Y34 Surgical Critical Care (SICU)
Course ID: MED 797AQ/997AQ
Discipline: Surgery
Prerequisites: Year 4 standing (exception Year 3 standing at St. John)
Available Sites: Detroit (Ascension St. John Hospital), Saginaw
Duration: 4 weeks

Description
The goal of the Surgical Critical Care Elective is to build on the medical student’s overall general surgical knowledge and clinical experience and provide more concentrated exposure in diseases and procedures/techniques related to management of critically ill surgical patients. Learning opportunities will include exposure to critically ill and injured patients with sepsis, severe sepsis, septic shock, other shock states (hypovolemic, distributive, cardiogenic, neurogenic), traumatic injuries, acute respiratory failure, acute kidney injury, acute respiratory distress syndrome, critical endocrine disorders, fluid and electrolytes disorders, hematologic disorders (hypo- and hyper-coagulable states, DIC, HIT, anemia, transfusion of blood products) and others.

Key Objectives

- Demonstrate and apply significant knowledge in the following critical care topical areas:
  - Cardiothoracic-respiratory resuscitation
  - Physiology, pathophysiology, diagnosis, and therapy of disorders of the cardiovascular,
  - Metabolic, nutritional, and endocrine effects of critical illness
  - Hematologic and coagulation disorders
  - Critical obstetric and gynecologic disorders
  - Trauma, thermal, electrical, radiation, inhalation and immersion injuries
  - Monitoring and medical instrumentation
  - Critical surgical conditions common in surgical specialties
  - Pharmacokinetics and dynamics of drug metabolism and excretion in critical illness
  - Ethical and legal aspects of surgical critical care
  - Principles and techniques of administration and management

- Demonstrate the acquisition of knowledge about evolving and established biomedical, clinical and cognate (e.g. epidemiological and social-behavioral) sciences, and apply such knowledge to patient care. The care of the critically ill patient necessitates a systematic approach to medical knowledge acquisition. Medical students will be expected to understand the relevant physiology, pathophysiology, epidemiology, and where appropriate, microbiology, of the various organ systems involved in critical illness. The medical student is expected to:
  - Demonstrate effective decision making based on adequate knowledge
  - Effectively correlate basic sciences knowledge with clinical scenarios
  - Demonstrate self-regulated learning practices for additional knowledge
  - Appropriately use learning resources
  - Explain pharmacology and physiology as it pertains to surgical critical care
  - Read the current literature
  - Demonstrate investigatory and analytical thinking approaches to clinical situations
• Interpret laboratory tests and data (including radiologic studies) accurately and consistently
• Explain pharmacokinetics and pharmacodynamics in the critically ill patient
• Demonstrate effective non-technical skills to provide optimal care of critically ill and injured patients
• Gather essential and accurate information about their patients in the ICU
• Make informed decisions about diagnostic and therapeutic interventions based on patient information and preferences, up-to-date scientific evidence and clinical judgment
• Develop and carry out patient management plans
• Maintain professional and cordial relationships with patients, staff, co-workers and faculty
• Listen and to accept constructive criticism
• Communicate effectively with and demonstrate caring and respectful behaviors when interacting with ICU patients and their families

Assessment Method
College of Medicine standard elective assessment will be completed by supervising faculty at conclusion of elective clerkship.

Scheduling Information
Interested students should contact CMU College of Medicine Department of Distributed Clinical Education at CMEDDCE@cmich.edu.