Chapter: Multisystem Trauma
Learning Objectives
1. Justify the role of the pharmacist in optimizing pharmacotherapy for acutely ill patients with multisystem trauma.
2. Design an acute resuscitation plan—including appropriate coagulopathy management—based on the current literature and guideline recommendations.
3. Assess differences in pharmacotherapy for patients with multisystem trauma based on specific organ injuries.
4. Develop pharmacotherapy to address challenges in the prevention and management of trauma-related complications.

Chapter: Acute Management of Burn Injury
Learning Objectives
1. Evaluate patient- and injury-specific characteristics that correlate with a recommendation for referral to an ABA-verified burn center on the basis of potentially increased morbidity and mortality.
2. Develop a fluid resuscitation plan for adult and pediatric patients with severe burn injury, considering the pathophysiology, the risk-benefit of crystalloid- versus colloid-based resuscitation strategies, and the risks of under- and over-resuscitation.
3. Develop a comprehensive plan for the pharmacologic management of inhalation injury, including when to consider carbon monoxide and cyanide exposure and associated treatments.
4. Assess the efficacy and safety of pharmacologic options to modulate the hypermetabolic response related to burn injury, including propranolol and oxandrolone in pediatric and adult patients.
5. Evaluate key differences in identifying and managing sepsis and septic shock in patients with severe burn injury.
6. Justify use of the optimal type of graft and skin substitute for burn wounds, as well as the best topical wound care product for infection prophylaxis.

Chapter: Spinal Cord Injuries
Learning Objectives
1. Evaluate patients with spinal cord injury by using current guidelines of care.
2. Distinguish between acute and chronic care of a patient with spinal cord injury.
3. Apply current medication recommendations for the treatment of spinal cord injury.
4. Evaluate the safety and efficacy of neuroprotective agents for spinal cord injury.
5. Design a treatment plan for both acute and chronic management of a patient with spinal cord injury.

**Chapter: Cardiothoracic Surgery**

**Learning Objectives**
1. Evaluate different cardiothoracic surgical procedures and the pharmacist’s role in each.
2. Design a treatment plan for acute heart failure.
3. Design a treatment plan for postoperative atrial fibrillation.
4. Develop a treatment plan for postoperative coagulopathy.
5. Develop an anticoagulation strategy for patients requiring mechanical circulatory support.

**Surgical Patients in the ICU III (Module 3) – Credit Hours: 6.5**

**Chapter: Acute Abdomen and Abdominal Sepsis**

**Learning Objectives**
1. Assess causes of acute abdomen and abdominal compartment syndrome in critically ill patients.
2. Distinguish between methods of temporary abdominal closure for the open abdomen and assess relevant pharmacotherapeutic considerations.
3. Design pharmacotherapy for the prevention of postoperative intra-abdominal infection and pancreatic fistula.
4. Design pharmacotherapy for intra-abdominal infection and sepsis in critically ill patients.

**Chapter: Acute Pain Management in the Surgical Patient**

**Learning Objectives**
1. Evaluate the impact of pain in the ICU and how multimodal pain control affects postoperative opioid use.
2. Assess opioid receptor pharmacology and its role in acute pain management.
3. Justify the role of nonopioid therapy in acute pain management.
4. Evaluate the role of sodium channel–blocking agents in acute pain management.
5. Develop a multimodal acute pain management regimen specific to pertinent patient history.

**Chapter: Nutrition Controversies**

**Learning Objectives**
1. Design a specialized nutrition support regimen for surgical ICU patients on the basis of clinical considerations such as demographics and nutrition risk.
2. Distinguish permissive underfeeding from trophic feeding strategies, and identify surgical ICU patients who may benefit from these feeding strategies.
3. Justify the role of probiotics in the surgical ICU patient.
4. Develop therapeutic plans regarding probiotic therapy in surgical ICU patients.
Surgical Patients in the ICU IV (Module 4) – Credit Hours: 4.5

Chapter: Interactive Case: Solid Organ Transplantation
Learning Objectives
1. Design a pharmacologic prophylactic and treatment plan for posttransplant complications.
2. Evaluate pharmacologic and nonpharmacologic causes of acute kidney injury in abdominal transplant recipients.
3. Develop a plan for treating and preventing acute allograft rejection in the ICU patient.

Chapter: Interactive Case: Anesthesia and the Critically Ill Patient
Learning Objectives
1. Demonstrate knowledge of basic characteristics of and monitoring techniques for general anesthesia.
2. Evaluate pharmacology of intravenous anesthetics and the properties of individual agents.
3. Evaluate pharmacology of inhaled anesthetics and the properties of individual agents.
4. Apply the pharmacology of neuromuscular blocking agents to reversal of anesthesia.