No Vein, No Gain? Think Again.
Transitioning to Oral Antibiotics

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Nebraska Infectious Diseases Conference

28 August 2026

Nebraska Medicine

Learning Objectives

1. Identify the benefits of transitioning from IV-to-oral antimicrobial therapy
2. Describe eligibility for IV-to-oral antimicrobial conversion
3. Discuss a patient case to determine the most appropriate oral antimicrobial therapy


PROVIDERS WHEN I ASK TO SWITCH
TO PO FOR COMPLICATED INFECTION
imgflip.com

The Evidence: PO is just as effective as IV

- PJI, osteomyelitis, VOM
- IV to PO switch after ~7 days of treatment
- 1y treatment failure: 13.2% (PO) vs 14.6% (IV)

Ho-Kwong et al. *N Engl J Med.* 2019.

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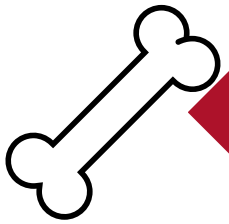

OVIVA

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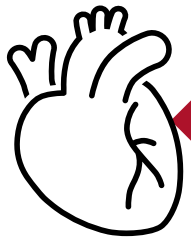
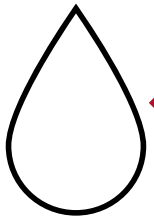


POET

- Left-sided endocarditis
- IV to PO switch when stable & after ~10d of treatment
- 6mo all-cause mortality & associated adverse events: 9.0% (PO) vs 12.1% (IV)



SABATO

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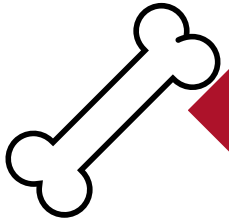

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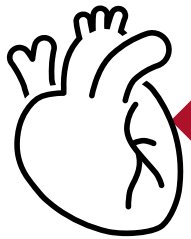

POET

- Left-sided endocarditis
- IV to PO switch when stable after ~10d of treatment
- Cumulative-cause mortality & associated adverse events: 9.0% (PO) vs 12.1% (IV)

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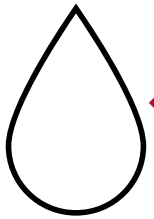

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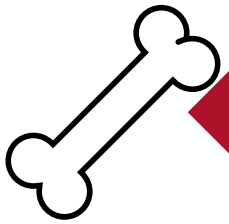

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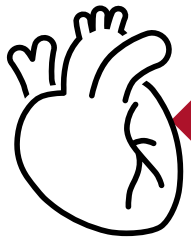

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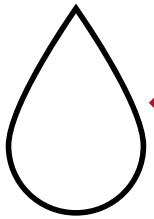

SABATO

- Uncomplicated S. aureus bloodstream infection
- IV to PO switch 5-7d of treatment
- 90d complication rate: 13% (PO) vs 12% (IV)

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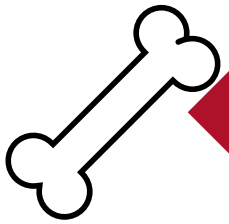

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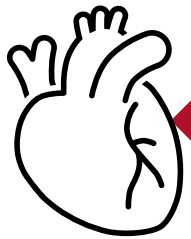

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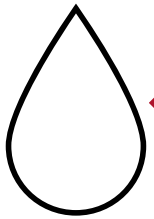

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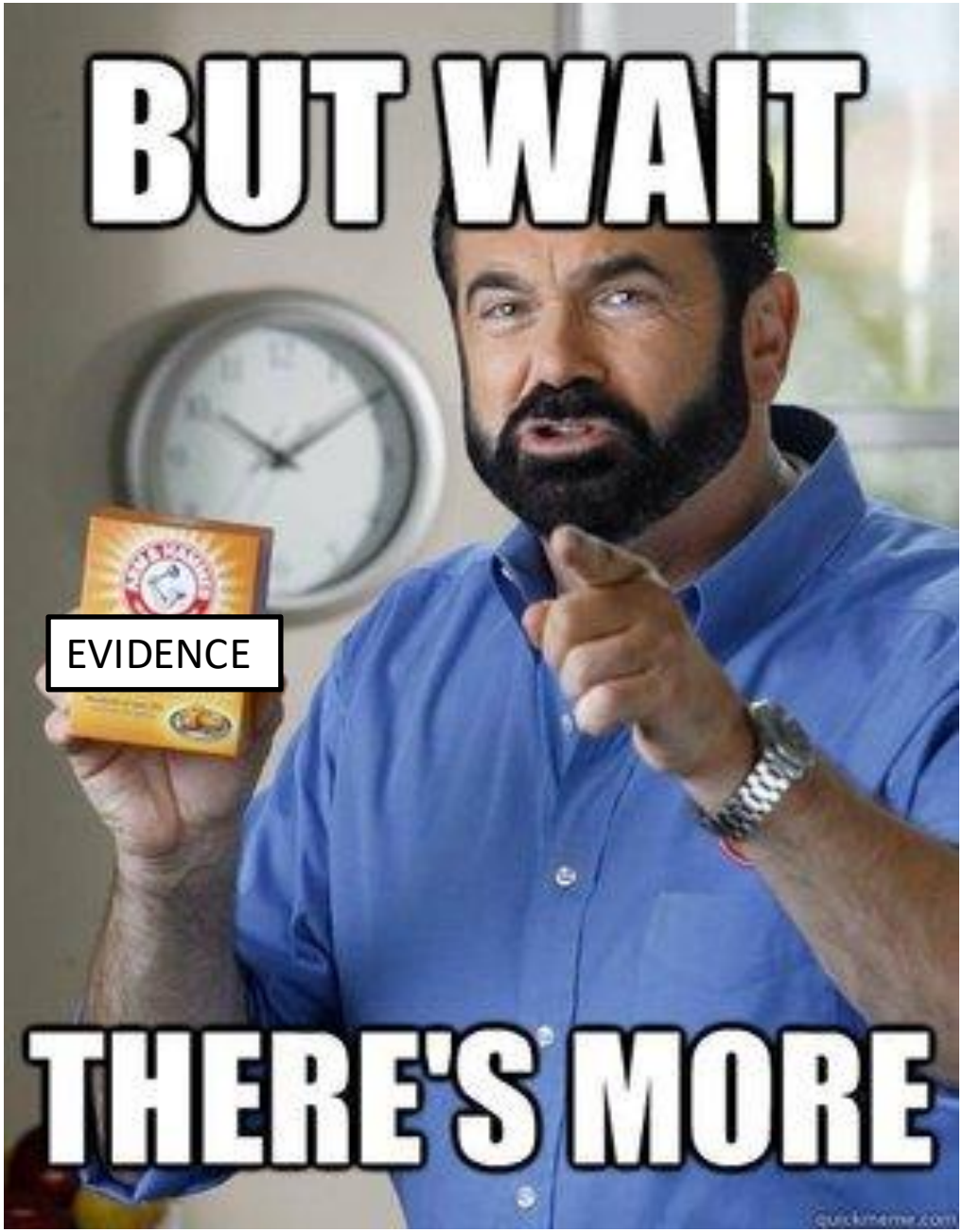

BUT WAIT
EVIDENCE
THERE'S MORE

Much, much, more…

CLINICAL RESEARCH STUDY

THE AMERICAN JOURNAL of MEDICINE®

Oral Is the New IV. Challenging Decades of Blood and Bone Infection Dogma: A Systematic Review

Noah Wald-Dickler, MD,[a,b,c] Paul D. Holtom, MD,[a,b] Matthew C. Phillips, MD,[a] Robert M. Centor, MD,[d,e] Rachael. A. Lee, MD,[d,e] Rachel Baden, MD,[a] Brad Spellberg, MD[a]

[a]Los Angeles County + University of Southern California Medical Center, Los Angeles; [b]Department of Medicine, Keck School of Medicine, University of Southern California, Los Angeles; [c]Department of Preventive Medicine, Keck School of Medicine, University of Southern California, Los Angeles; [d]Department of Medicine, University of Alabama at Birmingham School of Medicine, Birmingham; [e]Birmingham Veterans Affairs (VA) Medical Center, Birmingham, Ala.

Visit https://www.bradspellberg.com/oral-antibiotics for a comprehensive list of articles supporting early IV to PO switch

Additional Benefits of IV to PO

Improved safety outcomes

- Reduces line-related complications

Cost effective

- Decreased hospital length of stay, supply costs, labor

Increased patient satisfaction

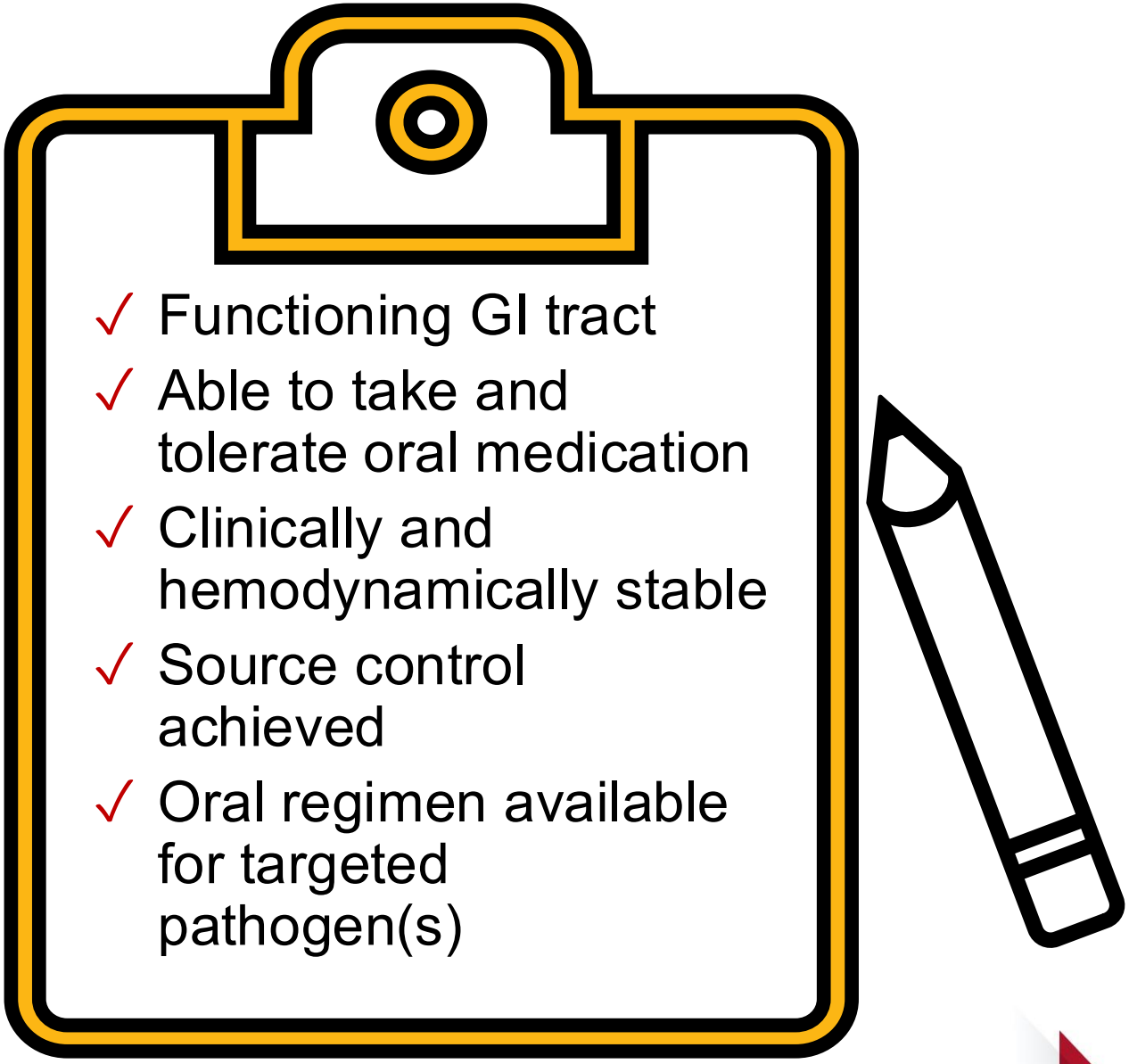
- Greater mobility, comfort, convenience

Environmentally Friendly

- Less waste production
- Antibiotic Waste Impact Calculator: https://ecorxchoice.com/?page=home

Cole et al. *JAC-Antimicrob Resist. 2025*
Kaacsh et al. *Lancet Infect Dis.* 2024
Landersdorfer et al. *Clin Microbiol Infect.* 2023
Wald-Dickler et al. *Am J Med.* 2022
Li et al. *N Engl J Med.* 2019.
Iversen et al. *N Engl J Med*. 2019

Considerations for Oral Step-Down



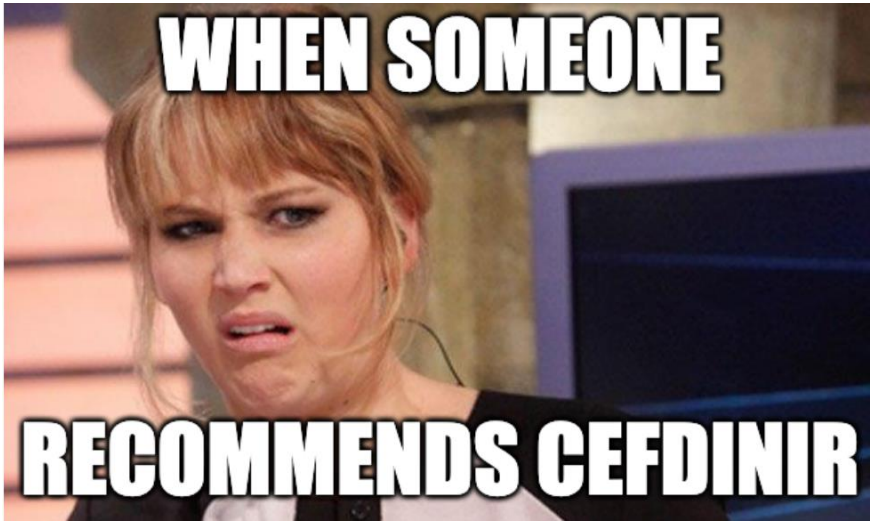
Wald-Dickler et al. *Am J Med.* 2022 Landersdorfer et al. *Clin Microbiol Infect.* 2023

Selecting an Antibiotic

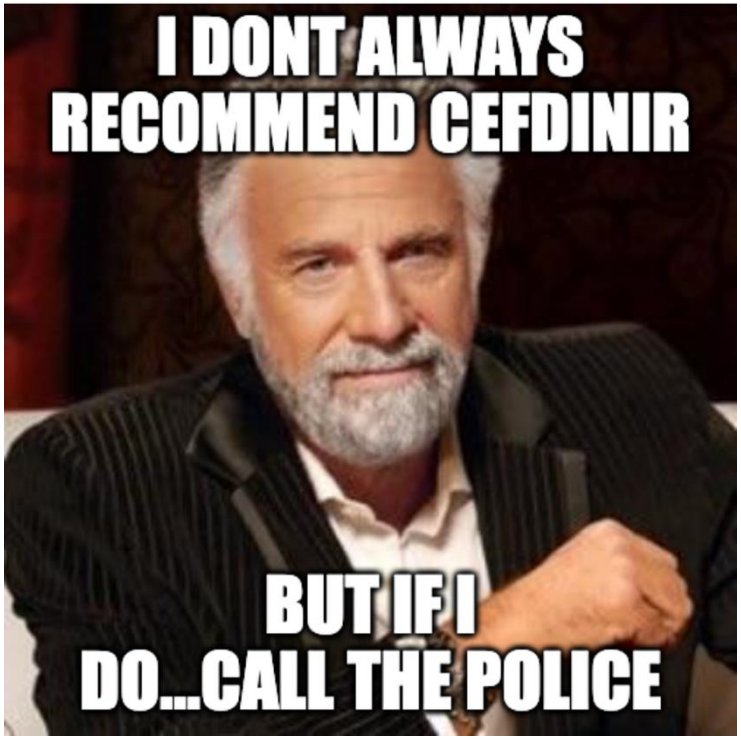
Empiric therapy → use your local antibiogram
Pathogen identified → use reported susceptibilities

Very Highly Bioavailable (~90-100%)	• Linezolid • Levofloxacin • Doxycycline • Cephalexin • Metronidazole
Highly Bioavailable (~80-90%)	• Amoxicillin • Ciprofloxacin • Bactrim

Landersdorfer et al. *Clin Microbiol Infect.* 2023


WHEN SOMEONE
RECOMMENDS CEFDINIR


WHEN THEY ASK ME
TO APPROVE CEFDINIR
no


I DONT ALWAYS
RECOMMEND CEFDINIR
BUT IF I
DO...CALL THE POLICE


CEFDINIR
JUST
SAY
NO

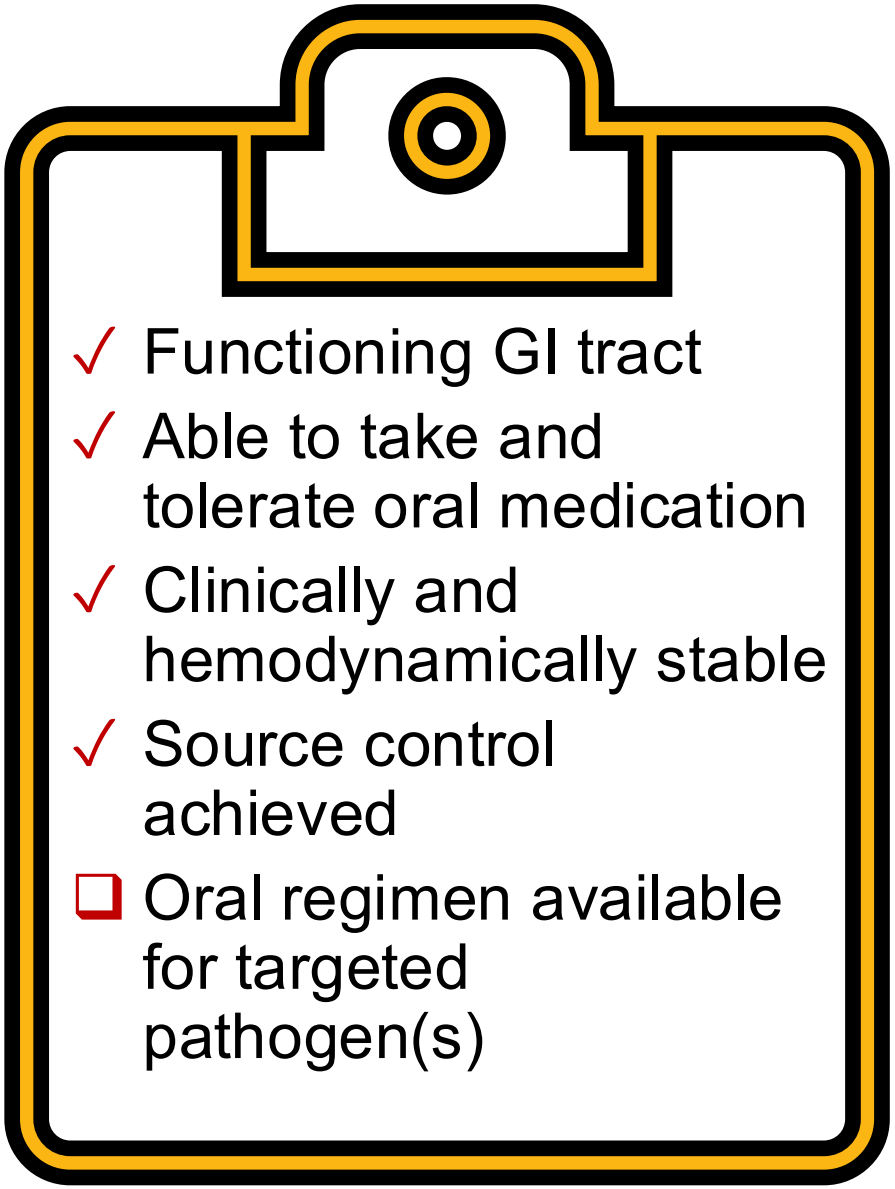
Patient Case

70yo M with PMH of penicillin allergy (reaction: anaphylaxis) and obesity (BMI 32), s/p L knee TKA ~2 months ago, now presenting with increased L knee erythema concerning for PJI. A DAIR was performed, cultures have finalized with MSSA, and current plan is for 6wk of cefazolin 2g q8h. It is now post-op day 10 and patient's only barrier to discharge is finding a facility that will accept q8h dosing.

Staphylococcus aureus		
	MIC	Interpretation
Clindamycin	4	Resistant
Daptomycin	0.5	Susceptible
Linezolid	1	Susceptible
Oxacillin	1	Susceptible
Tetracycline	<=2	Susceptible
Trimethoprim -Sulfa.	<=0.5/9.5	Susceptible
Vancomycin	2	Susceptible

Is this patient eligible for early IV to PO switch?

TKA: total knee arthroplasty
PJI: prosthetic joint infection
DAIR: debridement, antibiotics, and implant retention



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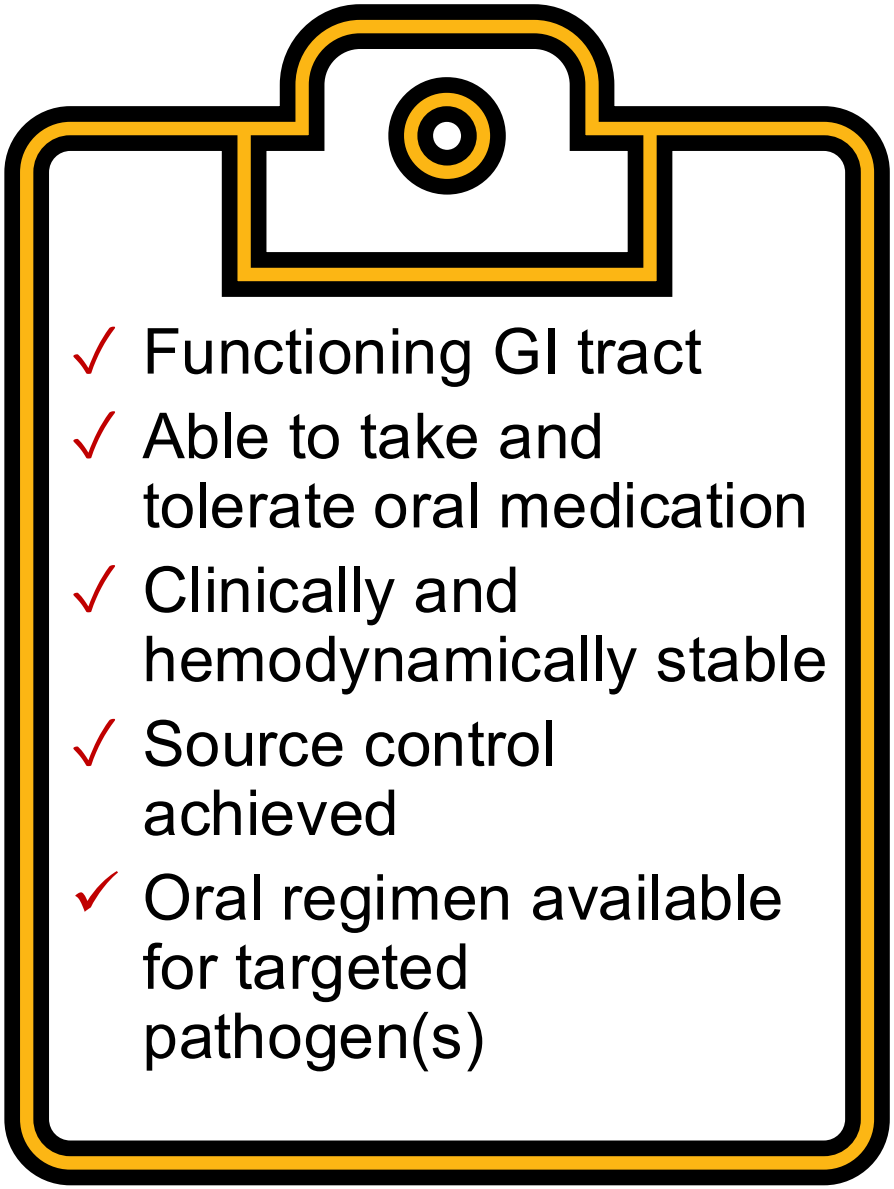

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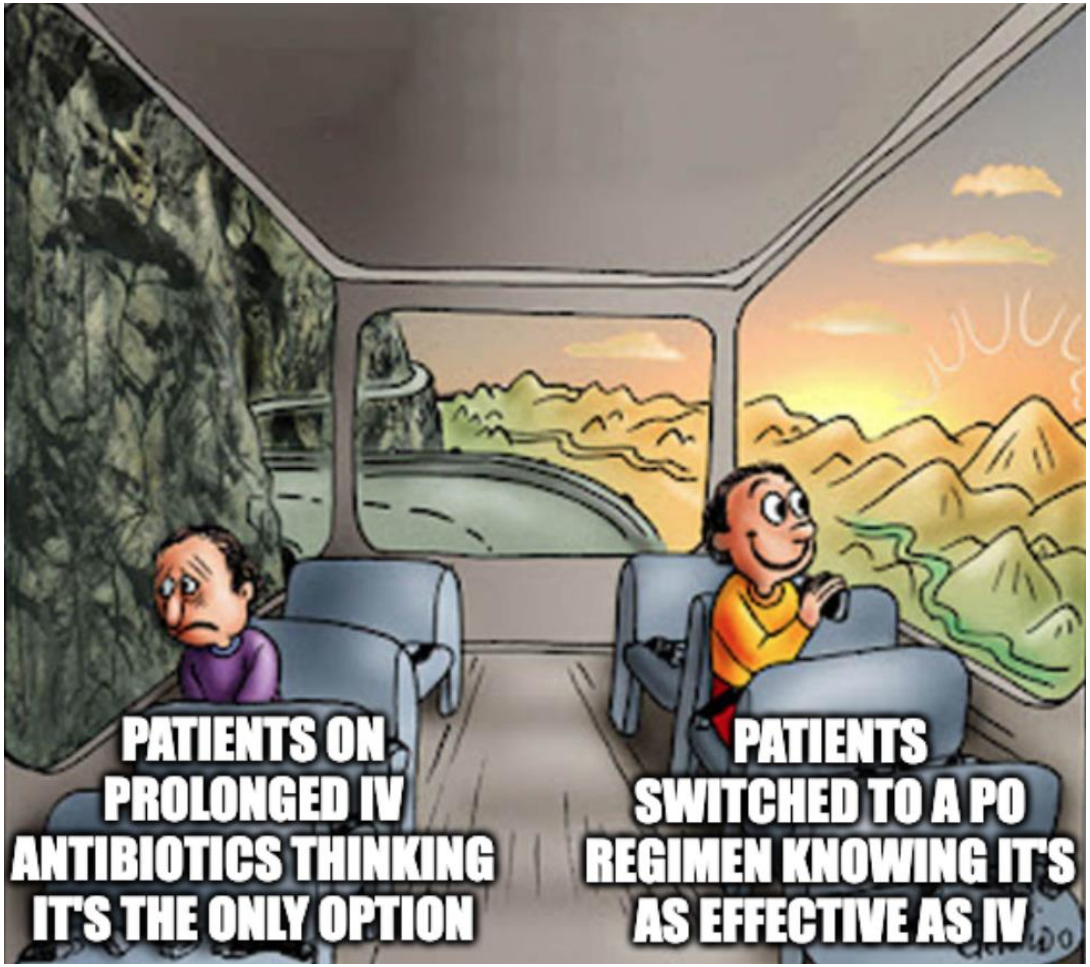
Allergies: Penicillin (anaphylaxis)

Patient-Centered Decision Making



The Pharmacist-Physician Partnership

Pharmacist

- Recommend appropriate PO agent and dosing
- Patient medication counseling

Physician

- Assess and monitor clinical stability
- Document plan
- Patient follow-up appointments (if needed)

► Review IV antibiotics daily to identify candidates for early PO switch ◄

Successful IV-to-PO programs rely on multidisciplinary collaboration

Take Home Messages

- ✓ Review IV antibiotics daily
- ✓ Early oral conversion is safe and evidenced-based
- ✓ IV to PO switch reduces complications, costs, and length of stay
- ✓ Pharmacists and physicians are essential partners in antimicrobial stewardship

Nebraska Medicine

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