilation
- Shock, diagnosis, and management
- Sepsis and the systemic inflammatory response syndrome
- Nutritional support
- Transfusion medicine and hematological disorder
- Imaging in the Intensive Care Unit
- Acute abdominal conditions
- Acute renal failure
- Hepatic failure
- Care of the acutely ill obstetric patient
- Ethical aspects of critical care
- Post-operative care of cardiac surgical patients

Clinical Components
Residents will gain experience in the following areas:

- Difficult airway assessment and management
- Supplemental oxygen administration techniques
- Invasive and non-Invasive ventilatory support
- Techniques to assess intra-abdominal pressure
- Interpretation of ABGs and pulmonary function
- Placement of arterial central venous and pulmonary artery catheter
- Placement of enteral feeding tubes
- Techniques for conditions requiring thoracocentesis and/or tube thoracostomy
- Fiberoptic laryngotracehobroncoscopy
- Pharmacological support of circulation
- Use of ultrasound devices
• Cardiopulmonary resuscitation

**Practice-Based Learning and Improvement**

Residents must be able to understand the team approach of managing critically ill patients, must be able to investigate and evaluate their patient care practices, seek, appraise, and apply scientific evidence to improve the quality of care of their patients

• Ability to use educational resources
• Ability to interact with other disciplines and ask for assistance when needed
• Be able to recognize errors and be responsive to constructive criticism
• Interpersonal and Communication Skills/Professionalism/System Based Practice:
  • Ability to coordinate effective and safe care in the Intensive Care Unit
  • Develops interpersonal and communication skills that allows optimal interactions with patients, family, and other members of the health care team
• Ability to coordinate patient care with other consultants and health care providers
• Demonstrates professional behavior, conducting professional responsibilities, adherence to ethical principles and respect to others

**Didactic Component**

• Medical informatics in the ICU
• Research in the critical care medicine
• End-of-life care
• Administration and management principles
• Cost-effective care
• Legal aspects of critical care medicine

**Procedures**

• Invasive lines including arterial and central lines
• Advance modes of mechanical ventilation (IRV, HFO, APRV, etc.)
• Mechanical support of circulation (IABP, VAD, ECMO)
• ICU applications of transesophageal echocardiography (TEE) and transthoracic echocardiography (TTE)
• Percutaneous tracheostomy
• Diagnostic bronchoscopy
• CRRT and renal dialysis catheter
• Transvenous pacemakers
• Cardioversion
• Lung and vascular ultrasound

**Methods of Evaluation**

• Global evaluation. 360-degree evaluation by members of the multidisciplinary ICU team (nurses, respiratory therapist, pharmacist, attendings, medical students & residents)
• Daily performance assessment during multidisciplinary rounds
• Periodic notes and case review
• Written Exam: The exam at the end of rotation will consist of 40 multiple choice questions and require more than 70% to pass.

**Educational Materials and Suggested Reading**

• Multidisciplinary teaching rounds are conducted daily
• Educational presentations are provided once a week
Lecture Topics

- Mechanical ventilation
- Discontinuation of mechanical ventilation
- Assessment and management of the difficult airway
- Pain, agitation, and delirium management
- Acid-base interpretation
- Neurological intensive care principles
- Post-operative care of the cardiothoracic surgical patient
- Nutritional support
- Coagulopathy diagnosis and management
- SIRS and multisystem organ dysfunction
- Shock, diagnosis, and management
- Hemodynamic invasive monitoring
- Antibiotics in the ICU
- Hepatic and renal failure
- Medical ethics

The cardiothoracic/critical care medicine section of the anesthesiology department provides the FCCS course sponsored by the Society of Critical Care Medicine two to three times per year. The residents are strongly encouraged to complete the course before graduation.

In addition to the Critical Care manual, Critical Care standard textbooks and journals are available in the department library.

All the educational materials, including the manual, orientation, forum, guidelines, protocols, and lectures, are also available online.

Critical care guidelines from Society of Critical Care Medicine:

Author: