

**** Materials for this course will be release on 09/25/2019 ****

Pediatric Pharmacy Review Course, Pract Exam, and Core Therapeutic Modules Package (Cert # L199203)

Teaser: This online Specialty Review Course, Practice Exam, and Core Therapeutic Modules 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; Pediatric



ACPE Numbers: Various – see listing below

Pre-Sale Date: 09/04/2019

Content Release Date: 09/25/2019

Expiration Date: 08/25/2020

Activity Type: Application-based

CE Credits: 25.5 hours (ACPE only)

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

Accreditation for Pharmacists



ASHP 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) Pediatric 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 pediatric pharmacy issues by:

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

This course is **NOT** intended for those obtaining recertification credit. To earn recertification credit, please see courses here:

These activities are part of the ASHP professional development program.

REVIEW COURSE

This course consists of 11 activities (see table below) and provides up to 16 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 further prepare, this package includes a compilation of practice questions in the same format and rigor to help you prepare for the BPS Specialty Examination.

Learning Module	ACPE Number	Credit Hours	ACPE Expiration Date
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Deep Vein Thrombosis and Metabolic Syndrome	0204-0000-19-985-H01-P	1.50	09/25/2022
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Diabetic Ketoacidosis	0204-0000-19-986-H01-P	1.50	
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Acute Asthma	0204-0000-19-987-H01-P	1.50	
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Pneumonia and Septic Shock	0204-0000-19-988-H01-P	1.50	
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Acute Lymphoblastic Leukemia and Supportive Care	0204-0000-19-989-H01-P	1.50	
Pediatric Pharmacy Specialty Review and Recertification Course: Regulatory and IRB Considerations	0204-0000-19-990-H03-P	0.50	
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Sickle Cell Disease with Vaso-Occlusive Crisis	0204-0000-19-991-H01-P	1.50	
Pediatric Pharmacy Specialty Review and Recertification Course: Medication Error and Practice Management	0204-0000-19-992- H05-P	1.50	
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Neonatal Sepsis	0204-0000-19-993- H01-P	1.50	
Statistics, Evidence-Based Medicine, and Clinical Trial Design	0204-0000-18-934-H04-P	2.00	
Pediatric Pharmacy Specialty Review and Recertification Course: Complex Case: Status Epilepticus and Cardiopulmonary Resuscitation	0204-0000-19-995-H01-P	1.50	

Learning Objectives

At the end of the presentations, the pharmacist should be able to:

Complex Case: Deep Vein Thrombosis and Metabolic Syndrome

ACPE Number: 0204-0000-19-985-H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex pediatric patient with multiple conditions, including deep vein thrombosis, type 2 diabetes mellitus, dyslipidemia, and hypertension.
- Identify resources and treatment options for sexually transmitted infections.
- Select appropriate monitoring considerations of anticoagulation medications.
- Recognize the impact of pharmacogenomic differences on warfarin therapy.

Complex Case: Diabetic Ketoacidosis

ACPE Number: 0204-0000-19-986-H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex pediatric patient with multiple conditions, including diabetic ketoacidosis, type 1 diabetes mellitus, and urinary tract infection.
- Calculate maintenance and replacement fluid requirements and urine output.
- Identify factors affecting medication adherence.
- Determine appropriate dosing of insulin based on patient age and weight.
- Select an effective method of delivery for insulin.

Complex Case: Acute Asthma

ACPE Number: 0204-0000-19-987-H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex pediatric patient with multiple conditions, including acute and chronic asthma, ADHD, acne and GERD.
- Evaluate essential components of social history, including smoke exposure and home environment.
- Formulate a plan to address barriers to patient education and adherence, including age, language, cultural considerations, and inhaler technique.
- Describe the impact of age on classification and management of asthma.
- Assess available resources to improve access to medications, including patient assistance programs.

Complex Case: Pneumonia and Septic Shock

ACPE Number: 0204-0000-19-988-H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex pediatric patient with multiple conditions, including pneumonia, septic shock, and acute kidney injury.
- Calculate creatinine clearance, fluid requirements, and urine output in pediatric patients.
- Incorporate FDA Alerts for adverse events and drug-drug interactions into clinical practice.
- Apply scoring systems to assess pediatric patients.
- Select appropriate dosing for medications based on renal dysfunction and/or replacement modalities.
- Differentiate vital signs between stable and critically-ill pediatric patients.

Complex Case: Acute Lymphoblastic Leukemia and Supportive Care

ACPE Number: 0204-0000-19-989-H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex pediatric patient with multiple conditions, including acute lymphoblastic leukemia (ALL), tumor lysis syndrome, febrile neutropenia, invasive aspergillosis infection, and Clostridium difficile infection.
- Select appropriate medication dose modifications related to hepatic impairment.

Regulatory and IRB Considerations

ACPE Number: 0204-0000-19-990-H03-P

- Identify appropriate off-label use of medications in the pediatric population.
- List characteristics of patients who require informed assent/consent.
- Recognize federal legislation relevant to the use of medications in pediatric patients.

Complex Case: Sickle Cell Disease with Vaso-Occlusive Crisis

ACPE Number: 0204-0000-19-991-H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex pediatric patient with multiple conditions, including a vaso-occlusive crisis, cellulitis, constipation, and need for immunizations.
- Select most appropriate patient controlled analgesia regimen based on vaso-occlusive crisis severity.
- Identify required immunizations for adolescents, including patients with risk factors for vaccine-preventable diseases.
- Apply pharmacodynamic principles when selecting appropriate antibiotic regimens.

Complex Case: Medication Error and Practice Management

ACPE Number: 0204-0000-19-992- H05-P

- Medication reconciliation
- Appropriate drug preparation and delivery (e.g., extemporaneous compounding and standardized concentrations)
- Selecting equipment/technology and decision support.
- Adverse drug event monitoring and reporting
- Metrics for evaluating quality of pediatric pharmacy services.

Complex Case: Neonatal Sepsis

ACPE Number: 0204-0000-19-993- H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex neonatal patient with multiple conditions, including patent ductus arteriosus, apnea of prematurity, early and late onset sepsis, and necrotizing enterocolitis.
- Evaluate the clinical and therapeutic implications of placental transfer of medications.
- Identify age-specific pharmacokinetic differences among neonates, infants, children, and adolescents.
- Incorporate FDA alerts for adverse drug events and drug-drug interactions into clinical practice.
- Select characteristics that facilitate transfer of medications into the breast milk.

Statistics, Evidence-Based Medicine, and Clinical Trial Design

ACPE Number: 0204-0000-18-934-H04-P

- Determine quality and appropriateness of a study by examining study design, statistical analysis, sources of bias, quality of conclusions, and interpretation of graphs.
- Determine clinical and statistical significance of a study outcome.
- Determine whether the study applies to a specified patient population.

Complex Case: Status Epilepticus and Cardiopulmonary Resuscitation

ACPE Number: 0204-0000-19-995-H01-P

- Correctly answer case-based questions about appropriate treatment and monitoring of a complex pediatric patient with multiple conditions and needs, including status epilepticus, cardiopulmonary resuscitation, and sedation/analgesia.
- Differentiate treatment options in cardiopulmonary arrest based upon patient presentation.
- Select the appropriate dose and route of administration for medications.
- Assess the need and processes for reporting adverse drug events.
- Identify cultural considerations related to treatment and counseling of the pediatric population.
- Distinguish between the four preceptor roles.

CORE THERAPEUTIC MODULES

The Core Therapeutic Modules Review Package consists of 14 activities in which faculty review clinical topics and practice skills using a case-based approach. The activities are designed to assist the learner in identifying knowledge gaps in preparation for a pharmacy specialty board examination. In addition to a recorded presentation, each activity includes links to resources for further self-study and a practice test developed in the same format and rigor as the specialty exam.

Learning Module	ACPE Number	Credit Hours	ACPE Expiration Date
Select Topics in Pediatric Critical and Emergency Care	0204-0000-18-995-H01-P	1	9/12/2021
Select Topics in Pediatric Cardiovascular Disease	0204-0000-18-996-H01-P	1	9/12/2021
Select Topics in Pediatric Hematology Oncology	0204-0000-17-935-H01-P	1	5/30/2020
Select Topics in Pediatric Infectious Diseases Part 1	0204-0000-19-996-H01-P	1.5	9/25/2022
Select Topics in Pediatric Infectious Diseases Part 2	0204-0000-17-936-H01-P	1	5/30/2020
Select Topics in Pediatric Neurology Part 1	0204-0000-18-997-H01-P	1	9/12/2021
Select Topics in Pediatric Neurology Part 2	0204-0000-19-997-H01-P	1	9/25/2022
Select Topics in Pediatric Nutrition	0204-0000-17-937-H01-P	1	5/30/2020
Select Topics in Pediatric Pulmonary Disease: Cystic Fibrosis and Chronic Asthma	0204-0000-19-998-H01-P	1	9/25/2022

Learning Objectives

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

Select Topics in Pediatric Critical and Emergency Care

ACPE Number: 0204-0000-18-995-H01-P

- For the following specific critical and emergency medicine topics in pediatric patients: traumatic brain injury, select toxicological emergencies, and medication dosing in ECMO
 - Interpret diagnostic and/or laboratory tests, vital signs, and clinical presentation.
 - Determine the most appropriate therapy and monitoring based on patient-specific information and the most current guidelines.
 - Identify and manage underlying disorders.

Select Topics in Pediatric Cardiovascular Disease

ACPE Number: 0204-0000-18-996-H01-P

- For the following specific pediatric cardiovascular topics: congenital heart disease (VSD, ASD, TOF, coarctation of the aorta and hypoplastic left heart), Kawasaki disease, and PALS management of bradycardias and tachycardias with pulse:
 - Interpret signs, symptoms and diagnostic tests.
 - Identify drug-related problems, including drug interactions.
 - Determine the most appropriate therapy and monitoring based on patient-specific information and the most current guidelines.
 - Utilize PALS to determine appropriate therapy for bradycardia and tachycardia.

Select Topics in Pediatric Hematology Oncology

ACPE Number: 0204-0000-17-935-H01-P

For the following specific hematology and oncology topics: chemotherapy supportive care (e.g., acute nausea/vomiting and mucositis), immune thrombocytopenia, and anemia:

- Interpret signs, symptoms and diagnostic tests.
- Assess available information to identify drug-related problems and response to therapy.
- Identify appropriate modifications and supportive care plans based on patient-specific follow up assessment.

Select Topics in Pediatric Infectious Diseases Part 1

ACPE Number: 0204-0000-19-996-H01-P

At the conclusion of this application-based educational activity, participants should be able to do the following:

- For the following specific infectious diseases in pediatric patients: otitis media, bronchiolitis, tuberculosis, meningitis, and pneumonia
 - Identify and select an age-appropriate therapeutic regimen to include monitoring for safety and efficacy based on the most current guidelines and standard of care

Select Topics in Pediatric Infectious Diseases Part 2

ACPE Number: 0204-0000-17-936-H01-P

For the following specific infectious diseases: HIV, Herpes Simplex Virus Types 1 and 2, and systemic fungal infections,

- Identify and select an age-appropriate therapeutic regimen to include monitoring for safety and efficacy based on the most current guidelines.

Select Topics in Pediatric Neurology Part 1

ACPE Number: 0204-0000-18-997-H01-P

- Determine the most appropriate treatment and monitoring based on patient-specific information and the most current guidelines
- Assess available information to identify drug-related problems and response to therapy
- Identify appropriate modifications of patient-specific treatment plans based on follow up assessment

Select Topics in Pediatric Neurology Part 2

ACPE Number: 0204-0000-19-997-H01-P

- For the following specific neurology topics: Seizures (i.e., febrile seizures, neonatal seizures, infantile spasms, absence seizures, and Lennox-Gastaut syndrome), chronic management of anti-epileptics (including adverse drug events related to treatment such as hepatic with valproate, phenobarbital), ketogenic diet
 - Determine the most appropriate treatment and monitoring based on patient-specific information and the most current guidelines.
 - Assess available information to identify nutrition and drug-related considerations.
 - Identify appropriate modifications of patient-specific treatment plans based on follow up assessment.

Select Topics in Pediatric Nutrition

ACPE Number: 0204-0000-17-937-H01-P

For the following specific nutrition topics for neonates, infants, and children: parenteral and enteral nutrition, and normal growth and development

- Determine if nutrition needs are being met based on assessment of appropriate growth and development.
- Evaluate patients for weight (overweight or obese) based upon current guidelines.
- Select the most appropriate therapy and monitoring based on patient-specific information and the most current guidelines.

Select Topics in Pediatric Pulmonary Disease: Cystic Fibrosis and Chronic Asthma

ACPE Number: 0204-0000-19-998-H01-P

- For the specific pediatric pulmonary topics of cystic fibrosis and chronic asthma management
 - Analyze and interpret relevant clinical and laboratory data and results of diagnostic procedures
 - Identify relevant differences in laboratory sampling for pediatric patients (e.g., blood volume; method, frequency and timing of sampling)
 - Determine the most appropriate therapy and monitoring based on patient-specific information and the most current guidelines

Faculty

Elizabeth Autry, Pharm.D., BCPPS

Pediatric Clinical Pharmacist
University of Kentucky HealthCare
Lexington, Kentucky

Emily Benefield, Pharm.D., BCPPS, BCPS

Advanced Clinical Pharmacist
Primary Children's Hospital
Salt Lake City, Utah

Peter N. Johnson, Pharm.D., BCPPS, BCPS, FCCM, FPPAG*

Associate Professor of Pharmacy Practice
University of Oklahoma College of Pharmacy
Clinical Pharmacy Specialist--Pediatric Critical Care
The Children's Hospital at OU Medical Center
Oklahoma City, Oklahoma

Nathan Lamb, Pharm.D., BCPPS

Clinical Pharmacist
Ann and Robert H. Lurie Children's Hospital of Chicago
Chicago, Illinois

Kevin Patrick Lonabaugh, Pharm.D., BCACP, AAHIVP, AE-C

Clinical Pharmacist - Pediatric Ambulatory Care
University of Virginia Children's Hospital
Charlottesville
Virginia

Rachel S. Meyers, Pharm.D., BCPPS, BCPS

Clinical Associate Professor
Rutgers University
Piscataway, New Jersey

Pediatric Pharmacist
Saint Barnabas Medical Center
Livingston, New Jersey

Jamie L. Miller, Pharm.D., BCPPS, BCPS, FPPAG*

Associate Professor
University of Oklahoma College of Pharmacy
Oklahoma City, Oklahoma

Jill A. Morgan, Pharm.D., BCPPS, BCPS

Professor and Chair
University of Maryland School of Pharmacy
Baltimore, Maryland

Kristen Nichols, Pharm.D., BCPPS, BCPS-AQ ID

Associate Professor of Pharmacy Practice
Butler University College of Pharmacy and Health Sciences
Indianapolis, Indiana

Jennifer L. Thackray, Pharm.D., BCPPS, BCPS*

Pediatric Oncology Clinical Pharmacy Specialist
Memorial Sloan Kettering Cancer Center
New York, New York

Lisa T. Thames, Pharm.D., BCPS

Assistant Director, Pharmacy Services
UF Health Shands Hospital
Gainesville, Florida

Emily S. Waite, Pharm.D., BCOP

Pediatric Hematology Oncology Pharmacist
Children's of Alabama
Birmingham, Alabama

** Content Matter Experts*

Reviewers

Michelle Abalos, Pharm.D.
Kristi Hofer, Pharm.D.

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Jennifer L. Thackray: Employer, Equashield; Consultant, Wolters Kluwer

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

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

These activities were developed by ASHP.

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