Infection Critical Care I (Module 1) – Credit Hours: 4.5

Chapter: Sepsis Management
Learning Objectives
1. Assess the updates in guideline definitions and recommendations for managing sepsis and/or septic shock.
2. Evaluate recent literature regarding the management of sepsis and septic shock.
3. Design an evidence-based treatment regimen for a patient with sepsis and/or septic shock.
4. Justify pharmacist involvement in preventing, recognizing, and managing sepsis and/or septic shock.

Chapter: CNS Infections
Learning Objectives
1. Distinguish between markers of viral and bacterial CNS infections.
2. Design intrathecal and intraventricular treatment regimens for CNS infections.
4. Develop regimens for surgical prophylaxis to prevent CNS infections.

Infection Critical Care II (Module 2) – Credit Hours: 7.0

Chapter: Microbiome Dysbiosis
Learning Objectives
1. Classify the therapeutic means for modulation of the microbiome in critical illness and its application.
2. Assess the benefit-risk for use of probiotic therapy in critically ill patients.

Chapter: HIV-1 Infection in the Critically Ill Patient
Learning Objectives
1. Assess patients with HIV/AIDS for the most common reasons for ICU admission in the current era of antiretroviral therapy (ART).
2. Distinguish risk-benefit in continuing, holding, or initiating ART in the setting of critical illness.
3. Design preferred and alternative therapies to manage opportunistic infections in the ICU.
4. Recognize and develop therapeutic strategies to manage ART-related toxicities and potential drug interactions in critically ill patients with HIV/AIDS.

Chapter: Rapid Diagnostic Testing and Biomarkers

Learning Objectives
1. Distinguish between the various available rapid diagnostic tests (RDTs) for bacterial, viral, and fungal infections.
2. Evaluate the evidence surrounding the use of RDTs in critically ill patients.
3. Apply RDTs in the management of infections in critically ill patients.
4. Analyze the recent clinical evidence surrounding the use of biomarkers for managing infections in critically ill patients.
5. Justify the role of antimicrobial stewardship in the application of RDT and biomarker results.

Infection Critical Care III (Module 3) – Credit Hours: 5.0

Chapter: Interactive Case: Antibiotic Dosing Issues

Learning Objectives
1. Distinguish risk factors for augmented renal clearance (ARC) in the critically ill patient, and describe the relative incidence of ARC among different ICU populations.
2. Evaluate the usefulness of different ARC scoring systems and glomerular filtration rate-estimating equations in patients with ARC.
3. Distinguish patients who may benefit from continuous infusion β-lactam therapy.
4. Given a patient receiving continuous renal replacement therapy, develop an antimicrobial dosing regimen that provides adequate and safe antibiotic exposure.

Chapter: Interactive Case: Antimicrobial Stewardship in Critical Care

Learning Objectives
1. Apply principles of antimicrobial stewardship to develop interventions that optimize antimicrobial use in critically ill patients.
2. Evaluate various laboratory techniques and rapid diagnostic technologies as they relate to patient care and outcomes.
3. Evaluate emerging antimicrobial stewardship strategies in the ICU setting.
4. Assess the role of new antibiotics and their relative advantages and disadvantages in the ICU setting.