Teaser: This Self-Assessment Program series provides Infectious Disease pharmacists with pertinent therapeutic updates to enhance their practice skills and improve patient outcomes.

Tag: Certifications; Infectious Disease

**ACPE Numbers:** Various – see listing below  
**Pre-Sale Date:** 10/23/2019  
**Release Date:** 11/15/2019  
**Expiration Dates:** 05/15/2020  
**Activity Type:** Application-based  
**CE Credits:** 13.5 hours (BPS and ACPE)  
**Activity Fee:** $75 (ASHP member); $110 (non-member)

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

**Target Audience**  
The target audience for IDSAP 2019 Book 2 (Multidrug-Resistant Gram-Negative Infections) is board certified and advanced-level infectious disease pharmacists involved in evidence-based management strategies for the prevention and management of drug-resistant gram-negative infections.

**Activity Overview**  
This course 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). The course consists of 3 learning modules (see table below) and provides up to 13.5 hours of continuing pharmacy education and/or recertification credit.

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 course, “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 and ACCP and professional development program for BCIDP recertification approved by the BPS.
Recertification Credit*
Board certified pharmacists are eligible to receive up to 13.5 hours of recertification credit for completing this course. 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>Credit Hours</th>
<th>*Assessment Pass Point</th>
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<td>0217-9999-19-033-H01-P</td>
<td>4.5</td>
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<td>IDSAP 2019 Book 2 (MDR Gram-Negative Infections II)</td>
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<td>IDSAP 2019 Book 2 (MDR Gram-Negative Infections III)</td>
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LEARNING OBJECTIVES

IDSAP 2019 Book 2 (MDR Gram-Negative Infections I)
ACPE Number: 0217-9999-19-033-H01-P

**Pseudomonas aeruginosa**
- Evaluate the microbiology, epidemiology, pathogenesis, mechanisms of resistance, and clinical presentation in patients with a possible *Pseudomonas aeruginosa* infection.
- Evaluate patient populations at greatest risk of having an infection caused by *P. aeruginosa*, including multidrug-resistant strains.
- Design a therapeutic regimen for a patient with a suspected or documented *P. aeruginosa* infection.
- Justify the role of antimicrobial stewardship and the pharmacist in treating patients with *P. aeruginosa* infections.

**Other Nonfermenters: Acinobacter and Stenotrophomonas**
- Distinguish between infection and colonization of *Acinetobacter baumannii* and *Stenotrophomonas maltophilia*, and assess potential sources for nosocomial outbreaks.
- Assess the various methods of intrinsic and acquired resistance mechanisms and their implications on the antibiotic susceptibility of *A. baumannii* and *S. maltophilia*.
- Evaluate the agents available for treating *A. baumannii* and *S. maltophilia* infections, and delineate the place in therapy for each agent.

IDSAP 2019 Book 2 (MDR Gram-Negative Infections II)
ACPE Number: 0217-9999-19-034-H01-P

**Optimizing Empiric Gram-Negative Therapy**
- Justify the importance of the antibiogram in determining appropriate empiric antimicrobial therapy.
- Justify an empiric antimicrobial therapy recommendation on the basis of a clinical prediction rule.
- Design empiric antimicrobial pharmacotherapy on the basis of rapid diagnostic test results.
PK/PD for Optimizing Therapy

- Justify various dosing strategies for patient cases using pharmacokinetic (PK) and pharmacodynamic (PD) principles.
- Evaluate PK-PD information derived from different data sources for application to patient care.
- Apply PK and PD metrics from a population model to therapeutic decision-making.
- Devise optimal dosing regimens to combat different multidrug-resistant gram-negative organisms.

IDSAP 2019 Book 2 (MDR Gram-Negative Infections III)
ACPE Number: 0217-9999-19-035-H01-P

Antibiotic Resistance in Enterobacteriaceae

- Detect mechanisms of antibiotic resistance in Enterobacteriaceae and their impact on patient outcomes.
- Evaluate the impact of Enterobacteriaceae resistance mechanisms on antibiotic efficacy.
- Assess for clinically relevant phenotypes, and devise treatment strategies on the basis of phenotypic susceptibility patterns.
- Evaluate the role in therapy of new β-lactam/β-lactamase inhibitor antibiotics for drug-resistant Enterobacteriaceae.

Recorded Webcast: Piperacillin/Tazobactam vs. Carbapenems for ESBL-Producing Enterobacteriaceae

- Apply knowledge of the in vitro activity and pharmacokinetics/pharmacodynamics of piperacillin/tazobactam against extended-spectrum β-lactamase (ESBL)-producing Enterobacteriaceae in designing pharmacotherapy.
- Evaluate the observational data on the use of piperacillin/tazobactam for treatment of bloodstream infections caused by ESBL-producing Enterobacteriaceae.
- Justify the designation of carbapenems as first-line for treatment of bloodstream infections caused by ESBL-producing Enterobacteriaceae.
- Evaluate the use of novel beta-lactam beta-lactamase inhibitors for infections with ESBL-producing Enterobacteriaceae.

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All other 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 ACCP and ASHP.