

**** Materials for this course will be release on 04/15/2020 ****

Pharmacotherapy Specialty Recertification Literature Study: Module 1A-C (Cert # L209135)

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; Pharmacotherapy



ACPE Numbers: Various – see listing below

Pre-Sale Date: 03/18/2020

Content Release Date: 04/15/2020

Expiration Dates: 10/20/2020

Activity Type: Application-based

CE Credits: 15.00 hours (BPS and ACPE)

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 credit 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 3 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 1A: Pain: This module focuses on pain management including opioid tolerance, opioid use disorder and use of nonnarcotic medications to manage pain.

Module 1B: Emergency Medicine and Disaster Preparedness: This module focuses on emergency preparedness and screening for tuberculosis in healthcare personnel.

Module 1C: Infectious Diseases: This module includes a variety of infectious diseases topics including drug allergies and immunology as well as study design and laboratory concepts.

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.

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

Recertification Credit*

Board certified pharmacists are eligible to receive up to 15 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.

Learning Activity	ACPE Number	Credit Hours	*Assessment Pass Point
Pharmacotherapy and Critical Care Literature Study Module 1A: Pain	0204-0000-20-935-H08-P	6.00	76%
Pharmacotherapy Literature Study Module 1B: Emergency Medicine and Disaster Preparedness	0204-0000-20-936-H01-P	3.00	73%
Pharmacotherapy Literature Study Module 1C: Infectious Diseases	0204-0000-20-937-H01-P	6.00	73%

Articles and Learning Objectives

Module 1A: Pain

0204-0000-20-935-H08-P

This module focuses on pain management including opioid tolerance, opioid use disorder and use of nonnarcotic medications to manage pain.

Martyn JAJ, et al. Opioid tolerance in critical illness. NEJM. 2019; 380: 365-378.

Learning Objectives:

- Describe the indications for use of opioid therapy in critically ill patients, opioid signal transduction during short- and long-term use, role of inflammation and the immune response in tolerance, and strategies to mitigate opioid tolerance
- Develop recommendations for strategies to mitigate opioid tolerance and opioid-induced hyperalgesia in critically ill patients

Schwenk ES, et al. Consensus guidelines on the use of intravenous ketamine infusions for acute pain management from the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists. Reg Anesth Pain Med. 2018; 43:456-466.

Learning Objectives:

- Describe the rationale, methodology, findings, limitations, and implications of the consensus guidelines on the use of intravenous ketamine infusions for acute pain management from the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists
- Develop recommendations for the use of intravenous ketamine infusions to manage acute pain

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Subramaniam B, Shankar P, et al. Effect of IV acetaminophen vs placebo combined with propofol or dexmedetomidine on postoperative delirium among older patients following cardiac surgery: the DEXACET randomized clinical trial. JAMA. 2019; 321(7):686-696.

Learning Objectives:

- Explain the rationale, methodology, findings, limitations, and implications of the DEXACET study of the effect of postoperative scheduled intravenous (IV) acetaminophen with propofol or dexmedetomidine on postoperative delirium in older patients undergoing cardiac surgery
- Develop recommendations for the use of scheduled intravenous (IV) acetaminophen as part of postoperative analgesia in combination with IV dexmedetomidine or propofol as sedation in older patients undergoing cardiac surgery

Finnerup NB. Nonnarcotic methods of pain management. NEJM. 2019; 380: 2440-2448.

Learning Objectives:

- Describe the assessment of pain, factors to consider in managing pain, role of self-management, and use of psychological interventions and nonopioid analgesic agents for the treatment of pain
- Develop recommendations for the use of nonopioid treatments for pain, including self-management, psychological treatments, nonsteroidal anti-inflammatory drugs, antidepressants, antiepileptic agents, and topical local agents

Goodman CW, Brett AS. A clinical overview of off-label use of gabapentinoid drugs. JAMA Int Med. 2019; 179(5): 695-701.

Learning Objectives:

- Describe the available evidence of efficacy and potential problems with off-label use of gabapentin and pregabalin to treat pain
- Develop recommendations for the off-label use of gabapentin and pregabalin to treat pain, taking into consideration the available evidence of efficacy, potential for adverse effects, type and etiology of pain, other patient characteristics, and cost

Crockett SD, et al. American Gastroenterological Association Institute guideline on the medical management of opioid-induced constipation. Gastroenterology. 2018; 1-9.

Learning Objectives:

- Describe the American Gastroenterological Association Institute guideline on the medical management of opioid-induced constipation
- Develop recommendations for the medical management of constipation associated with opioid therapy

Koehl JL, et al. Medications for the management of opioid use disorder. Am J Health-Syst Pharm. 2019; 76: 1097-1104.

Learning Objectives:

- Describe the management of acute opioid withdrawal and compare and contrast the pharmacology, pharmacokinetics, efficacy, safety, tolerability, and feasibility of using buprenorphine, methadone, and naltrexone to manage opioid use disorder (OUD)
- Develop recommendations for the medical management of patients with opioid-use disorder

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Module 1B: Emergency Medicine and Disaster Preparedness

0204-0000-20-936-H01-P

This module focuses on emergency preparedness and screening for tuberculosis in healthcare personnel.

Henretig FM, et al. Hazardous chemical emergencies and poisonings. NEJM. 2019; 380: 1638-55.

Learning Objectives:

- Describe the toxicology and hospital-based management of acute poisonings caused by exposure to hazardous chemicals
- Develop recommendations for the hospital-based management of acute poisonings caused by exposure to hazardous chemicals

Narayanan N, et al. Disaster preparedness: biological threats and treatment options. Pharmacotherapy. 2018; 38(2):217-234.

Learning Objectives:

- Describe the etiology, natural history, clinical presentation, diagnosis, prevention, and treatment of biological agents that pose a natural, accidental, or intentional threat to national security or public health
- Develop recommendations for the diagnosis, prevention, and treatment of biological agents that pose a natural, accidental, or intentional threat to national security or public health

Sosa LE, Njie GJ, Lobato MN, et al. Tuberculosis screening, testing, and treatment of U.S. health care personnel: recommendations from the National Tuberculosis Controllers Association and CDC, 2019. MMWR Morb Mortal Wkly Rep. 2019; 68:439-443.

Learning Objectives:

- Describe the impetus for, methodology used, and nature of the changes in the 2019 recommendations from the National Tuberculosis Controllers Association and Centers for Disease Control and Prevention for tuberculosis screening, testing, and treatment of health care personnel
- Develop recommendations for tuberculosis (TB) screening, testing, and treatment of health care personnel (HCP), including baseline screening, testing, and individual TB risk assessment; postexposure screening and testing; serial screening and testing for HCP without latent TB infection (LTBI); and evaluation and treatment of positive test results

Module 1C: Infectious Diseases

0204-0000-20-937-H01-P

This module includes a variety of infectious diseases topics including drug allergies and immunology as well as study design and laboratory concepts.

Bland CM, et al. A practical guide for pharmacists to successfully implement penicillin allergy skin testing. Am J Health-Syst Pharm. 2019; 76(3):136-147.

Learning Objectives:

- Describe challenges in and strategies for successful implementation of penicillin allergy skin testing (PAST) by pharmacists
- Develop a plan to implement penicillin allergy skin testing (PAST)

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Shenoy ES, et al. Evaluation and management of penicillin allergy: A review. JAMA. 2019; 321:188-199.

Learning Objectives:

- Describe the epidemiology of penicillin allergy, clinical consequences of labeling patients as penicillin allergic, and methods for clinically evaluating patients with a report of penicillin allergy
- Develop a plan for the clinical evaluation of patients with a report of penicillin allergy

Jones BM, et al. Clinical and economic outcomes of penicillin skin testing as an antimicrobial stewardship initiative in a community health system. Open Forum Infections Diseases. 2019; 6(4):ofz109.

Learning Objectives:

- Explain the rationale, methodology, findings, limitations, and implications of the quasi-experimental study of penicillin skin testing (PST) in a community health system without allergy services
- Develop recommendations for the use of penicillin skin testing (PST) in patients who self-report a penicillin allergy

Rodger AJ, et al. Risk of HIV transmission through condomless sex in serodifferent gay couples with the HIV-positive partner taking suppressive antiretroviral therapy (PARTNER): final results of a multicentre, prospective, observational study. Lancet. 2019; 393:2428-38.

Learning Objectives:

- Explain the rationale, methodology, findings, limitations, and implications of the PARTNER study of the risk of HIV transmission through condomless sex in serodifferent gay couples with the HIV-positive partner taking suppressive antiretroviral therapy.
- Develop recommendations for the use of suppressive antiretroviral therapy and condoms by serodifferent gay couples to protect against HIV transmission.

Bastidas A, de la Serna J, El Idrissi M, et al. Effect of Recombinant Zoster Vaccine on Incidence of Herpes Zoster After Autologous Stem Cell Transplantation: A Randomized Clinical Trial. JAMA. 2019;3 22(2):123-133.
doi:10.1001/jama.2019.9053

Learning Objectives:

- Explain the rationale, methodology, findings, limitations, and implications of the Zoster Efficacy Study in Patients Undergoing HSCT (ZOE-HSCT)
- Develop recommendations for the use of recombinant zoster vaccine in adults undergoing autologous hematopoietic stem cell transplantation
- Compare and contrast the appropriate use of recombinant zoster vaccine and zoster vaccine live in adults

Strebel PM, Orenstein WA. Measles. NEJM. 2019; 381:349-357.

Learning Objectives:

- Describe the epidemiology, clinical presentation, diagnosis, prevention, management, and reporting of measles in the United States
- Develop recommendations for the diagnosis, prevention, management, and reporting of measles in adult and pediatric patients

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deKraker ME, et al. Optimizing the design and analysis of clinical trials for antibacterials against multidrug-resistant organisms: a white paper from COMBACTE's STAT-Net. Clin Infect Dis. 2018; 67:1922-1931

Learning Objectives:

- Describe the recommendations for the design of and analysis of data from clinical trials in the Combatting Bacterial Resistance in Europe (COMBACTE) STAT-Net white paper on antibacterial agents for treatment of infections caused by multidrug-resistant organisms
- Develop recommendations for designing, analyzing data, and applying the results from clinical trials involving antibacterial agents for use in treating infections caused by multidrug-resistant organisms

Humphries RM, et al. Understanding and addressing CLSI breakpoint revisions: a primer for clinical laboratories. J Clin Microbiol. 2019; 57(6): e00203-19; DOI: 10.1128/JCM.00203-19

Learning Objectives:

- Discuss the processes used by the Clinical and Laboratory Standards Institute (CLSI), Food and Drug Administration (FDA), commercial antimicrobial susceptibility testing system (cASTs) manufacturers, and institutions to prioritize, revise, and adopt new breakpoints
- Describe the revisions made since 2010 in the Clinical and Laboratory Standards Institute (CLSI) breakpoints for bacteria that grow aerobically and the implications for clinical testing
- Apply the revisions made since 2010 in the Clinical and Laboratory Standards Institute (CLSI) breakpoints for bacteria that grow aerobically to a given clinical scenario

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Disclosures

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All planners, presenters, and reviewers of this session report no financial relationships relevant to this activity.

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.