LEARNING OBJECTIVES

On completion of the chapter, the reader will be able to:

1. Recognize general signs, symptoms, laboratory, and microbiologic findings of a patient with an infection.
2. Apply susceptibility data from an institution’s antibiogram in choosing presumptive antimicrobial therapy.
3. Select antimicrobial(s) of choice based on organism and infectious disease.
4. Design an appropriate antimicrobial regimen for a patient-based allergy profile, age, renal and liver function, concomitant disease states, and infection.
5. Propose alternative antimicrobial therapy for a patient with a penicillin allergy.
6. Discuss metabolic and host genetic variations that may affect antimicrobial therapy.
7. Identify major drug interactions with antimicrobials.
8. Differentiate adverse drug reactions profiles associated with antimicrobial classes.
9. Explain key pharmacodynamic relationships to optimize antimicrobial dosing.
10. Recommend antimicrobial agents based on tissue or fluid penetration and site of infection.
11. Debate advantages and disadvantages of using combination antimicrobial therapy.
12. Formulate a monitoring plan to assess therapeutic response after initiation of antimicrobial therapy.
13. Evaluate issues including drug selection, host factors, and pathogen(s) in a patient lacking clinical response to antimicrobial therapy.
14. List clinical parameters to consider when switching from parenteral to oral therapy.
15. Define antimicrobial cycling including specific methods and assumptions.