Ambulatory Care Pharmacy Specialty Review and Recertification Course

Learning Objectives

Research Design, Evidence-Based Medicine and Statistical Analysis

At the conclusion of this session, the participant should be able to:

1. Compare and contrast the following study designs:
   a. Descriptive
   b. Case-control
   c. Cross-sectional
   d. Follow-up
   e. Experimental—parallel
   f. Experimental—cross-over
2. Identify common sources of bias in a study and assess how the bias could influence the study results.
3. Determine the appropriate statistical tests given the type of data and study design.
4. Interpret common statistical information presented in a study including:
   a. p values
   b. confidence intervals
   c. relative risk, odds ratio, and hazard ratio
   d. standard deviation
   e. sample size and power calculations
   f. absolute risk reduction, number needed to treat and number needed to harm
5. Given a meta-analysis, interpret the statistical data including:
   a. Test of heterogeneity
   b. Funnel plots
6. Compare and contrast noninferiority and superiority trials.
Complex Case: “Will the coughing ever stop?”

At the conclusion of this session, given a patient case, the participant should be able to:

1. Correctly answer case-based questions about appropriate ambulatory treatment of a complex patient with multiple conditions and needs, including COPD, upper respiratory tract infection, BPH, anemia, and GERD.
2. Identify methods for effectively managing transitions-of-care issues.
3. Recognize and resolve medication reconciliation issues.
4. Determine roles and responsibilities that members of an inter-professional team play in the care of a specific patient.
5. Describe systems for ongoing quality improvement.

Complex Case: “Should I be washing the sheets?”

At the conclusion of this session, given a patient case, the participant should be able to:

1. Answer correctly case-based questions about appropriate ambulatory treatment of a complex pediatric patient with multiple conditions and needs, including lice, asthma, ADHD, skin infection, and poisoning.
2. Recommend appropriate immunizations for a specific patient.
3. Identify appropriate drug-related patient education and counseling.
4. Identify and explain how to teach a patient to use self-care devices for monitoring chronic diseases.
5. Identify appropriate resource groups, organizations, and agencies that would be helpful to a specific patient.
6. Identify appropriate care for patients affected by public health threats and disasters.
7. Explain effective disaster response preparation and planning.

Complex Case: “It’s time for Plan B!”

At the conclusion of this session, given a patient case, the participant should be able to:

1. Correctly answer case-based questions about appropriate ambulatory treatment of a complex patient with multiple conditions and needs, including contraception, emergency contraception, urinary tract infection, vulvovaginitis, sleep disorder, and pregnancy.
2. Explain appropriate patient-specific wellness and prevention education and counseling.
3. Identify appropriate patient-specific education and counseling about nonprescription (over-the-counter or OTC) products, including herbal supplements.
4. Identify appropriate screening tests for a given patient.
5. Identify resource groups, organizations, and agencies that may be helpful to a given patient.
6. Identify an appropriate response to a drug information request.
**Complex Case: “My leg is killing me!”**

At the conclusion of this session, given a patient case, the participant should be able to:

1. Correctly answer case-based questions about appropriate ambulatory treatment of a complex patient with multiple conditions and needs, including atrial fibrillation, DVT, hypothyroidism, anticoagulation, stroke prevention, and a history of alcohol dependency.
2. Correctly interpret pertinent literature involving the treatment of atrial fibrillation related to the patient case.
3. Describe how to manage point-of-care testing in accordance with regulatory requirements.
4. Discuss the pharmacist’s scope of practice under the specifications of a collaborative practice agreement.
5. Identify clinically significant drug interactions involving warfarin and complementary and alternative medicines.

**Practice Management**

At the conclusion of this session, given a patient case, the participant should be able to:

1. Explain how to identify the need for and establish ambulatory clinical pharmacy services in response to patient care needs and/or business potential.
2. Apply skills needed to perform evaluations of quality, value, and need to justify, modify, disband, or expand ambulatory care pharmacy services.
3. Explain how to organize a practice in a manner that supports efficient work flow, and integration of care, and assures timely patient visits and follow-up as well as assuring time, space, and resources necessary to provide patient care services.
4. Explain how to manage a financially viable practice.
5. Explain how to develop systems to obtain reimbursement for ambulatory clinical pharmacy services.
6. Summarize key points pertaining to scope of practice and other guidelines.
7. Discuss quality as it relates to pharmacy practice.
8. Identify different quality improvement methods.
9. Provide successful examples of pharmacist quality improvement initiatives.
10. Differentiate between various quality organizations.
11. Explain the role of performance measurement.
**Complex Case: “I can’t walk to the mailbox!”**

At the conclusion of this session, given a patient case, the participant should be able to:

1. Correctly answer case-based questions about appropriate ambulatory treatment, including follow-up assessment and treatment, of a complex patient with multiple conditions and needs, including heart failure, electrolyte abnormalities, coronary artery disease, and gout.
2. Identify and explain how to interpret pertinent physical and diagnostic assessments of a given patient’s current condition and/or therapies.
3. Assess a patient’s self-management knowledge, understanding, skills and willingness and ability to actively participate in his/her own care.
4. Explain disease-related patient education/counseling needed by a specific patient.
5. Explain focused and integrated disease-state management for a specific patient.

**Complex Case: “The pressure is getting to me!”**

At the conclusion of this session, given a patient case, the participant should be able to:

1. Correctly answer case-based questions about appropriate ambulatory treatment of a complex patient with multiple conditions including chronic pain, constipation, chronic kidney disease, peptic ulcer, and sinusitis.
2. Explain how to conduct symptom analysis using effective interviewing techniques.
3. Identify and make appropriate referrals when a given patient’s needs are beyond the scope of the ambulatory care pharmacy specialist.
4. Explain effective systems for tracking medication errors and determining possible interventions.

**Complex Case: “How do you expect me to pay for all this?”**

At the conclusion of this session, given a patient case, the participant should be able to:

1. Correctly answer case-based questions about appropriate ambulatory treatment for a complex patient with multiple medical problems, including diabetes, hypertension, dyslipidemia, obesity, sexual dysfunction and who is a smoker.
2. Identify effective methods of managing affordability and cost-effectiveness issues for an underserved patient.
3. Identify and recommend appropriate resource organizations/groups to assist a specific patient.
Complex Case: “She is burning the pots”

At the conclusion of this session, given a patient case, the participant should be able to:

1. Correctly answer case-based questions about appropriate ambulatory treatment of a complex geriatric patient with multiple conditions, including osteoarthritis, osteoporosis, dementia, glaucoma, incontinence, and thyroid disorder.
2. Identify patient-specific barriers to successful drug therapy.
3. Determine a patient’s ability and willingness to pay for services (e.g., insurance coverage, out of pocket expenses).
4. Explain and incorporate information from community screenings into patient assessment and care.
5. Resolve formulary issues to ensure access to cost-effective drug therapy.