Dealing with the consequences of antimicrobial resistance is no easy task, but there’s an overlooked culprit that doctors should target: patients’ self-reported penicillin allergies. Uncovering the truth about patients’ penicillin allergies—or lack thereof—allows physicians to avoid unnecessary prescribing of common alternatives such as tetracyclines, quinolones, macrolides, aminoglycosides and glycopeptides. That in turn can improve patient outcomes, reduce health care spending and combat antibiotic resistance.

“Up to 10% of the general population has a self-reported penicillin allergy, and that estimate rises to about 15% to 20% if you look at hospitalized patients,” said David Lang, MD, immediate-past president of the American Academy of Allergy, Asthma and Immunology. Dr. Lang also chairs the allergy and immunology department at Cleveland Clinic.

“Most of those patients can accomplish negative skin testing and receive penicillin without experiencing an allergic reaction,” said Dr. Lang, adding that “the overwhelming majority are needlessly avoiding penicillin-type drugs.”

After receiving verification testing, more than 95% of patients in the U.S. who believe they are allergic to penicillin—a group of antibiotics—are not, says a JAMA article, “Evaluation and Management of Penicillin Allergy: A Review.” The Centers for Disease Control and Prevention also cited that correctly identifying if patients have a penicillin allergy can help fight antibiotic resistance in the U.S.

Here are ways physicians can address penicillin allergies in their patients to prevent antibiotic resistance.

Don’t be complacent

It is important to not respond in “the way we’ve responded to penicillin allergy in the past, which is,
‘OK, you’re allergic to penicillin. Take equally effective alternatives,’” said Dr. Lang. “Don’t assume that because somebody has a label of penicillin allergy, they need to avoid it in all circumstances.”

Instead, physicians and health professionals should complete a drug allergy history to determine if the patient is allergic.

Use the EHR

At Cleveland Clinic, Dr. Lang and other health professionals are piloting a best practice alert in the EHR when encountering a patient with a reported penicillin allergy or a patient file that indicates an allergy. This is part of their strategy to focus on penicillin allergies in their patients rather than the management for this condition that was prevalent in the past.

In most instances, patients are “needlessly avoiding penicillin and that is an opportunity to intervene in a way that will lead to their improved health care outcomes in the near future,” he said.

Elaborate on the penicillin allergy

“Penicillin allergy testing should be part of any initiative looking at antimicrobial stewardship,” said David Khan, MD, an allergist-immunologist and professor of medicine and pediatrics at the University of Texas Southwestern Medical Center in Dallas.

Ask patients what they mean, precisely, when they say they are allergic to penicillin. Physicians should also ask how long ago the patient had a reaction to penicillin. This is “because there’s a significant percentage of patients who carry this allergy label when it’s not an allergy at all, and the natural history of true penicillin allergy is to resolve over time,” said Dr. Khan.

For example, if a patient had a headache or felt nauseated after taking penicillin, this is not an allergy and the record should reflect that. Another common patient misconception is that if a parent is allergic, their kids will be too.

Refer to an allergist for testing

“Most people who have avoided penicillin for so long would benefit from a more formal evaluation,” said Dr. Lang. “We have evidence that this is associated with improved outcomes, reduced costs of care and it contributes to the goals of antimicrobial stewardship.”
An allergist can find the best way to determine if the patient is allergic to penicillin. One way is to perform a skin test. And, assuming the skin test is negative, give the patient a dose of penicillin to prove they are not allergic, said Dr. Khan.

“At the end of the day, we can determine whether they truly are tolerant of penicillin, which is again the vast majority of the time,” said Dr. Khan.

Read more about other ways to slow the spread of deadly antibiotic-resistant infections.

JN Learning™ provides resources for physicians to learn about the importance of penicillin allergy testing and how to implement a program in their medical practice. The JAMA Network™ has published a series of articles, podcasts and videos, and developed a toolkit to assess penicillin sensitivity in clinical practice. Physicians can earn up to seven CME credits from these resources.

Learn more about AMA CME accreditation.