UWTASP tele-antimicrobial stewardship program | echo

Antibiotic Guide Update

- Speaker: *Rupali, John and Joanne*
- Case Discussions
- Open Discussion

You get a guide, you get a guide!

Available online

CSiM | CENTER FOR STEWARDSHIP IN MEDICINE

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TASP ECHO

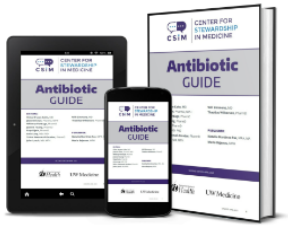
The **T**ele-Antimicorbial **S**tewardship **P**rogram **E**xtension for **C**ommunity **H**ealthcare **O**utcomes (TASP ECHO) is a weekly telehealth meeting that includes a 15-minute didactic followed by discussion of a case or question submitted by CSiM members.

Access TASP Resources >

Intensive Quality Improvement Cohort

The **I**ntensive **Q**uality **I**mprovement **C**ohort (IQIC) is a 12-month project for CSiM hospitals to implement a quality improvement initiative using patient and provider education, clinician engagement, and use of local data to optimize care.

Click here for IQIC resources >



Get the Antibiotic Pocket Guide

The UW CSiM Antibiotic Guide is based on local, Pacific Northwest resistance-based data and expert opinion.

Click here to learn more >

- If you didn't get one, email Maria.
- https://www.uwcsim.org/sites/default/files/UW_CSiM_Antibiotic_Guide-April_2023.pdf

Key updates

- ✓ Penicillin allergy updates
- ✓ Lower Respiratory tract
- ✓ Sepsis
- ✓ Updated versions are planned every other year

TABLE OF CONTENTS:

Penicillin allergy: obtaining history

When was the reaction?

How soon after taking a dose?

How far into the course of the antibiotic?

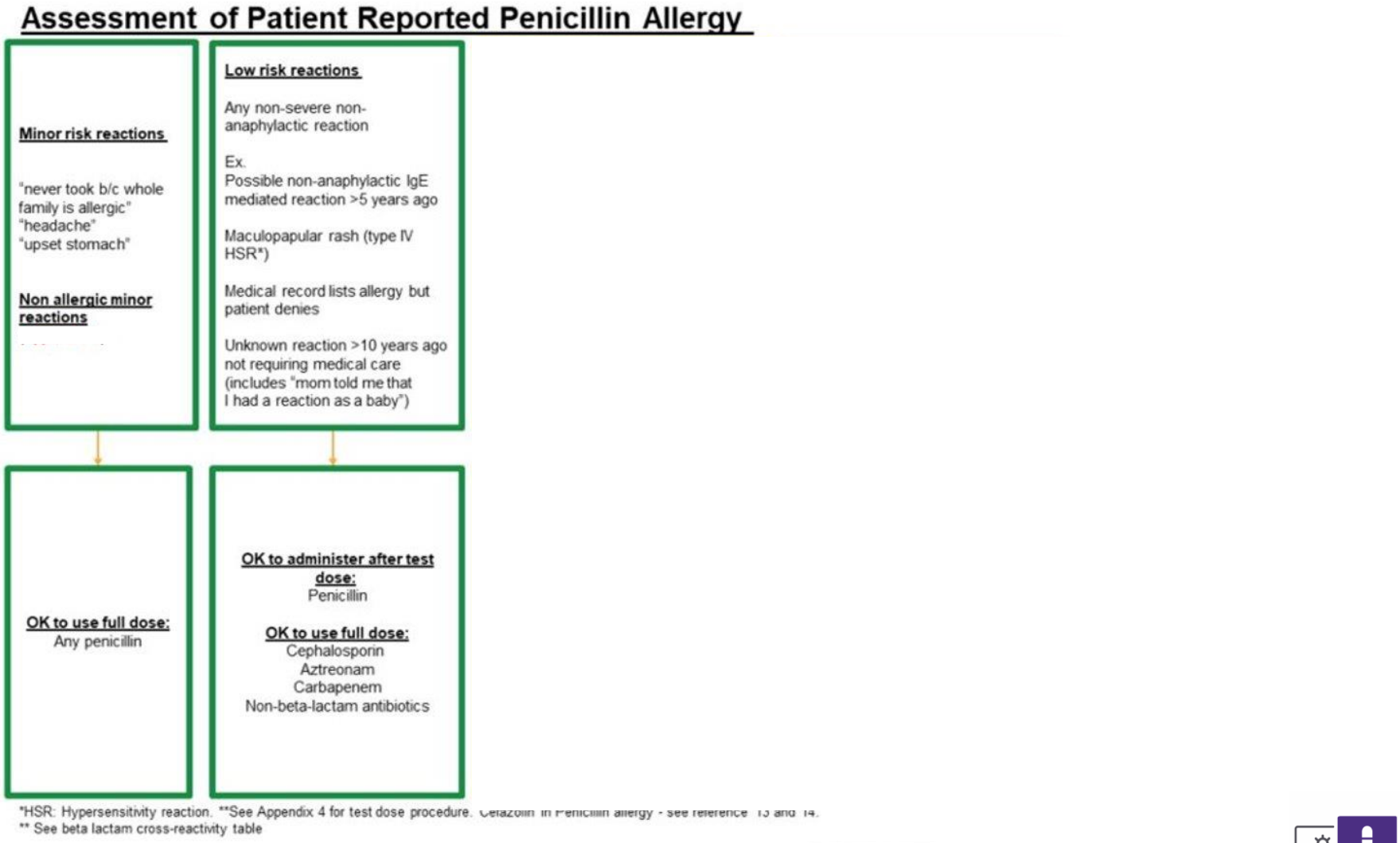
Has the patient used the same antibiotic or antibiotic in the same class since the reaction?

What were the symptoms?

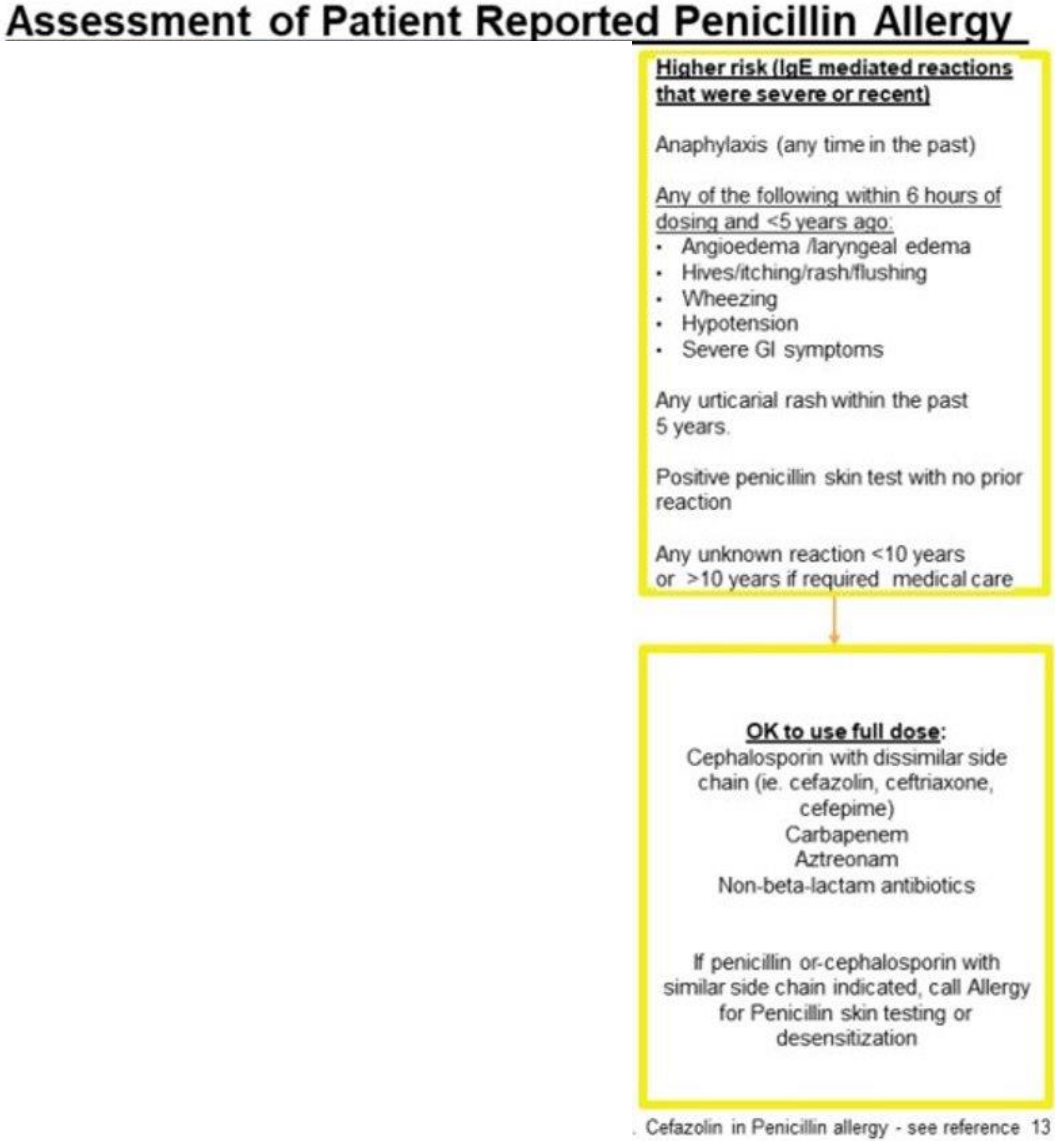
Did the patient require medical attention or treatment?

Is there anticipated need for use of this medication in the near future?

My mom told me that I am allergic to penicillin so I never took it!



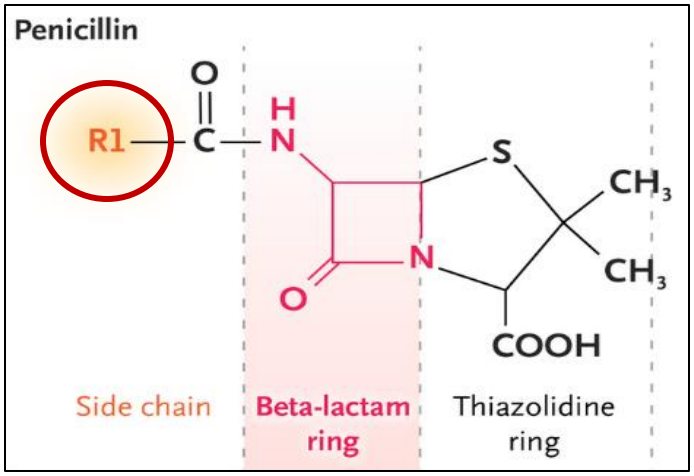
Can my patient with a penicillin allergy get cefazolin?

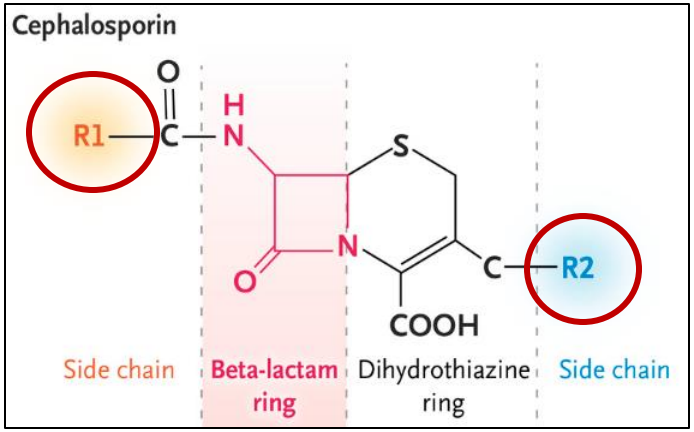


Notable cephalosporins that share side-chain with penicillin are:

- ✓ cefadroxil,
- ✓ cephalexin,
- ✓ cefaclor,
- ✓ cefprozil

Why it's OK to give cefazolin





- Risk of cross-reactivity between penicillin and cephalosporins → similar **R-side chains**
- NOT because of shared beta-lactam ring
- Cefazolin → unique side chain that is distinct from other cephalosporins and beta-lactams

Castells M, et al. Penicillin Allergy. 2019.

Updated the penicillin allergy recommendations throughout

RECOMMENDED TREATMENT AND DURATION

Inpatient:

FIRST LINE

- Ceftriaxone 1g IV Q24H
  For patients with penicillin allergies (including anaphylaxis): Ceftriaxone is safe

SECOND LINE

For patients with severe penicillin allergies with delayed severe cutaneous reactions (DRESS, SJS) or any cephalosporin allergies

- Ciprofloxacin 400mg IV Q12H
- Levofloxacin 750mg IV Q24H

Outpatient:

FIRST LINE

- Ceftriaxone 1g IM/IV x 1 dose (ok for patients with penicillin allergies, including anaphylaxis)

For patients with severe penicillin allergies with delayed severe cutaneous reactions (DRESS, SJS) or any cephalosporin allergies: Gentamicin 5mg/kg IM/IV x 1 dose

Continued

RECOMMENDED TREATMENT AND DURATION

EXTRA-BILIARY SOURCE:

appendicitis, diverticulitis, bowel perforation with peritonitis, hepatic abscess

Extra-biliary Source MILD-MODERATE Risk

FIRST LINE

Ceftriaxone 2gm IV q24hr PLUS Metronidazole 500mg IV q8hr

For patients with penicillin allergies (including anaphylaxis): Ceftriaxone is safe

Continued

Drug **allergy**: A 2022 practice **parameter update**.
J Allergy Clin Immunol. 2022 Dec;150(6):1333-1393. doi: 10.1016/j.jaci.2022.08.028. Epub 2022 Sep 17.PMID: 36122788

Evaluation and Management of **Penicillin Allergy**: A Review.
Shenoy ES, Macy E, Rowe T, Blumenthal KG.JAMA. 2019 Jan 15;321(2):188-199. doi: 10.1001/jama.2018.19283.PMID: 30644987

How long do I need to treat pneumonia?

- **Duration in children: 7-10 days (but possibly shorter)**
    - Same et al. 2021: 5-7 days vs. 8-14 days
    - Kuitunen et al. 2023: 3-5 days vs. 7-10 days
- **Duration in adults: 3-5 days**
    - Dinh et al. 2021: 3 days can be considered among patients admitted for moderate CAP.

Is Doxycycline safe in kids?

- Doxycycline may be used for any age group for courses ≤ 21 days.*
  - Tetracycline can bind calcium causing discoloration of teeth – avoided in age ranges during calcification/mineralization of teeth.
  - The same phenomenon has not been seen with doxycycline.
  - AAP/IDSA now allows for doxycycline use for all ages.

*Will be added in next year's pocketguide

Todd SR, Dahlgren FS, Traeger MS, et al. No visible dental staining in children treated with doxycycline for suspected Rocky Mountain Spotted Fever. *J Pediatr.* 2015;166(5):1246-1251.

American Academy of Pediatrics. Committee on Infectious Diseases. *Red Book: 2021 Report of the Committee on Infectious Diseases.* 32nd ed. American Academy of Pediatrics; 2021.

Triaging LRTIs: outpatient → inpatient, wards → ICU

- PSI/CURB-65 – triage patients in outpatient setting.
- Severe CAP – use in patients already admitted to assess for ICU care.

PSI – Pneumonia Severity Index

What abx do we give for sepsis?

RECOMMENDED TREATMENT AND DURATION

If shock, rapid initiation of early broad-spectrum antibiotics as an undifferentiated disease state are warranted. If a syndrome-based approach to sepsis or severe sepsis, consider the following key agents for adequate empiric coverage based upon risk of MRSA, anaerobes or pseudomonas.

FIRST LINE ADULT, COMMUNITY ACQUIRED

Ceftriaxone 2g IV daily

FIRST LINE ADULT, AT RISK FOR PSEUDOMONAS (e.g. hospital acquired)

Cefepime 2gm q8hr

FIRST LINE ADULT, HISTORY OF ESBL

Meropenem 1gm q8hr

SECOND LINE INPATIENT

Penicillin allergy (including anaphylaxis): ceftriaxone/cefepime/ meropenem are safe

For patients with severe penicillin allergy with delayed severe cutaneous reactions (DRESS, SJS) or any cephalosporin allergy: Aztreonam 2g IV q6 hours + Vancomycin loading dose IV x1 (2g if ≥ 70 kg, 1.5g if <70 kg).

In addition to the above agents, additional antibiotics are recommended in the following scenarios:

<u>If Risk of MRSA</u>

FIRST LINE ADULT

Include Vancomycin IV loading dose X 1 (2gm if > 70kg, 1.5gm if < 70kg) STAT, then 15mg/kg IV q12hrs

<u>If Risk of anaerobes</u>

FIRST LINE ADULT

Include Metronidazole 500mg IV q8hr

<u>If Risk for highly resistant gram-negative pathogens including Acinetobacter</u>

FIRST LINE ADULT

Include Ciprofloxacin 400mg IV q8hr

Continued ›

Feedback?

Let us know how we can make the Antibiotic Guide better for upcoming years!

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Influenza update

Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2022-2023 Influenza Season has been published. CDC recommends everyone 6 months and older in the United States should get a flu vaccine every season with rare exception. More information about the 2022-2023 flu season is also available.

For each recipient, a licensed and age-appropriate vaccine should be used.

With the exception of vaccination for adults aged ≥65 years, ACIP makes no preferential recommendation for a specific vaccine when more than one licensed, recommended, and age-appropriate vaccine is available.

All seasonal influenza vaccines are quadrivalent

- A/Victoria/4897/2022 (H1N1)pdm09-like virus for egg-based vaccines and
- A/Wisconsin/67/2022 (H1N1)pdm09-like virus for cell-based or recombinant vaccines.

Inactivated influenza vaccines (IIV4s), recombinant influenza vaccine (RIV4), and live attenuated influenza vaccine (LAIV4) are expected to be available.

Trivalent influenza vaccines are **no longer available**, but data that involve these vaccines are included for reference.

ACIP website with presentations
2023-2024 CDC Flu Vaccination Recommendations Adopted

Updated Influenza guidelines for 23-24

Timing:

September and October are the best times for most people to get vaccinated. A few exceptions:

- Pregnant people who are in their third trimester can get a flu vaccine in July or August
- For adults (especially those >/= 65 years old) and pregnant people in the first and second trimester, vaccination in July-August should be avoided unless it won't be possible to vaccinate in September - October.

- Children who need two doses of flu vaccine should get their first dose of vaccine as soon as vaccine becomes available. The second dose should be given at least four weeks after the first.
- Vaccination in July or August can be considered for children who have health care visits during these months, if there might not be another opportunity to vaccinate them. For example, some children might have medical visits in the late summer before school starts and might not return to see a health care provider in September or October.

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Influenza Vaccine 23-24

Egg allergies:

Previous recommendation:

- Additional safety measures recommended for administration of egg-based flu vaccine to people who have had severe allergic reactions to egg.

New Recommendation:

- Additional safety measures are no longer recommended for flu vaccination beyond those recommended for receipt of any vaccine.

Influenza Vaccine 23-24

ACIP recommends that adults aged ≥65 years preferentially receive any one of the following higher dose or adjuvanted influenza vaccines:

- quadrivalent high-dose inactivated influenza vaccine (Fluzone High-Dose Quadrivalent)
- quadrivalent recombinant influenza vaccine (Flucelvax)
- quadrivalent adjuvanted inactivated influenza vaccine (Fluad Quadrivalent)

If none of these three vaccines is available at an opportunity for vaccine administration, then any other age-appropriate influenza vaccine should be used.

ACIP website with presentations

https://www.cdc.gov/flu/professionals/acip/2022-2023/acip-table.htm

https://www.cdc.gov/vaccines/acip/recs/grade/influenza-older-adults.html

RSV vaccine co-administration

https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-06-21-23/07-RSV-Adults-Britton-508.pdf

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Influenza Vaccine 23-24

ACIP website with presentations