

IDSAP 2020 Book 1 (*PK/PD in Special Populations and Antimicrobial Prophylaxis*)

Release date: May 15, 2020

BCIDP test deadline: 11:59 p.m. (Central) on November 16, 2020.

ACPE test deadline: 11:59 p.m. (Central) on May 15, 2023.

Target Audience: The target audience for *PK/PD in Special Populations and Antimicrobial Prophylaxis* is Board Certified Infectious Diseases Pharmacists caring for patients with or at risk of infectious diseases.

Module I (4.5 CPE): UAN 0217-9999-20-018-H01-P

Chapter: PK/PD in Critical Illness

Learning Objectives

1. Evaluate the impact of critical illness-related pharmacokinetic and pharmacodynamic differences on antimicrobial exposures and dosing requirements in critically ill patients.
2. Design and justify various alternative dosing strategies for commonly used antimicrobials that can be applied in critically ill patients based on current pharmacokinetic and pharmacodynamic data.
3. Design and justify various antimicrobial dosing strategies for sub-groups of patients in the ICU (e.g., augmented renal clearance, renal replacement therapy and extracorporeal membrane oxygenation patients).
4. Evaluate and assess the latest pharmacokinetic and pharmacodynamic data presented to be applied in clinical decision making.

Chapter: TDM of Anti-infectives

Learning Objectives

1. Assess for various pharmacodynamic end points associated with optimal antimicrobial activity.
2. Justify implementation and/or creation of therapeutic drug monitoring services.
3. Distinguish between calculations to appropriately determine patient-specific pharmacokinetic parameters.
4. Compare and contrast the benefits of various dosing strategies for antimicrobials such as vancomycin and aminoglycosides.
5. Assess serum concentrations of medications that require therapeutic drug monitoring and make appropriate recommendations for dose adjustment.

Module II (6.0 CPE): UAN 0217-9999-20-019-H01-P

Chapter: Surgical Prophylaxis

Learning Objectives

1. Evaluate published evidence regarding optimal antimicrobial prophylactic regimens and explain the role of various antimicrobial prophylactic treatment plans.

2. For a given patient, develop an antimicrobial plan for the prevention of surgical site infection.
3. Assess patients for risk factors associated with an increased risk of surgical site infections.
4. Evaluate the role of topical antibiotics for the prevention of surgical infections.

Chapter: Adult Vaccines

Learning Objectives

1. Develop an understanding of recent epidemiologic changes, etiology, risk factors, and clinical presentation of common vaccine-preventable diseases.
2. Distinguish between the various available influenza, pneumococcal, herpes zoster, tetanus diphtheria pertussis, measles mumps rubella, and hepatitis vaccines.
3. Evaluate the impact of influenza and pneumococcal vaccines on antibiotic resistance.
4. Design a patient-specific immunization regimen based on age, risk factors, and comorbid conditions.
5. Justify the role of the pharmacist in addressing pseudo-science.

Chapter: Drug Assay Methodologies

Learning Objectives

1. Distinguish between the types of bioanalytical methods and assess advantages and disadvantages of each method.
2. Evaluate drug concentrations based on the approved FDA procedures and protocols.
3. Develop validated assays according to the FDA standards.
4. Apply common procedures and workflow for drug concentration quantification.
5. Distinguish between procedures needed for clinical and research-only samples.

Module III (3.0 CPE): UAN 0217-9999-20-118-H01-P

Interactive Case: Clinical Decision Support Systems in Drug Dosing

Learning Objectives

1. Assess for technical and regulatory challenges around precision dosing clinical decision-support systems (CDSS), ability to classify tools.
2. Apply the concepts of Bayesian dosing tools, exemplified using vancomycin
3. Assess appropriateness and limitations of literature PK models, and how to apply in individual patient cases.
4. Evaluate the use of dosing tools in individual patient cases.

Recorded Webcast: Regulatory Environment for Drugs

Learning Objectives

1. Evaluate the societal, clinical, and economic burden of antimicrobial resistance and the importance of antibiotics to health care.
2. Assess the various stages of drug development while providing timelines in each stage and how the FDA is involved in each stage of R&D.
3. Evaluate the regulatory process for drugs from the FDA perspective.
4. Distinguish between the various legislative and funding approaches in aiding with antimicrobial development and approval.

5. Evaluate novel regulatory processes to aid in the development and approval of antibiotics.