

Should

**PENICILLIN
ALLERGY
SKIN TESTING**

be your next step

**TO OPTIMIZE
PATIENT
CARE?**

You can continue to improve your
AMS efforts with this simple step

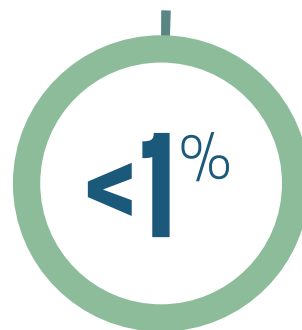


PENICILLIN MAY BE AN OPTION FOR MORE PATIENTS THAN YOU THINK

Some patients incorrectly self-report penicillin allergy¹



Report being allergic



Are truly allergic

Many patients outgrow their penicillin allergy

80%

Lose their sensitivity after 10 years¹



Retesting for penicillin allergy may offer surprising results



96% of tests are negative²



98% negative predictive value³

Oral or IV penicillin challenge without prior skin testing is not recommended, especially in patients with a history of anaphylaxis³

IV=intravenous.

OPENING THE OPPORTUNITIES FOR PENICILLIN USE ACHIEVES MULTIPLE AMS GOALS

GOAL 1:

Choose the most appropriate antibiotic therapy with the correct dose, indication, and duration⁴

63% of patients who were skin tested received a narrower-spectrum antibiotic.²

GOAL 2:

Prevent antimicrobial misuse and abuse⁴

After a negative skin test, **55%** of patients were switched to a penicillin, **40%** to a cephalosporin, and **5%** to a carbapenem.²

GOAL 3:

Minimize the development of resistance⁴

Patients exposed to broad-spectrum antibiotics showed **10- to 20-fold increases** in gram-negative resistance to carbapenems and cephalosporins.⁵

Negative penicillin allergy skin tests significantly reduce broad-spectrum antibiotic use⁶

Vancomycin



Clindamycin



Fluoroquinolones



Carbapenems



Aztreonam

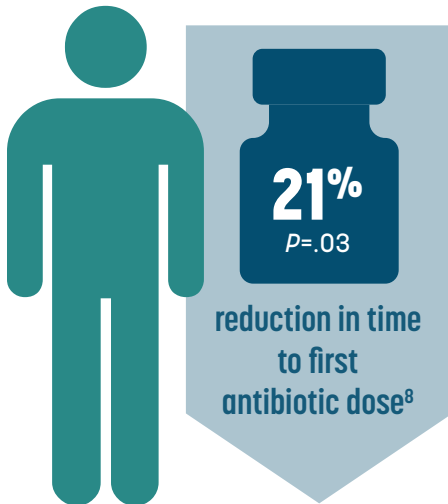


According to the CDC's 2019 Antibiotic Resistance Threats Report: **Each year, antibiotic-resistant bacteria and fungi are estimated to cause approximately 2.8 million infections and over 35,000 deaths⁷**

By removing the “penicillin allergic” label from your nonallergic patients

CHANGE THEIR THERAPY. IMPROVE THEIR OUTCOMES

The benefits of reclassifying patients as “nonallergic” are well documented

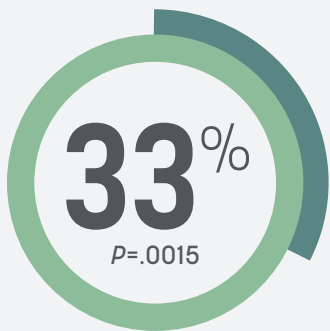


27%

$P=.03$

lower rate of clinical failure⁹

Additionally, patients with a reported allergy had a 50% increased risk of developing a surgical site infection ($P=.04$)¹⁰



shorter inpatient hospital stays^{11,12}

The median length of stay for patients without penicillin allergy was 6 days, compared with 9 days for those with penicillin allergy¹¹

In an analysis of 223 hospital patients who tested negative for penicillin allergy, appropriate beta-lactam treatment **avoided 504 inpatient and 648 outpatient days on unnecessary beta-lactam alternatives⁶**

Guidelines from multiple national organizations—CDC, AAAAI, ACAAI, and the IDSA—recommend using penicillin allergy testing to enhance patient care, while supporting the goals of AMS^{1,13-15}

By removing the “penicillin allergic” label from your nonallergic patients

CHANGE THEIR THERAPY. IMPROVE THEIR OUTCOMES

Nearly **35%**
P<.001



decreased risk of infection with *Clostridioides difficile* (*C diff*)¹²

Demonstrated **decreases in MRSA and VRE infections** have also been seen in patients without penicillin allergy^{16,17}

21%
P=.008



decrease in 30-day hospital readmission rate¹²

In a retrospective study in 2 tertiary care hospitals over almost 6 years, patients without penicillin allergy had a **15.1% 30-day readmission rate**, compared with **19.2%** for patients with penicillin allergy¹²

35%

lower risk of mortality¹⁸

Patients with MSSA bloodstream infections who received definitive beta-lactam therapy had a hazard ratio of .65 (95% CI, .52-.80) compared with patients who received vancomycin, after controlling for other factors

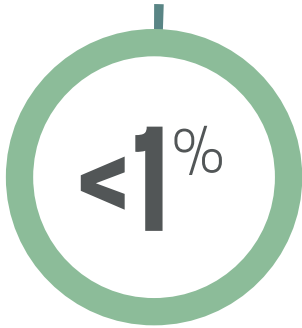
\$297

in cost savings per patient

In a retrospective analysis of 50 adult inpatients with a beta-lactam allergy who received penicillin allergy skin testing and an oral challenge by an allergist, 37 patients were switched to a beta-lactam antibiotic, with an overall cost savings of \$11,005¹⁹

In an effort to advance the proper use of antibiotics and to combat antibiotic resistance, CMS requires hospitals that participate in its programs to establish AMS programs⁴

ADVANCE YOUR AMS EFFORTS WITH PENICILLIN ALLERGY SKIN TESTING



of patients are actually allergic.
Take the next step and skin test for penicillin allergy to help achieve these goals in your institution¹:

OPTIMIZING ANTIBIOTIC USE: Choosing the most appropriate antibiotic therapy can limit antibiotic misuse and minimize the threat of resistance.⁴

LIMITING INCORRECT PENICILLIN-ALLERGY LABELING: Restricting the “penicillin allergic” label to only patients who are truly allergic may decrease patient morbidity and mortality, reduce both the number and length of hospital stays, and lower health care costs.^{5,12,20,21}

FOLLOWING NATIONAL GUIDELINE RECOMMENDATIONS: Incorporating penicillin allergy skin testing is consistent with the recommendations of the CDC, AAAAI, ACAAI, and IDSA.^{1,13-15}

AAAAI=American Academy of Allergy, Asthma & Immunology; ACAAI=American College of Allergy, Asthma & Immunology; AMS=antimicrobial stewardship; CDC=Centers for Disease Control and Prevention; IDSA=Infectious Diseases Society of America.

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PRP-US-21-10-00000 05/2021