Critical Care Pharmacy Specialty Recertification Literature Study: Module 2A-B (Cert # L229111)

Teaser: The Literature Study Module provides immediate access to peer-selected, contemporary articles that are relevant to specialty practice. After learners review the content, they must successfully complete an online assessment to earn recertification credit.

Tag: Certifications; Critical Care

ACPE Numbers: Various – see listing below  
Pre-Sale Date: 09/21/2022  
Content Release Date: 10/19/2022  
Expiration Dates: 10/17/2023  
Activity Type: Application-based  
CE Credits: 10 contact hours  
Activity Fee: $55 (ASHP member); $110 (non-member)

Accreditation for Pharmacists
The American Society of Health-System Pharmacists is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

Target Audience
These Literature Studies are designed to help board-certified pharmacists who are seeking recertification contact hours to maintain their Board of Pharmacy Specialties (BPS).

Activity Overview
The Literature Study Module is intended for board certified pharmacists in need of recertification credit and is designed based on the content outline developed by the Board of Pharmacy Specialties (BPS). This module consists of 2 online home study activities (see table below). Each activity is designed to assess the learners’ ability to analyze and apply peer-selected contemporary articles to practice and includes a short video for enhanced learning and understanding.

Module 2A -- Sepsis: This module focuses on updates to the management of patients with sepsis, including new guidelines, pharmacist impact on outcomes, heart rate control, and selection of fluids.

Module 2B -- Gastroenterology and Immunology: This module focuses on gastroenterology and immunology topics, including cirrhosis, hepatorenal syndrome, and various topics related to adverse drug reactions and allergies.
Materials for this course will release 10/19/2022

Learners will be required to review the content and complete the associated online assessments. The learner must be able to correctly answer the questions based upon their interpretation of the content, as well as “baseline specialty specific knowledge and/or easily retrievable information.” For purposes of this Literature Study, “baseline specialty specific knowledge and/or easily retrievable information” is defined as product labeling and well-established standards of practice in the specialty practice.

These activities are part of the ASHP professional development program for BCCCP recertification approved by the BPS.

Recertification Credit

Board certified pharmacists are eligible to receive up to 10 contact hours of recertification credit for completing this module. To earn recertification credit, learners must review the activity content and successfully complete the online assessments by the deadline. Only completed assessments will be eligible for credit; no partial or incomplete assessments will be processed. You are allowed only one attempt to successfully complete this assessment.

<table>
<thead>
<tr>
<th>Learning Activity</th>
<th>ACPE Number</th>
<th>Contact Hours</th>
<th>Assessment Pass Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Care Pharmacy Literature Study Module 2A: Sepsis</td>
<td>0204-0000-22-940-H01-P</td>
<td>5</td>
<td>TBD</td>
</tr>
<tr>
<td>Critical Care Pharmacy Literature Study Module 2B: Gastroenterology and Immunology</td>
<td>0204-0000-22-941-H01-P</td>
<td>5</td>
<td>TBD</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>10.0 BPS</td>
</tr>
</tbody>
</table>

Articles and Learning Objectives

Module 2A: Sepsis
ACPE #: 0204-0000-22-940-H01-P
This module focuses on updates to the management of patients with sepsis, including new guidelines, pharmacist impact on outcomes, heart rate control, and selection of fluids.


Learning Objectives:
- Describe the 2021 Surviving Sepsis Campaign guidelines for management of sepsis and septic shock.
- Develop recommendations for the management of patients with sepsis or septic shock.

Learning Objectives:
- Describe the study by Tarabichi and colleagues of an electronic health record (EHR)-embedded sepsis early warning system (EWS) in the emergency department (ED).
- Develop recommendations for an electronic health record (EHR)-embedded sepsis early warning system (EWS) in the emergency department (ED).


Learning Objectives:
- Describe the PHARM-CRIT study of the role of pharmacists in reducing medical costs for critically ill adults.
- Develop recommendations for pharmacists to use to minimize medical costs in critically ill adults.


Learning Objectives:
- Describe the study by Bosch and colleagues of atrial fibrillation (AF) medications for heart rate control in critically ill patients with sepsis and AF with rapid ventricular response (RVR).
- Develop recommendations for pharmacotherapy to provide heart rate reduction in critically ill patients with sepsis and atrial fibrillation (AF) with rapid ventricular response (RVR).


Learning Objectives:
- Describe the Balanced Solutions in Intensive Care Study (BaSICS).
- Develop recommendations for intravenous (IV) fluid selection for critically ill patients.


Learning Objectives:
- Describe the Plasma-Lyte 148 versus Saline (PLUS) study.
- Develop recommendations for the type of intravenous (IV) fluid to use in critically ill patients in the intensive care unit (ICU) who require fluid therapy.
Module 2B: Gastroenterology and Immunology
ACPE #: 0204-0000-22-941-H01-P
This module focuses on gastroenterology and immunology topics, including cirrhosis, hepatorenal syndrome, and various topics related to adverse drug reactions and allergies.


Learning Objectives:
- Describe the clinical practice guideline from the American Gastroenterological Association (AGA) Institute for the management of coagulation disorders in patients with cirrhosis.
- Develop recommendations for the management of coagulation disorders in patients with cirrhosis.


Learning Objectives:
- Describe the recognition and management of infections in patients with cirrhosis.
- Develop recommendations for the detection and management of infections in patients with cirrhosis.


Learning Objectives:
- Describe the CONFIRM study of terlipressin plus albumin for the treatment of type 1 hepatorenal syndrome (HRS-1).
- Develop recommendations for the use of terlipressin plus albumin for the treatment of patients with type 1 hepatorenal syndrome (HRS-1).


Learning Objectives:
- Describe the analysis by Wulf and colleagues of evidence of allergy to medications that contain iodine or seafood.
- Develop recommendations for the use of iodine-containing medications in patients reporting an allergy to iodine or seafood and for documenting reactions to these substances.

Learning Objectives:
- Describe the available evidence of cross-reactivity to propofol in patients reporting an allergy to products containing egg, soy, or peanut; methods for screening for such allergies and determining whether to use propofol in these patients; and the evaluation and management of patients experiencing an anaphylactic reaction to propofol.
- Develop recommendations for the screening of adults for allergy to products containing egg, soy, or peanut; use of propofol or alternative strategies for sedation in these patients; and evaluation and management of patients experiencing an anaphylactic reaction to propofol.


Learning Objectives:
- Describe the ASHP guidelines on adverse drug reaction (ADR) monitoring and reporting.
- Develop recommendations for a comprehensive adverse drug reaction (ADR) monitoring and reporting program.


Learning Objectives:
- Describe the rationale for the changes proposed by Alvarez-Arango and colleagues to the terminology and best practices used by healthcare providers to describe and document vancomycin infusion reaction.
- Develop recommendations for systemwide improvements in drug-allergy recognition and documentation that ensure the equitable delivery of health care to diverse patient populations.

**Faculty**

Christopher Carter, PharmD, BCCCP, FCCM  
Clinical Manager - Pharmacy Services  
SSM Health St. Clare Hospital - Fenton  
Fenton, Missouri

Quinn Czosnowski, PharmD, BCCCP  
Clinical Pharmacy Specialist - Critical Care  
Indiana University Health - Methodist Hospital  
Indianapolis, Indiana

Brian Dee, PharmD, BCCCP, BCNSP, FCCM  
Clinical Pharmacy Specialist - Critical Care/Nutrition Support  
The University of Texas MD Anderson Cancer Center  
Houston, Texas

Rena Gosser, PharmD, BCPS  
Clinical Ambulatory Pharmacy Manager  
University of Washington Medicine - Harborview Medical Center  
Seattle, Washington
Materials for this course will release 10/19/2022

Lauren A. Igneri, PharmD, BCPS, BCCCP
Clinical Pharmacy Specialist, Critical Care
Cooper University Health Care
Camden, New Jersey

Lindsay McCann, PharmD, BCCCP
Critical Care Clinical Pharmacy Specialist
Main Line Health
Bryn Mawr, Pennsylvania

Song Oh, PharmD, BCCCP
Assistant Professor of Clinical Pharmacy
Philadelphia College of Pharmacy
University of the Sciences

Rachel Swope, PharmD, BCCCP
Clinical Pharmacy Manager
Norton Healthcare
Louisville, Kentucky

Heather Torbic, PharmD, BCPS, BCCCP, FCCM
Medical ICU Clinical Pharmacist
Cleveland Clinic
Cleveland, Ohio

Content Matter Experts
Angela L. Bingham, PharmD, BCPS, BCNSP, BCCCP, FASPEN, FCCP, FASHP
Vice Chair and Associate Professor of Clinical Pharmacy
Philadelphia College of Pharmacy
Philadelphia, Pennsylvania

Mary M. Hess, PharmD, BCCCP, FASHP, FCCM, FCCP
Associate Dean
Professor, Pharmacy Practice
Jefferson College of Pharmacy
Philadelphia, Pennsylvania

Paul Szumita, PharmD, BCCCP, BCPS, FCCM, FASHP
Director, Clinical Pharmacy Services
Brigham and Women’s Hospital
Boston, Massachusetts

Reviewers
Susan R. Dombrowski, MS, RPh
Anna M. Wodlinger-Jackson, PharmD, BCPS

Field Testers
In progress

Copyright © 2022, American Society of Health-System Pharmacists. All rights reserved.
Disclosures
In accordance with our accreditor’s Standards of Integrity and Independence in Accredited Continuing Education, ASHP requires that all individuals in control of content disclose all financial relationships with ineligible companies. An individual has a relevant financial relationship if they have had a financial relationship with an ineligible company in any dollar amount in the past 24 months and the educational content that the individual controls is related to the business lines or products of the ineligible company. An ineligible company is any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients. The presence or absence of relevant financial relationships will be disclosed to the activity audience.

No one in control of the content of this activity has a relevant financial relationship (RFR) with an ineligible company.

Methods and CE Requirements
Activities consist of educational materials, assessments, and activity evaluations. In order to receive continuing pharmacy education credit, learners must:

- Complete the attestation statement
- Review all content
- Complete and pass the assessments
- Complete the evaluations

Follow the prompts to claim, view, or print the statement of credit within 60 days after completing the activity.

System Technical Requirements
Courses and learning activities are delivered via your Web browser and Acrobat PDF. For all activities, you should have a basic comfort level using a computer and navigating web sites.

View the minimum technical and system requirements for learning activities.

Development
These activities were developed by ASHP.