



# Microbes and Infectious Diseases

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## Continuous Medical Education Forum (CME from EB)

### Continuous medical education activities; Case No. 6. Train to apply principles of prudent antimicrobial use

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#### CASE INFO

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#### Abstract

Antimicrobial stewardship entails every provider selects “The right antibiotic, for the right indication (right diagnosis), the right patient, at the right time, with the right dose and route, causing the least harm to the patient and future patients.” If followed strictly, these principles ensure that providers only prescribe antibiotics for non-self-limiting bacterial infections. Depending on the clinical setting antimicrobial stewardship programs will target their goals and outcomes based on available resources and opportunities. Those goals fall under the following categories: 1) Improve patient care and outcomes. 2) Reduce collateral damage and 3) Impact costs. We will present two cases to discuss how to apply principles of prudent antimicrobial prescribing.

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#### **Case 1:**

A 35-year-old woman presents with 2 days of burning on urination and today noticed some blood in her urine. You diagnose acute uncomplicated cystitis. What is the Infectious Diseases Society of America (IDSA) Guideline first line recommended agent for treatment?

- a. No antibiotics and reassurance
- b. Cranberry juice
- c. Ampicillin
- d. Ciprofloxacin
- e. Nitrofurantoin

#### **Case 2:**

A 58-year-old female with end stage renal disease has fever (Tmax 101.9 F) during hemodialysis. Three sets of

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blood cultures are taken, and patient is empirically started on vancomycin and cefepime. At 72 hours cultures report a methicillin susceptible *S. aureus* (MSSA). Using stewardship principles, what alterations in antibiotic therapy should be recommended?

- a. Discontinue cefepime and continue vancomycin
- b. Discontinue cefepime and vancomycin, initiate cefazolin
- c. Discontinue cefepime and vancomycin, initiate ceftaroline
- d. Replace the hemodialysis catheter and discontinue all antibiotics

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