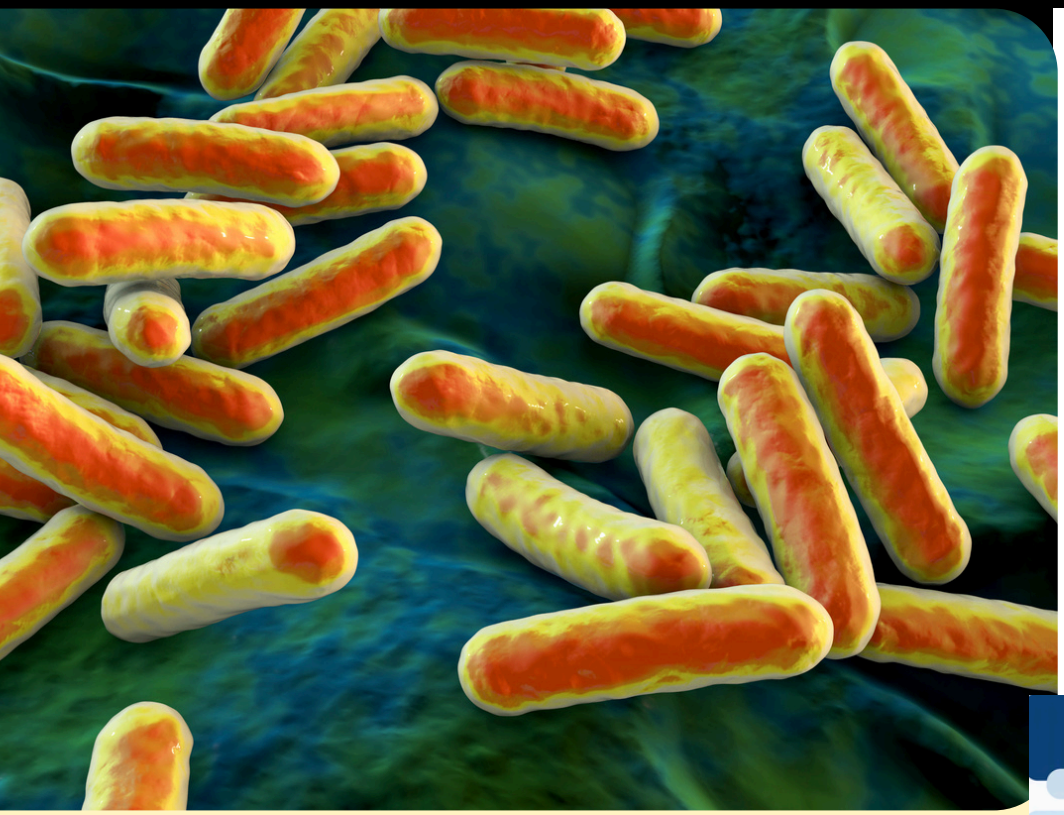
THE ANTIMICROBIAL ADVOCATE

NE ASAP NEWSLETTER

Volume 3: Issue 10
October 2026



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It's Respiratory Season!

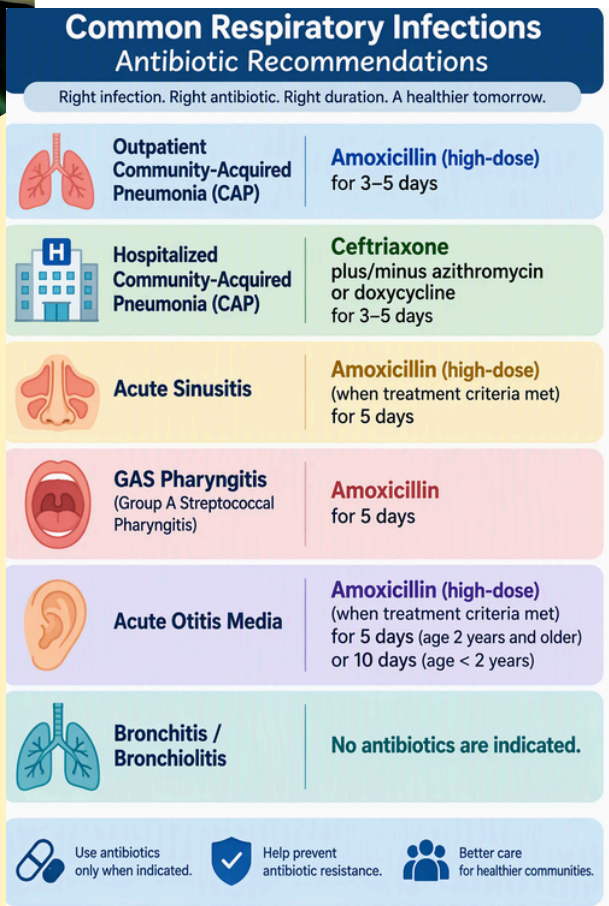
Respiratory Virus Immunization Resources:

- CDC COVID-19 and Influenza
- American Medical Association

Antiviral Treatment Guidelines

- COVID-19
- Influenza
  - Recently, the REMAP-CAP Trial found 98% probability of harm when oseltamivir given to critically ill patients with influenza

Reminder for common bacterial infections



How Many Ceftriaxone Doses Does it Take to Treat Acute Otitis Media

2011 American Academy of Pediatrics Guidelines for Acute Otitis Media recommends 1-3 doses

How do you choose?

References:

- AAP AOM Guidelines
- Single-dose IM ceftriaxone for AOM in Children
- One dose ceftriaxone vs ten days of amox/clav
- One vs 3 days IM ceftriaxone

Watchful Waiting

- >80% of AOM resolves without antibiotics
- Consider watchful waiting over immediate antibiotic prescriptions

S. pneumoniae is King

- Amoxicillin high-dose is first line
  - Amox-clav if recent amoxicillin use in the last 30 days or concomitant conjunctivitis

Ceftriaxone

- Levels persist in middle ear fluid
- Compared to 10 day oral courses, 1 dose ceftriaxone is equivalent (7 RCTs)
- A 2nd or 3rd dose may be considered if limited improvement observed 48 hours after the 1st dose

Safety

Well tolerated

- GI effects most common
- No significant effect on resistance colonization in microbiome study

Key Points

- Ceftriaxone IM or IV is an alternative option for children with acute otitis media.
  - Consider for those with persistent vomiting, aversion to oral antibiotics or otherwise unable to tolerate PO, or failure of initial antibiotic therapy.
- Single-dose is **equivalent** to 7-10 days of oral antibiotics and 3 doses ceftriaxone for penicillin-susceptible *S. pneumoniae*.

UPDATE

CDC OUTPATIENT ANTIBIOTIC STEWARDSHIP CORE ELEMENTS

NE ASAP

Stewardship Self-Assessment Tool for Outpatient Facilities

01 Leadership

Allocate dedicated time and resources for outpatient stewardship lead(s) to manage and advance the program, including information technology resources.

02 Accountability

Designate a leader or co-leaders responsible for outpatient stewardship program development, management, and outcomes. Define clear roles and responsibilities and establish measurable targets.

03 Expertise

Combine antibiotic stewardship expertise with outpatient specific clinical expertise. Engage key staff within their outpatient practice. Identify service leads and engage key staff.

04 Action

Implement interventions, such as audit-and-feedback, treatment pathways, public commitment, communication training, accountable justification, and performance incentives.

05 Tracking

Monitor antibiotic prescribing, stewardship intervention impact, and other outcomes. Dedicate IT resources, monitor overall and diagnosis-specific antibiotic prescribing, and compare antibiotic use.

06 Reporting

Regularly report data on antibiotic prescribing and outcomes to healthcare professionals and leadership. Report metrics electronically through a dashboard. Share prescribing reports.

07 Education

Educate healthcare professionals, patients, and caregivers on when antibiotics are indicated and the potential harms of inappropriate antibiotics (i.e. resistance, *C difficile*, and side effects).

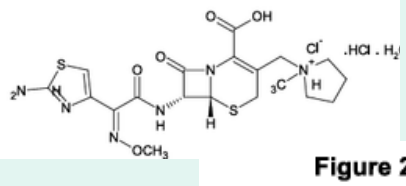
Scan the QR code to learn more about CHARM's Antibiotic Tracking Dashboard

If you are interested in signing-up for CHARM, email us at nebraskaASAP@nebraskamed.com

Cefepime-Zidebactam (Zaynich™)

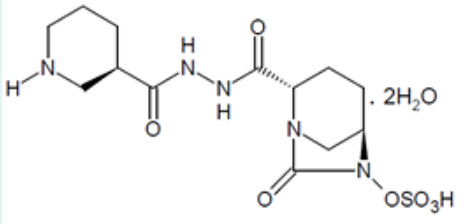
Approved May 29th, 2026 for complicated UTI in adults
New Option for Difficult-to-Treat and Metallo-β -Lactamase (MBL) Producing Gram-Negative Organisms

Figure 1. Cefepime Hydrochloride



Cefepime (FEP) exhibits broad-spectrum bacteriocidal activity via PBP 3 and PBP 1a inhibition. Notably active against *Pseudomonas aeruginosa* and stable against ampC beta-lactamases.

Figure 2. Zidebactam



Zidebactam (ZID) is a non-β-lactam, beta-lactamase inhibitor. ZID inhibits Class A (e.g., ESBL, KPC) and Class C (i.e. ampC) enzymes, but does not inhibit Class B (i.e. MBLs) or Class D (i.e. OXAs) enzymes.

Unique Attributes

- ZID inhibits ESBL, KPC, and ampC beta-lactamases
- ZID directly inhibits PBP 2, conferring activity against MBL- and OXA-producing organisms since ZID is not inactivated.
- ZID enhances FEP activity by lowering the pharmacodynamic target (i.e., from 40-70% --> 15-20% fT>MIC).

Spectrum

- **Carbapenem-resistant gram-negative organisms**
  - *Enterobacterales* (e.g., *E. coli*), including NDM, VIM, IMP, and OXA-48 producing strains
  - *Pseudomonas aeruginosa*, including difficult-to-treat resistant phenotypes and cefiderocol-non-susceptible isolates
  - *Acinetobacter baumannii*
  - *Stenotrophomonas maltophilia*

Organism	MIC90 (mcg/mL)	Susceptible (%)
Enterobacterales (n=17524)	0.25	99.9
Carbapenem-R (n=681)	2	98
MBL-producing (n=191)	4	95
NDM-producing (n=450)	1	97
OXA-48-producing (n=111)	2	100
Pseudomonas a. (n=4808)	4	99.2
Multi-drug resistant (n=262)	16	97
MBL-producing (n=94)	16	100
NDM-producing (n=72)	8	100
Acinetobacter b., CR (n=21)	16	95
Stenotrophomonas m.	16	99

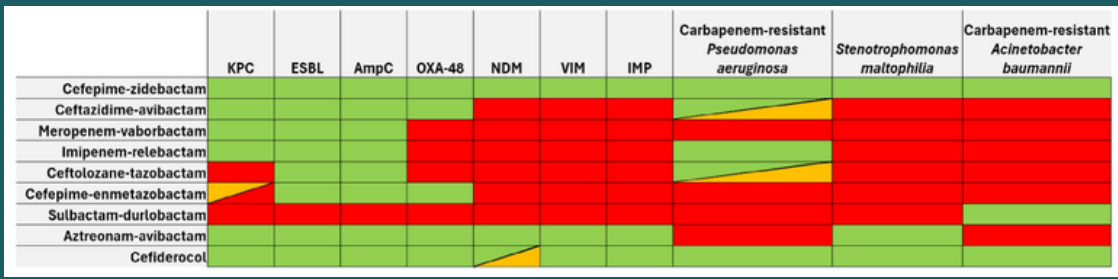
Susceptibility breakpoints have not yet been assigned, draft breakpoint set at ≤64mcg/mL per CLSI. Applied susceptibility breakpoints in the above table are ≤8mcg/mL for *Enterobacterales* and ≤ 32mcg/mL for non-*Enterobacterales*.

Dosing / PK

- 3 grams (2g FEP / 1g ZID) IV q8h over 1 hour - available as 1.5g vials
  - Dosage adjustmenet when eGFR <60 mL/min/1.73m2

Parameter*	Cefepime	Zidebactam
C_{max} (mg/L)	123.9–153	57.2–64.3
AUC_{0-8} (mg·h/L)	327–362	140–153
$t_{1/2}$ (h)	1.8–2.0	1.7–1.9
V_{ss} (L)	15.4–19.2	17.4–21.9
ELF AUC_{0-8} (mg·h/L)	128	52
Protein Binding	20%	4.0%–5.4%
CL (L/h)	5.2–6.4	6.1–7.4
Elimination	Renal (~85% excreted unchanged)	Renal (~88% excreted unchanged)

Abbreviations: AUC, area under the drug concentration-time curve; CL, clearance; ELF, epithelial lining fluid; $t_{1/2}$, half-life; V_{ss}, volume of distribution at steady state.
*Cefepime-zidebactam dose of 3 g (2 g/1 g) every 8 h as 1-h IV infusion.



Efficacy and Summary

- Enhance 1 Trial - FEP-ZID vs. Meropenem (MEM) for cUTI
  - Composite response 89% (250/281) FEP-ZID and 68.4% (93/136)
    - Difference diven by lower microbiological response with MEM on follow-up cultures.
- FEP-ZID is a welcomed addition for carbapenem-resistant gram-negative infections with limited or no alternatives available.

Van Helden SR, et al. *Pharmacotheraphy*. 2026; 46(11): e70208. doi: 10.1002/phar.70208.

US Antibiotic Awareness Week is Coming!
November 18-24, 2026

Now is a great time to brainstorm how your team can participate.
Here is a list of ideas to get you started!

- Share information on antibiotic use and resistance with staff
- Participate in Nebraska ASAP trivia (coming soon!)
- Post flyers throughout hospitals and clinics
- Promote on internal websites/intranet/social media
- Set up a table with posters/flyers in patient waiting areas or cafeterias
- Create short videos for social media/local news outlets
- Plan digital street signage
- Newsletter articles
- Highlight recent accomplishments of local hospital or LTC antibiotic stewardship teams
- Wear purple!
- Light local landmarks and buildings in purple

For more ideas and resources, visit:
U.S. Antibiotic Awareness Week (USAAW) Toolkit

EDUCATIONAL OPPORTUNITIES

MIDWEST ANTIMICROBIAL STEWARDSHIP COLLABORATIVE

MASC is a regional forum that brings together clinicians, leaders, industry, and other partners to advance antimicrobial and diagnostic stewardship.

Save the Date! Thursday, November 12th, from 1200-1300

Antibiotics and the Microbiome: What Microbiome Researchers Want Antimicrobial Stewards to Know About Antibiotic Use

This moderated session features emerging microbiome research and key microbiome implications for stewardship clinicians.

Pre-registration is not required. **Click Here for the Zoom Link to Join**

For questions or to join the mailing list, please email: MidwestASC@gmail.com

The American Society of Health-System Pharmacists is hosting a webinar for U.S. Antibiotic Awareness Week

Save the Date! Thursday, November 19th, from 1300-1400

U.S. Antibiotic Awareness Week 2026: Translating Antimicrobial Use Data into Stewardship Action

ASHP Membership Required: Click Here to Register

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Podcast Episodes You Don't Want to Miss!

From SIDP-Breakpoints, CMI/ESCMID-Communicable, and ASHP-Clinical Conversations.

ASHP-coming 11/16 - US Antibiotic Awareness Week: Update in Outpatient Antibiotic Stewardship

Breakpoints Episode #143 - Tiny Lungs, Big Protection: RSV Prevention in Infants

Breakpoints Episode #144 - Top ASHE Papers of 2026: Rapid Fire with Editors

Communicable Episode #64- Getting Micro on Macrolides for Community-Acquired Pneumonia