



5 WAYS HOSPITAL PHARMACISTS CAN BE ANTIBIOTICS AWARE



1. Verify Penicillin Allergy

- Although 10% of the population in the United States reports a penicillin allergy, less than 1% of the population is truly penicillin allergic.¹
- When possible, obtain a more detailed history of the penicillin reaction and review previously prescribed antibiotics. Alert the provider of your findings if you think the patient can tolerate a beta-lactam antibiotic, when appropriate.



2. Avoid Duplicative Anaerobic Coverage

- Duplicative anaerobic coverage, such as piperacillin/tazobactam and metronidazole, is unnecessary in most cases.²
- When the pharmacy receives antibiotic orders for two or more agents with anaerobic activity, alert the provider that the antibiotics have overlapping spectra of activity.



3. Reassess Antibiotic Therapy

- Review the patient's microbiology results (e.g., rapid diagnostic tests and clinically relevant cultures).³
- Prompt the provider to consider **stopping** or **tailoring** antibiotic therapy as appropriate.



4. Avoid Treatment of Asymptomatic Bacteriuria

- Patients with asymptomatic bacteriuria should not be treated with antibiotics in most cases.⁴
- Consider the importance of signs and symptoms consistent with urinary tract infection (UTI) when reviewing positive urine cultures and/or making treatment recommendations.



5. Use the Shortest Effective Antibiotic Duration

- Guidelines for treatment duration are available for common infectious diseases such as pneumonia, UTI, and skin and soft tissue infection.^{5,6,7}
- Alert the provider if the total days of inpatient and post-discharge antibiotic therapy exceeds the recommended duration.

The scenarios and recommendations are applicable to most immunocompetent adult patients. Prior to making interventions, always assess the individual patient and use your clinical judgment. Follow your institution's treatment guidelines when applicable.

References:

1. "Is It Really a Penicillin Allergy?" Centers for Disease Control and Prevention, <https://www.cdc.gov/antibiotic-use/community/pdfs/penicillin-factsheet.pdf>.
2. Implementation of Antibiotic Stewardship Core Elements at Small and Critical Access Hospitals. Centers for Disease Control and Prevention, www.cdc.gov/antibiotic-use/healthcare/implementation/core-elements-small-critical.html.
3. Core Elements of Hospital Antibiotic Stewardship Programs. Centers for Disease Control and Prevention, www.cdc.gov/antibiotic-use/healthcare/implementation/core-elements.html.
4. Nicolle LE, Gupta K, Bradley SF, et al. Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America. Clin Infect Dis. 2019 March 21 [Epub]. <https://academic.oup.com/cid/article/68/10/e83/5407612>.
5. Mandell LA, Wunderink RG, Anzueto A, et al. Infectious Diseases Society of America/American Thoracic Society consensus guidelines on the management of community-acquired pneumonia in adults. Clin Infect Dis. 2007;44 Suppl 2:S27-72. https://academic.oup.com/cid/article/44/Supplement_2/S27/372079.
6. Gupta K, Hooton TM, Naber KG, et al. International clinical practice guidelines for the treatment of acute uncomplicated cystitis and pyelonephritis in women: A 2010 update by the Infectious Diseases Society of America and the European Society for Microbiology and Infectious Diseases. Clin Infect Dis. 2011;52(5):e103-120. <https://academic.oup.com/cid/article/52/5/e103/388285>.
7. Stevens DL, Bisno AL, Chambers HF, et al. Practice guidelines for the diagnosis and management of skin and soft tissue infections: 2014 update by the Infectious Diseases Society of America. Clin Infect Dis. 2014;59(2):e10-52. <https://academic.oup.com/cid/article/52/5/e103/388285>.



www.cdc.gov/antibiotic-use