

potential. We agree that cultural change is a major factor in achieving the promise of both personalized care planning and person-centered primary care.

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Persistence of Penicillin Allergy

To the Editor The *JAMA* Insights article on penicillin allergy¹ stated that many children and adults are erroneously labeled as penicillin allergic. However, the title could falsely suggest that true IgE-mediated penicillin hypersensitivity in some patients represents a temporary phenomenon. To our knowledge, there are no robust data that endorse this statement, and the referenced study by Solensky et al² was incorrectly discussed. In the study by Solensky et al, there is no irrefutable evidence for skin test conversion from positive to negative, as patients were enrolled solely based on clinical history. Patients with positive skin test responses were excluded from further investigation. The authors discussed "resensitization," but this would require unequivocal proof of previous sensitization (ie, a positive skin test, specific IgE response, or both). Moreover, this limitation was acknowledged by the authors who correctly stated that patients with IgE-mediated allergy to penicillin should be prospectively monitored and the effect of repeated penicillin exposure on their immunological and clinical reactivity evaluated once the skin test,

IgE level, or both become negative. A study including patients in whom skin tests and IgE levels were evaluated at different time points³ showed that after a positive challenge, skin tests can convert from positive to negative or from negative to positive within only 4 weeks. In the absence of robust longitudinal data indicating the transient character of IgE-mediated penicillin allergy, caution should be exercised before stating that IgE-mediated penicillin allergy is not necessarily forever. We recommend thorough evaluation of individual patients to avert diagnostic error with potentially serious consequences.

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In Reply Our intended primary message was that following careful specialist evaluation, most individuals thought to be penicillin allergic will have negative skin testing and oral challenge, enabling them to be safely exposed to penicillins in the future without fear of an immediate or life-threatening reaction. A recent study suggests 75% of children clinically diagnosed with penicillin allergy have this documented on their health record by age 3 years.¹ This childhood label of penicillin allergy imparts both an individual and public health burden that typically goes unchallenged into adulthood. One major reason that most patients carrying a diagnosis of penicillin allergy have negative skin testing and oral challenge and demonstrate future tolerance of penicillin is that only a very small proportion of these patients had ever experienced a true IgE-mediated reaction to penicillins.

Dr Sabato and colleagues argue for "thorough evaluation of individual patients." Penicillin skin testing followed by oral challenge in the history-positive, skin test-negative patient is a safe and effective mechanism to remove the diagnosis of IgE-mediated penicillin allergy in more than 90% of those tested. This approach is the current guideline-based standard of care. Particularly if partnered with antibiotic stewardship programs, this approach could improve antibiotic appropriateness and reduce the risk of adverse public health outcomes such as antibiotic resistance and *Clostridium difficile* infection. However, patients with a history consistent with an IgE-mediated reaction and a reaction within the last 12

months define a higher-risk population for a positive skin test, positive oral challenge reaction, or both.^{2,3} Evidence exists for both penicillins and cephalosporins showing that among patients with initial positive skin tests, skin test reactivity is lost over time. These studies, however, are limited by the lack of oral challenge data both at baseline—at the time of positive skin testing and at follow-up when the skin test has become negative.^{4,5} Overall, less than 1% of the population will be advised to avoid penicillin based on both a history consistent with an IgE-mediated reaction and positive penicillin skin testing. We agree that in this select population, long-term studies are warranted to define the safest clinical approaches, as well as the mechanisms and host and ecologic factors that drive sensitization and future loss of reactivity.

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