Complex Case: Post-Cardiac Surgery
ACPE Number: 0204-0000-15-959-L01-P
Application-based: 1.5 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex post-cardiac surgery patient to include pain, agitation and delirium, glucose management, and heparin-induced thrombocytopenia.
2. Examine the impact of critical illness on pre-existing conditions (e.g., endocrine disorders, cardiovascular diseases).
3. Identify needs assessment techniques (e.g., medication use survey,) utilized in critical care settings.
4. Recommend quality assurance and process improvement methods relevant to critical care.
5. Assess the relationship between institutional guideline development and evidence-based critical care literature.

Complex Case: Acute Coronary Syndrome
ACPE Number: 0204-0000-15-958-L01-P
Application-based: 1.5 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex critical care patient with acute coronary syndrome and renal dysfunction.
2. Adjust treatment and monitoring plans related to alterations of pharmacodynamic and pharmacokinetics in the critically ill.
3. Select appropriate devices required for treatment and monitoring of a critical care patient.
4. Determine appropriate fluid, electrolyte and acid/base management and monitoring based on patient-specific factors.
Learning Objectives

Complex Case: Hyperglycemic Emergency and Community-Acquired Pneumonia
ACPE Number: 0204-0000-15-951-L01-P
Application-based: 1.5 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex critical care patient with hyperglycemic emergency and community-acquired pneumonia.
2. Select appropriate routes and methods of administration for medications in critically ill patients.
3. Determine appropriate fluid, electrolyte and acid/base management and monitoring based on patient-specific factors.
4. Recommend appropriate use of agents for acute volume resuscitation and hemostasis.
5. Identify medication safety issues and strategies pertinent to patients requiring care in the ICU.
6. Identify appropriate nutrition support in the critically ill patient.

Research Design, Evidence-Based Medicine and Statistical Analysis
ACPE Number: 0204-0000-15-940-L04-P
Application-based: 2.0 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
1. Interpret biomedical literature with regard to study design methodology, statistical analysis, and significance and applicability of reported data and conclusions.
2. Summarize key points from the most current pharmacy practice literature.
3. Explain the use of evidence-based treatment guidelines and protocols.

Complex Case: Warfarin-associated Intracranial Hemorrhage
ACPE Number: 0204-0000-15-955-L01-P
Application-based: 1.5 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex critical care patient with oral anticoagulant (OAC)-associated intracranial hemorrhage (ICH).
2. Identify adverse drug events common in critical care.
3. Select appropriate neurologic monitoring techniques.
4. Recommend appropriate use of agents for acute volume resuscitation and hemostasis (e.g., blood products, hemostatic agents).
5. Examine the impact of critical illness on preexisting conditions (e.g., cardiovascular diseases).
Complex Case: Pneumonia

ACPE Number: 0204-0000-15-953-L01-P
Application-based: 1.5 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex critical care patient with multiple conditions, including pneumonia and acute respiratory distress syndrome (ARDS).
2. Identify drug interactions and adverse drug events common in critical care and methods to document.
3. Determine factors that enhance the education and training of critical care pharmacists available in published documents from relevant professional societies (e.g., ASHP, ACCP, SCCM).

Practice Administration and Development
ACPE Number: 0204-0000-15-957-L04-P
Application-based: 2.0 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
1. Describe the application and integration of evidence-based critical care literature into institutional guidelines and processes.
2. Develop a plan to monitor and evaluate compliance with, and impact of, policies and guidelines (e.g., institutional, evidence based).
3. Select quality assurance methods and improvement activities, including needs assessment techniques, aimed at enhancing the safety and effectiveness of medication-use processes in the critical care area.
4. Examine the evidence-based literature that supports the value of critical care pharmacy.
5. Identify metrics for evaluating the quality of critical care pharmacy services (e.g., lengths of ICU stay, mortality, cost-effectiveness).
6. Evaluate regulatory/IRB requirements relative to conducting critical care research.
Complex Case: Shock
ACPE Number: 0204-0000-15-954-L01-P
Application-based: 1.5 credit hours

Objectives:
At the end of the presentation, the pharmacist should be able to:
  1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex critical care patient with an intra-abdominal infection, sepsis/SIRS, and shock.
  2. Select appropriate routes of administration for medications in critically ill patients.
  3. Determine appropriate use of agents for acute volume resuscitation and hemostasis (e.g., crystalloids, colloids).

Complex Case: Oncologic Emergencies: Febrile Neutropenia and Tumor Lysis Syndrome
ACPE Number: 0204-0000-15-952-L01-P
Application-based: 1.5 credit hours

Objectives:
At the conclusion of the session the participant should be able:
  1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex critical care patient with febrile neutropenia and tumor lysis syndrome.
  2. Determine appropriate fluid, electrolyte and acid/base management and monitoring based on patient-specific factors.
  3. Examine the impact of critical illness on pre-existing conditions (e.g., cancer).

Complex Case: GI Bleeding
ACPE Number: 0204-0000-15-956-L01-P
Application-based: 1.5 credit hours

Objectives:
At the conclusion of the session the participant should be able:
  1. Correctly answer case-based questions about appropriate treatment and monitoring of a complex critical care patient with gastrointestinal bleeding, alcohol withdrawal, refeeding syndrome, hepatorenal syndrome, and cirrhosis.
  2. Identify appropriate nutrition support in the critically ill patient.
  3. Adjust treatment and monitoring plans related to alterations of pharmacodynamics and pharmacokinetics in the critically ill.
  4. Select appropriate routes of administration for medications in critically ill patients.
  5. Determine appropriate use of agents for acute volume resuscitation and hemostasis (e.g., blood products, hemostatic agents).