**CCSAP 2018 Book 3 (Fluids and Nutrition/GI and Liver Disorders)**
**Total Available Hours:** 11.0
**BCCCP test deadline:** 11:59 p.m. (Central) on March 15, 2019.
**ACPE test deadline:** 11:59 p.m. (Central) on September 15, 2021.

**Fluids and Nutrition I (Module 1) – Credit Hours: 5.5**

**Chapter: Fluid and Hyponatremia Management**
**Learning Objectives**

1. Evaluate intravascular volume status and administer intravenous fluids (IVFs) to a critically ill patient.
2. Develop a plan to administer the appropriate IVF choice in a critically ill patient according to evidence from the literature.
3. Justify the use of peripheral administration of hypertonic saline and vasopressin antagonists to correct hyponatremia in a critically ill patient.
4. Demonstrate the role of desmopressin in preventing sodium overcorrection when treating hyponatremia.

**Chapter: Current Topics in Critical Care Nutrition**
**Learning Objectives**

1. Evaluate patients for nutrition risk and for potential benefit from nutrition support therapy (NST), trophic enteral nutrition, or supplemental parenteral nutrition.
2. Apply knowledge of the physiology of the inflammatory response and its metabolic effects to NST.
3. Using patient demographics and nutrition risk, estimate caloric and protein requirements.
4. Identify the risk factors for metabolic disorders from NST, and devise a plan to minimize the incidence of these disorders.

**Chapter: Nutrition Support Services**
**Learning Objectives**

1. Develop a plan for expanding the pharmacist's role in nutrition support.
2. Justify the need for training in nutrition support for the critical care pharmacist.
3. Distinguish opportunities for standardizing nutrition support-related care.
4. Evaluate the resources available for the critical care pharmacist in nutrition support.
5. Apply the principles of study design to nutrition support research.

**GI and Liver Disorders (Module 2) – Credit Hours: 5.5**

**Chapter: GI Alterations**
**Learning Objectives**

1. Detect GI dysmotility in critically ill patients and design a treatment regimen to improve dysmotility-induced feeding intolerance.

2. Evaluate the etiology and risk factors associated with intestinal integrity dysfunction and justify a preventive or treatment regimen.
3. Assess the efficacy and safety of using probiotic preparations to prevent and treat diarrhea in the critically ill patient.
4. Evaluate the efficacy and safety data for oral chlorhexidine, selective oral decontamination, and selective digestive decontamination strategies in the critically ill patient.

**Chapter: Acute Liver Failure**

**Learning Objectives**

1. Differentiate between underlying causes of acute liver failure (ALF) using clinical, laboratory, and radiologic features.
2. Using guideline recommendations and current evidence, design pharmacotherapy – including the use of acetylcysteine – for a patient with ALF.
3. Design pharmacotherapy to manage secondary complications of ALF.
4. Evaluate the potential for altered drug disposition and the need for subsequent drug therapy modifications in the patient with ALF.

**Chapter: Severe Acute Pancreatitis**

**Learning Objectives**

1. Apply knowledge of etiologies, diagnostic interventions, and laboratory measures to evaluate acute pancreatitis (AP).
2. Design pharmacotherapy and justify prevention strategies for the patient with AP.
3. Design a fluid resuscitation regimen for the patient with severe AP.
4. Analyze patient-specific factors in the initiation of antimicrobial therapy for AP.