

**Materials for this course will release 04/12/2023**

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**Pharmacotherapy Specialty Recertification Literature Study: Module 1A-C (Cert # L239185)**

**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:** 03/15/2023

**Content Release Date:** 04/12/2023

**Expiration Dates:** 10/17/2023

**Activity Type:** Application-based

**CE Credits:** 15 contact hours (BPS and ACPE)

**Activity Fee:** \$55 (ASHP member); \$110 (non-member)

**Accreditation**



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

**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 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: Critical Care:** This module focuses on current issues in critical care. Topics include intracerebral hemorrhage, adrenal insufficiency, hyponatremia, and use of midodrine in vasodilatory shock.

**Module 1B: Women's Health:** This module focuses on current issues in Women's Health. Topics include hypertension in pregnancy, contraception, medications in pregnancy, and osteoporosis.

**Module 1C: Current Topics:** This module includes updates on various therapeutic areas. Topics include use of aspirin, treatment of heart failure, management of benign prostatic hyperplasia, and vaccines.

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

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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 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	Contact Hours	Assessment Pass Point
Module 1A: Critical Care	0204-0000-23-954-H0X	5	TBD
Module 1B: Women’s Health	0204-0000-23-955-H0X	5	TBD
Module 1C: Current Topics	0204-0000-23-956-H0X	5	TBD
<b>Recertification Assessment</b>		15 BPS	

**Articles and Learning Objectives**

**Module 1A: Critical Care**

**ACPE #: 0204-0000-23-954-H0X**

This module focuses on current issues in critical care. Topics include intracerebral hemorrhage, adrenal insufficiency, hyponatremia, and use of midodrine in vasodilatory shock.

Greenberg SM, Ziai WC, Cardonniere C, et al. 2022 guidelines for the management of patients with spontaneous intracerebral hemorrhage: a guideline from the American Heart Association/American Stroke Association. *Stroke*. 2022; (Focus on: Section 5 (16-37), Section 9 (50-56).

Learning Objectives:

- Describe the 2022 guideline for the management of patients with spontaneous intracerebral hemorrhage (ICH) from the American Heart Association (AHA) and American Stroke Association (ASA).
- Develop recommendations for the management of patients with spontaneous intracerebral hemorrhage (ICH).

Kam W, Holmes DN, Hernandez AF, et al. Association of recent use of non-vitamin K antagonist oral anticoagulants with intracranial hemorrhage among patients with acute ischemic stroke. *JAMA*. 2022; 327(8):760-771.

Learning Objectives:

- Describe the study by Kam and colleagues of intracranial hemorrhage from the use of intravenous (IV) alteplase in patients with acute ischemic stroke.
- Develop recommendations for the use of intravenous (IV) alteplase in patients with acute ischemic stroke.

Nowotny H, Ahmed SF, Bensing S, et al. Therapy options for adrenal insufficiency and recommendations for the management of adrenal crisis. *Endocrine*. 2021; 71(3):586-594. <https://pubmed.ncbi.nlm.nih.gov/33661460/>

Learning Objectives:

- Describe strategies for the treatment of adrenal insufficiency (AI) and prevention of adrenal crisis.
- Develop recommendations for the treatment of patients with adrenal insufficiency (AI) and prevention of adrenal crisis.

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Lawless SJ, Thonpson C, Garrahy A. The management of acute and chronic hyponatremia. *Ther Adv Endocrinol Metab.* 2022; 13:1-16.

Learning Objectives:

- Describe the epidemiology, clinical presentation, classification, pathophysiology, and treatment of hyponatremia.
- Develop recommendations for the treatment of patients with hyponatremia.

Smith SE, Peters NA, Floris LM, et al. Putting midodrine on the MAP: an approach to liberation from intravenous vasopressors in vasodilatory shock. *Am J Health Syst Pharm* 2022; 79: 1047-1055.

Learning Objectives:

- Describe the adjunctive use of oral midodrine with intravenous (IV) vasopressors in critically ill adults in the recovery phase of vasodilatory shock.
- Develop recommendations for the adjunctive use of oral midodrine with intravenous (IV) vasopressors in the recovery phase of vasodilatory shock in critically ill adults.

### **Module 1B: Women's Health**

**ACPE #: 0204-0000-23-955-H0X**

This module focuses on current issues in Women's Health. Topics include hypertension in pregnancy, contraception, medications in pregnancy, and osteoporosis

Garovic VD, Dechend R, Easterling T, et al. Hypertension in Pregnancy: Diagnosis, Blood Pressure Goals, and Pharmacotherapy: A Scientific Statement From the American Heart Association. *Hypertension.* 2022; 79:e21–e41.

Learning Objectives:

- Describe the scientific statement from the American Heart Association (AHA) on diagnosis, blood pressure goals, and pharmacotherapy for pregnant women with hypertension.
- Develop recommendations for the diagnosis and treatment of hypertensive disorders of pregnancy (HDP).

Tita AT, Szychowski JM, Boggess K, et al. Treatment for mild chronic hypertension during pregnancy. *N Engl J Med.* 2022; 386:1781-1792.

Learning Objectives:

- Describe the Chronic Hypertension and Pregnancy (CHAP) trial by Tita and colleagues of antihypertensive drug therapy for pregnant women with mild chronic hypertension.
- Develop recommendations for the blood pressure to use as a threshold for initiating and target during antihypertensive drug therapy in pregnant women with mild chronic hypertension.

Teal S, Edelman A. Contraception selection, effectiveness, and adverse effects: A review. *JAMA.* 2021; 326:2507-2518.

Learning Objectives:

- Describe the effectiveness, adverse effects, and other considerations in choosing among available reversible contraceptives.
- Develop recommendations for reversible contraception, taking into consideration medication or device effectiveness, risks, and patient values and preferences.

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Lindley KJ, Teal SB. Contraception in women with cardiovascular disease. *JAMA*. 2022; 328(6):577-578.

Learning Objectives:

- Describe considerations in choosing a contraceptive method for and counseling pregnancy-capable women with cardiovascular (CV) disease about contraception.
- Recommend contraceptive methods and provide counseling about contraception for pregnancy-capable women with cardiovascular (CV) disease taking into consideration the potential benefits and risks and patient preferences.

Cohen RH, Teal SB. Medication for early pregnancy termination. *JAMA*. 2022;327(24):2446-2447.

Learning Objectives:

- Describe the use of medication abortion, including prescriber and patient considerations, contraindications, cautions, requirements for pretreatment testing and follow up, safety risks, and legal and regulatory issues
- Develop recommendations for the use of medication abortion, taking into consideration patient safety and needs and state and federal legal requirements and constraints.

Bjørk MH, Kristoffersen ES, Tronvik E, et al. Management of cluster headache and other trigeminal autonomic cephalalgias in pregnancy and breastfeeding. *Eur J Neurol*. 2021 Apr 14. doi: 10.1111/ene.14864.

Learning Objectives:

- Describe the epidemiology, clinical presentation, classification, and management of trigeminal autonomic cephalalgias (TACs) during pregnancy and breastfeeding.
- Develop recommendations for the management of trigeminal autonomic cephalalgias (TACs) in women who are pregnant or breastfeeding.

Harris GM, Wood M, Ystrom E, et al. Association of maternal use of triptans during pregnancy with risk of attention-deficit/hyperactivity disorder in offspring. *JAMA Netw Open*. 2022; 5(6):e2215333

Learning Objectives:

- Describe the study by Harris and colleagues of maternal use of triptans during pregnancy and the risk of attention-deficit/hyperactivity disorder (ADHD) in their offspring.
- Develop recommendations for the use of triptans by pregnant women to treat migraine.

Deardorff WJ, Cenzer I, Nguyen B, Lee SJ. Time to benefit of bisphosphonate therapy for the prevention of fractures among postmenopausal women with osteoporosis: A meta-analysis of randomized clinical trials. *JAMA Int Med*. 2022; 182:33-41.

Learning Objectives:

- Describe the meta-analysis by Deardorff and colleagues of studies of the time to benefit (TTB) from bisphosphonate therapy for the prevention of nonvertebral and other fractures in postmenopausal women with osteoporosis.
- Develop recommendations for the use of bisphosphonate therapy in postmenopausal women with osteoporosis taking into consideration the potential benefits and harms and life expectancy.

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**Module 1C: Current Topics**

**ACPE #: 0204-0000-23-956-H0X**

This module includes updates on various therapeutic areas. Topics include use of aspirin, treatment of heart failure, management of benign prostatic hyperplasia, and vaccines.

USPSTF. Aspirin use to prevent cardiovascular disease: US Preventive Services Task Force Recommendation Statement. *JAMA*. 2022; 327: 1577-1584.

Learning Objectives:

- Describe the U.S. Preventive Services Task Force recommendation statement on aspirin use to prevent cardiovascular disease
- Develop recommendations for the use of aspirin for primary prevention of cardiovascular disease.

Heidenreich PA, Bozkurt B, Aguilar D, et al. 2022 AHA/ACC/HFSA Guideline for the management of heart failure: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. *Circulation*. 2022; 145: e895-e1032. (Focus on select sections: 2 (e901-904), 3 (e906-908), 4 (e908-911), 5 (e919-921), 6 (e921-923), 7.1-7.3 (e923-941), 7.7 (e949-952); 7.8 (e952-e955); 8 (e955-e958); 9 (e960-967); 10 (e969-972); 11 (e973-978))

Learning Objectives:

- Describe the 2022 American Heart Association (AHA)/American College of Cardiology (ACC)/Heart Failure Society of America (HFSA) guideline for the management of heart failure (HF).
- Develop recommendations for the management of patients with heart failure (HF).

Lerner LB, McVary KT, Barry MJ, et al. Management of lower urinary tract symptoms attributed to benign prostatic hyperplasia: AUA Guideline Part I - Initial work-up and medical management. *The Journal of Urology*. 2021; 206: 806-817.

Learning Objectives:

- Describe the American Urological Association (AUA) guideline for the initial work up and medical management of lower urinary tract symptoms (LUTS) attributed to benign prostatic hyperplasia (BPH)
- Develop recommendations for the initial work up for or medical management of lower urinary tract symptoms (LUTS) in a patient with benign prostatic hyperplasia (BPH).

Meissner HC. Understanding vaccine safety and the roles of the FDA and the CDC. *N Engl J Med*. 2022; 386: 1638-45

Learning Objectives:

- Describe the roles of the Food and Drug Administration (FDA) and Centers for Disease Control and Prevention (CDC) in ensuring vaccine safety, including the methods for evaluating safety and efficacy, pathways by which vaccine products are authorized or licensed, and factors taken into consideration in establishing vaccine recommendations.
- Explain to other healthcare professionals and patients the methods used by federal, state, and local agencies to ensure the safety and efficacy of vaccines for preventable diseases.

Kobayashi M, Farrar JL, Gierke R, et al. Use of 15-Valent Pneumococcal Conjugate Vaccine and 20-Valent Pneumococcal Conjugate Vaccine Among U.S. Adults: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2022. *MMWR Morb Mortal Wkly Rep*. 2022; 71:109–117

Learning Objectives:

- Describe the updated recommendations of the Centers for Disease Control and Prevention Advisory Committee on Immunization Practices (ACIP) for the use of the 20-valent pneumococcal conjugate vaccine (PCV20) and 15-valent pneumococcal conjugate vaccine (PCV15).
- Develop recommendations for the use of the 20-valent pneumococcal conjugate vaccine (PCV) and 15-valent pneumococcal conjugate vaccine (PCV15) in adults.

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### **Disclosures**

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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.

The following persons in control of this activity's content have relevant financial relationships:

Snehal Bhatt: Janssen Pharmaceuticals, Inc., Speaker Bureau  
Christopher Betz: Vifor, Nanomedicines Advisory Board

All other persons in control of content do not have any relevant financial relationships with an ineligible company.

As required by the Standards of Integrity and Independence in Accredited Continuing Education, all relevant financial relationships have been mitigated prior to the CPE 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.