UW TASP
tele-antimicrobial stewardship program | echo

August 5, 2025

Agenda

- ID Cases
- Case Discussions
- Open Discussion

Case 1

A 72-year-old F develops a Gram-negative bacteremia following bowel resection

The rapid diagnostic panel detects *E.coli* with CTX-M.

Which of the following is the best treatment option?

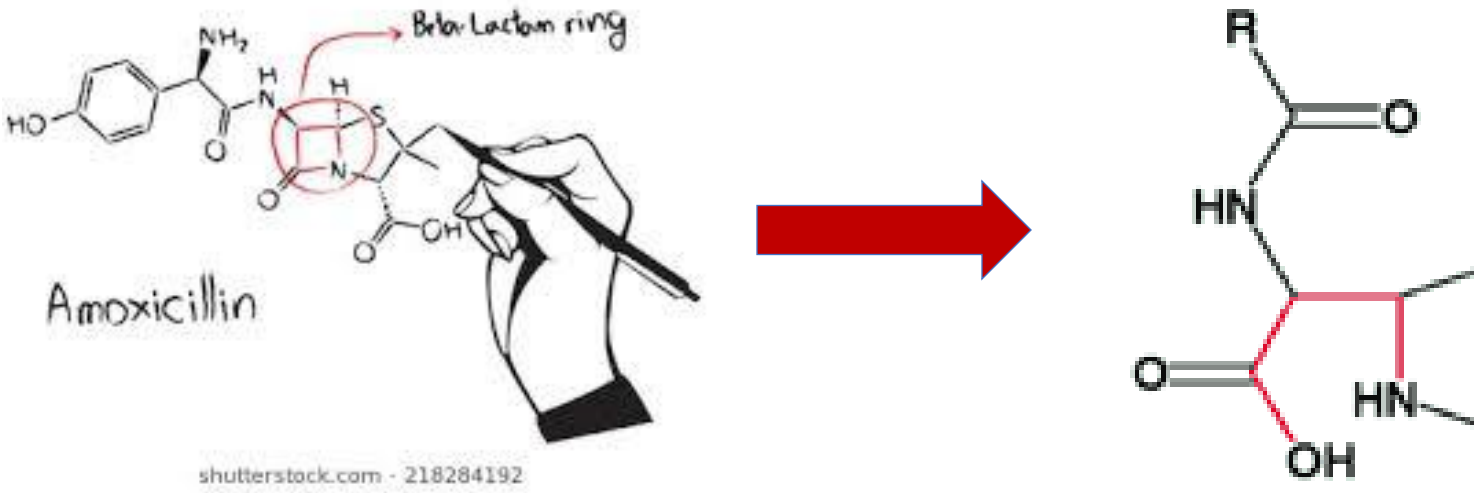
A. Cefepime
B. Ceftriaxone
C. Meropenem
D. Piperacillin-tazobactam

Case and Question from: J.Nicholas O'Donnell PharmD. 2022. ACCP

What is CTX-M?

The most common Extended Spectrum Beta-Lactamase (ESBL) in the U.S.

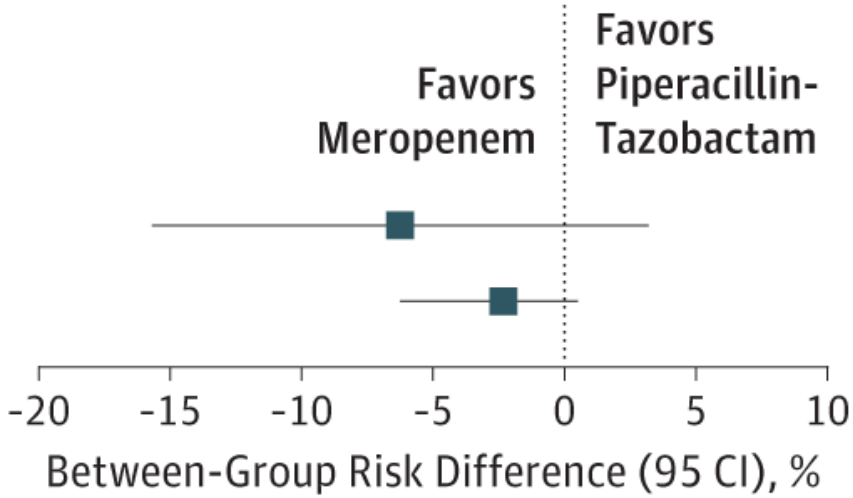
- Cefotaxime-hydrolysing β-lactamase isolated in Munich (1980s)
- ESBLs = family of enzymes (often on a plasmid) that degrade the beta-lactam ring of most penicillins and cephalosporins.



Castanheira et al. 2021. JAC Antimicrob Resist. doi: 10.1093/jacamr/dlab092
Slide Credit: Chloe Bryson Cahn

MERINO Trial (2018 RCT):
Meropenem vs. Pip/Tazo for ESBL bloodstream infection

Measure of Success
Clinical and microbiological success at day 4[a]
Microbiological success at day 4



Conclusions and relevance Among patients with *E coli* or *K pneumoniae* bloodstream infection and ceftriaxone resistance, **definitive treatment with piperacillin-tazobactam compared with meropenem did not result in a noninferior 30-day mortality.** These findings do not support use of piperacillin-tazobactam in this setting.

Harris PNA et al. JAMA 2018;320;(10):984-994. doi:10.1001/jama.2018.12163

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Case and Question adapted from: J.Nicholas O'Donnell PharmD. 2022. ACCP

Case 2

A 5 yo M with unilateral acute otitis media (AOM)

He has a 2-day history of fever (Tmax 38.5 °C), otalgia, and ear tugging, possible effusions and opaque tympanic membrane.

What is the most appropriate initial treatment option?

A. Amoxicillin 45 mg/kg/dose BID x 7 days
B. Ciprofloxacin 10 mg/kg/dose BID x 7 days
C. Amox/clav 45mg/kg/dose by mouth BID x 5 days
D. No antibiotics at this time.

Case and Question from: K.R. Stover PharmD. 2022. ACCP

American Academy of Pediatrics (AAP)
Acute otitis media antibiotic treatment guidance

5yo with 2-day history of fever (Tmax 38.5 °C), otalgia, and ear tugging, possible effusions and opaque tympanic membrane.

	6 mo – 2 years	>=2 years
Otorrhea with AOM	Antibiotics	Antibiotics
Uni or Bilateral AOM with severe symptoms	Antibiotics	Antibiotics
Bilateral AOM without otorrhea	Antibiotics	Antibiotics OR Observation
Unilateral AOM without otorrhea	Antibiotics OR Observation	Antibiotics OR Observation

Lieberthal et al. 2013. Pediatrics. doi: 10.1542/peds.2012-3488.
Paul and Frohna. 2025. Pediatr Rev. doi: 10.1542/pir.2023-006216.

2 Things to Note

1. **Severe symptoms merit antibiotics**
   - A toxic-appearing child
   - Persistent otalgia > 48 h
   - Temperature ≥39°C (102.2°F) in the past 48 h
   - Uncertain access to follow-up

2. **If observation is offered**
   - Ensure follow-up and begin antibiotics if the child worsens or fails to improve within 48 to 72 h of AOM onset.

Lieberthal et al. 2013. Pediatrics. doi: 10.1542/peds.2012-3488.
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Make that 3 things

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"Appropriate nonprescription analgesic medication is the foundation of management of AOM in children."

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Case and Question from: K.R. Stover PharmD. 2022. ACCP

Case 3

A 68 yo M with long-standing, uncontrolled DM2, HTN, and HLD presents to for routine clinic visit and found to have a large ulcer on his heal

The area around the ulcer is warm to the touch, tender on palpation and malodorous. The surrounding erythema is about 0.8 cm wide. He has a history of diabetic foot infections. Last was 1 year ago with MRSA.

T = 99.1°F, HR = 76 bpm, BP = 134/90, RR = 22

Which grade of perfusion, extent, depth, infection, sensation (PEDIS) and IDSA interpretation best describes this patient?

A. PEDIS grade 1; not infected
B. PEDIS grade 2; mild infection
C. PEDIS grade 3; moderate infection
D. PEDIS grade 4; severe infection

Case and Question from: J. Harting PharmD. 2022. ACCP

IDSA/PEDIS Score

PEDIS Grade	Severity of Infection	Signs and Symptoms
1	Uninfected	•Wound with no purulence or inflammation
2	Mild	•≥2 signs of inflammation (purulence, erythema, tenderness, warmth, induration) •≤ 2 cm extension of erythema or cellulitis from the ulcer •limited to skin or superficial subcutaneous tissue •No systemic illness
3	Moderate	•Infected but hemodynamically stable •≥1 of the following characteristics: Cellulitis >2cm, lymphangitis streaking, involvement below superficial fascia, deep tissue abscess, gangrene, involvement of muscle, joint or bone
4	Severe	•Infection as above and meets SIRS criteria

Monteiro-Soares et al. 2019. International Working Group on the Diabetic Foot Guidelines on Prevention and Mangaement of Diabetic Foot Disease. www.iwgdfguidelines.org

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B. Linezolid x14 days
C. Doxycycline x7 days
D. Admission to the hospital to start IV vancomycin

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A 28 year old health care worker presents to employee health with the following Hep B serologies:

HBsAg: negative

Total Anti-HBs (HBsAb): postive

Total Anti-HBc (HBcAb): negative

Which is the correct interpretation?

A. Patient has acute infection
B. Patient has chronic infection
C. Patient is immune due to prior exposure/infection
D. Patient is immune due to vaccination

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Board Certification (Pharmacists)

- **Who:** Pharmacists who specialize in use of microbiology and pharmacology to develop, implement, and monitor drug regimens that incorporate antimicrobials to optimize therapy for patients
- **Why:** To validate that the pharmacist has advanced knowledge and experience to…lead antimicrobial stewardship, and improve public health
- **What:** Exam with 150 questions, 125 scored
- **Requirements:**
  - Graduation from an accredited pharmacy program
  - Current active license to practice pharmacy in the US or another jurisdiction
  - 1 of the following:
    - 4+ years of infectious disease practice experience
    - Pharmacy practice residency + 2 years of infectious disease practice experience
    - Infectious diseases pharmacy residency

https://bpsweb.org/infectious-diseases-pharmacy/