

**Materials for this course will release 06/15/2022**

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**Emergency Medicine Pharmacy Specialty Review Course and Practice Exam (No Recert Credit (Cert # L229261))**

**Teaser:** This online Specialty Review Course and Practice Exam package will help you prepare for the Board of Pharmacy Specialty (BPS) examination. With this course, get comprehensive, practical guidance, with a variety of complex cases, including references for further study.

**Tag:** Certifications; Emergency Medicine

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**ACPE Numbers:** Various – see listing below

**Pre-Sale Date:** 05/18/2022

**Content Release Date:** 06/15/2022

**Expiration Date:** 05/16/2023

**Activity Type:** Application-based

**CE Credits:** 25 contact hours (ACPE only)

**Activity Fee:** \$425 (ASHP member); \$625 (non-member)

**Accreditation for Pharmacists**



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

**Target Audience**

These activities are intended for pharmacists who are seeking to update their knowledge and skills commensurate with a board certification examination in the areas listed below.

**Activity Overview**

This online course provides a robust preparatory curriculum for the pharmacy professional preparing for the Board of Pharmacy Specialties (BPS) Emergency Medicine Pharmacy Specialty Certification Examination. Designed based on the domains, tasks, and knowledge statements developed by the BPS for the certification examination, this course will help you prepare for the exam by identifying areas needed for in-depth review of emergency medicine issues by:

- Reviewing pertinent clinical topics and practice skills
- Providing exam practice questions
- Listing valuable references for further study

These activities are part of the ASHP and ACCP professional development program.

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**REVIEW COURSE**

This course consists of 21 activities (see table below) and provides up to 25 contact hours of continuing pharmacy education credit. The Review Course includes case-based presentations for application to real-life scenarios, a practice exam along with correct answers, and links to the reference sources, and domains, tasks, and knowledge statements to help you prepare for the BPS Specialty Examination.

Learning Activity	ACPE Number	Contact Hours	ACPE Expiration Date
Complex Case: Pulmonary	0204-9999-22-984-H01-P	1.50	06/15/2025
Complex Case: Cardiovascular - ACS	0204-9999-22-985-H01-P	1.00	
Complex Case: Cardiovascular - Acute Decompensated Heart Failure	0204-9999-22-986-H01-P	1.00	
Complex Case: Cardiovascular - Dysrhythmia	0204-9999-22-987-H01-P	1.00	
Complex Case: Seizures and Status Epilepticus	0204-9999-22-988-H01-P	1.00	
Complex Case: Headache	0204-9999-22-989-H01-P	1.00	
Complex Case: Ischemic Stroke	0204-9999-22-990-H01-P	1.00	
Complex Case: Psychiatry	0204-9999-22-991-H01-P	1.50	
Complex Case: Hepato-gastrointestinal	0204-9999-22-992-H01-P	1.00	
Complex Case: Endocrine	0204-9999-22-993-H01-P	1.00	
Complex Case: Infectious Diseases - Sepsis	0204-9999-22-994-H01-P	1.50	
Complex Case: Infectious Diseases - Meningitis	0204-9999-22-995-H01-P	1.00	
Complex Case: Toxicology - Adult	0204-9999-22-996-H01-P	1.50	
Complex Case: Toxicology - Pediatric	0204-9999-22-997-H01-P	1.50	
Complex Case: Surgery and Trauma - Blunt Trauma	0204-9999-22-998-H01-P	1.50	
Complex Case: Surgery and Trauma - Penetrating Trauma	0204-9999-22-999-H01-P	1.00	
Complex Case: Genitourinary	0204-9999-22-600-H01-P	1.00	
Complex Case: Obstetrics and Gynecology	0204-9999-22-601-H01-P	1.00	
Complex Case: Hematology	0204-9999-22-602-H01-P	1.00	
Complex Case: Oncology	0204-9999-22-603-H01-P	1.00	
Statistics, Evidence-based Medicine, and Research Design	0204-9999-22-604-H04-P	2.00	

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### Learning Objectives

After participating in these CPE activities, learners should be able to:

#### Complex Case: Pulmonary

ACPE #: 0204-9999-22-984-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices).
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Adjust patient-centered care plan based upon response, monitoring and patient-specific information.
- Identify adverse drug events and medication errors in emergency medicine.
- Evaluate protocols for adherence to evidence-based guidelines to assure safe and cost effective medication use and optimal resource allocation.

#### Complex Case: Cardiovascular – ACS

ACPE #: 0204-9999-22-985-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices, pre-hospital providers).
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Assess applicability and limitations of published data and reports to care of patient.
- Modify treatment plan based upon monitoring patient's response to initial therapy.

#### Complex Case: Cardiovascular - Acute Decompensated Heart Failure

ACPE #: 0204-9999-22-986-H01-P

- Assess patient presentation based upon patient-specific signs, symptoms, acuity indices, laboratory and other diagnostic results.
- Evaluate medication-related problems based on presentation, history (e.g., pre-hospital providers), medication use, and/or laboratory data.
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon monitoring patient's response to initial therapy.

#### Complex Case: Cardiovascular – Dysrhythmia

ACPE #: 0204-9999-22-987-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices, pre-hospital providers).
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon monitoring patient's response to initial therapy.

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**Complex Case: Seizures and Status Epilepticus**

ACPE #: 0204-9999-22-988-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices, pre-hospital providers).
- Evaluate medication-related problems based on presentation, history (e.g., pre-hospital providers), medication use, and laboratory data.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon patient's response to initial therapy.

**Complex Case: Headache**

ACPE #: 0204-9999-22-989-H01-P

- Evaluate medication-related problems based on presentation, history (e.g., pre-hospital providers), medication use, and laboratory data.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Modify treatment plan based upon monitoring patient's response to initial therapy.
- Develop education, discharge and follow-up care plans based upon patient- and disease specific factors to improve adherence and continuity of care.

**Complex Case: Ischemic Stroke**

ACPE #: 0204-9999-22-990-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices).
- Evaluate medication-related problems based on presentation, history (e.g., pre-hospital providers), medication use, and laboratory data.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon monitoring patient's response to initial therapy.

**Complex Case: Psychiatry**

ACPE #: 0204-9999-22-991-H01-P

- Interpret signs, symptoms, laboratory and other diagnostic and acuity results.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Select alternative routes of administration based upon patient-specific factors.
- Modify treatment plan based upon monitoring patient's response to initial therapy.
- Assess applicability and limitations of published data and reports to care of patient.

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**Complex Case: Hepato-gastrointestinal**

ACPE #: 0204-9999-22-992-H01-P

- Interpret signs, symptoms, laboratory and other diagnostic and acuity results.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Select alternative routes of administration based upon patient-specific factors.
- Modify treatment plan based upon monitoring patient's response to initial therapy.

**Complex Case: Endocrine**

ACPE #: 0204-9999-22-993-H01-P

- Interpret signs, symptoms, laboratory and other diagnostic and acuity results.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Select alternative routes of administration based upon patient-specific factors.
- Modify treatment plan based upon monitoring patient's response to initial therapy.
- Develop education, discharge and follow-up care plans based upon patient- and disease specific factors to improve adherence and continuity of care.

**Complex Case: Infectious Diseases – Sepsis**

ACPE #: 0204-9999-22-994-H01-P

- Develop therapeutic and monitoring plans based on medication-related, patient- and disease-specific information, laboratory data, and available evidence.
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon patient's response to initial therapy and stewardship guidelines
- Evaluate medication use protocols for adherence to evidence-based guidelines.
- Identify principles of quality assurance and continuous quality improvement (e.g., RAC, MUE).

**Complex Case: Infectious Diseases – Meningitis**

ACPE #: 0204-9999-22-995-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices).
- Interpret signs, symptoms, laboratory and other diagnostic and acuity results.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Select alternative routes of administration based upon patient-specific factors.
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon monitoring patient's response to initial therapy.

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**Complex Case: Toxicology – Adult**

ACPE #: 0204-9999-22-996-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices).
- Develop therapeutic and monitoring plans based on medication-related, patient- and disease-specific information, and laboratory data.
- Interpret signs, symptoms, and laboratory and other relevant diagnostic test results.
- Evaluate policies and processes for availability of essential drugs (e.g., drug shortages).
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon monitoring patient’s response to initial therapy.

**Complex Case: Toxicology – Pediatric**

ACPE #: 0204-9999-22-997-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices).
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Evaluate policies and processes for availability of essential drugs (e.g., drug shortages) and emergency preparedness.
- Modify treatment plan based upon patient’s response to initial therapy.

**Complex Case: Surgery and Trauma - Blunt Trauma**

ACPE #: 0204-9999-22-998-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, medication use, acuity indices).
- Interpret signs, symptoms, and laboratory and other diagnostic test results.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Modify treatment plan based upon monitoring the patient’s response to initial therapy.

**Complex Case: Surgery and Trauma - Penetrating Trauma**

ACPE #: 0204-9999-22-999-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, medication use, and acuity indices).
- Interpret signs, symptoms, acuity indices, laboratory and other diagnostic results (e.g., pre-hospital care).
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Select alternative routes of administration based upon patient-specific factors.
- Modify treatment plan based upon patient’s response to initial therapy.

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**Complex Case: Genitourinary**

ACPE #: 0204-9999-22-600-H01-P

- Interpret signs, symptoms, and laboratory and other relevant diagnostic test results.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Develop discharge and follow-up care plans based upon patient- and disease specific factors and public health recommendations to ensure continuity of care.

**Complex Case: Obstetrics and Gynecology**

ACPE #: 0204-9999-22-601-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, relevant acuity indices) and best available evidence.
- Interpret signs, symptoms, and laboratory and other relevant diagnostic test results.
- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Modify treatment plan based upon monitoring the patient's response to initial therapy.

**Complex Case: Hematology**

ACPE #: 0204-9999-22-602-H01-P

- Develop therapeutic and monitoring plans based on medication-related problems, patient- and disease-specific information, and laboratory data.
- Modify treatment plan based upon monitoring the patient's response to initial therapy.
- Develop discharge and follow-up care plans based upon patient- and disease specific factors to improve adherence and continuity of care.

**Complex Case: Oncology**

ACPE #: 0204-9999-22-603-H01-P

- Identify initial management in medical emergencies using available patient-specific information (e.g., age-related, risk factors, laboratory data).
- Summarize strategies for procurement, preparation, and administration of time-sensitive therapies.
- Modify treatment plan based upon monitoring the patient's response to initial therapy.

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**Statistics, Evidence-based Medicine, and Research Design**

ACPE #: 0204-9999-22-604-H04-P

Given an excerpt from a study:

- Evaluate quality and appropriateness of the excerpt, with specific attention to:
  - study design
  - statistical analysis
  - internal/external validity
  - source of bias/confounders
  - quality of conclusions
  - interpretation of graphs
- Explain why a statistical test is appropriate or not appropriate, based on the sample distribution, data type, and study design.
- Interpret clinical and statistical significance for results from commonly used statistical tests.
- Explain the strengths and limitations of different types of measures of central tendency (mean, median, and mode) and data spread (standard deviation, standard error of the mean, range, and interquartile range).
- Evaluate odds ratio, risk/incidence rate, relative risk, number needed to treat, number needed to harm, and other risk estimates.
- Assess whether the study applies to a specified patient population.

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### **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.

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

- David Zimmerman: Spero Therapeutics; Grant recipient
- Marianne Pop: TerSera Therapeutics; Consultant

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

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### **Methods and CE Requirements**

Activities can be completed in any order. Each activity consists of audio, video, and/or PDFs and evaluations. Learners must review all content and complete the evaluations to receive continuing pharmacy education credit for each activity.

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**

ASHP collaborates with ACCP on Emergency Medicine Pharmacy activities.

*To maintain its strict, independent standards for certification, BPS does NOT endorse or provide review information, preparatory courses, or study guides for Board Certification Examinations.*