

# Improving Referrals for Penicillin Allergy Testing: A Primary Care Strategy for Penicillin Allergy Delabeling



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# Objectives

- To develop a standardized screening tool to identify patients with reported penicillin (PCN) allergy
- To delabel those patients with reported PCN allergy who do not meet criteria for true allergy
- To refer those patients who warrant further allergy evaluation and/or penicillin allergy testing

# Methods

- Quality improvement initiative in the general internal medicine (IM) outpatient clinic
- Education
  - Provided to all providers re: screening tool, penicillin allergy, and penicillin allergy testing
  - After screening, provided to all patients re: risks and benefits of delabeling and penicillin skin testing
- Screening tool was administered by residents to patients in clinic

# Screening Tool & Education

## Penicillin Allergy Screening Questionnaire

1. Have you ever experienced an adverse reaction to a penicillin antibiotic (ie Amoxicillin, Augmentin, Ampicillin, PenG, PenVK)?

Yes  No

2. If yes, have you continued to take penicillin antibiotics (amoxicillin, Augmentin, Ampicillin, PenG, PenVK) without further adverse reactions?

Yes  No

3. If no,, would you be interested in safe testing to determine if you are still allergic?

Yes  No

## Frequently Asked Questions

### How common in penicillin allergy?

Approximately 10% of patients report an allergy to penicillin. However, most (greater than 90%) may not truly be allergic. Most who had a penicillin allergy lose their allergy over time.

### How do I know if I am still allergic to penicillin?

A penicillin skin test can determine if you are allergic to penicillin. An allergist can perform this testing in their office.

### Do I need to see an allergist if I had a severe reaction to penicillin in the past

Even if you think you are allergic to penicillin, allergies change over time and it is worth discussing your history with an allergist.

### What will happen during my visit with the allergist?

During your visit, you will likely discuss your history and prior reaction to penicillin. The allergist will then consider skin testing..= If the skin testing remains negative, then it is possible you will be given an oral pill of penicillin or amoxicillin. However, the allergist will discuss the particular plan with you at the appointment

### Is skin testing painful and what are the risks?

A skin prick test, also called a scratch test, checks for immediate allergy and is the first step in skin testing. Skin prick testing is usually not painful and very small uses needles under the skin's surface. You won't bleed or feel more than mild, momentary discomfort. Depending on your reaction you may require deeper skin testing. This will be discussed in detail at the appointment. Reactions to the skin testing include itching, redness and swelling of the skin. Any reaction is usually mild and last an hour or less. More serious reactions can occur but this is very rare.

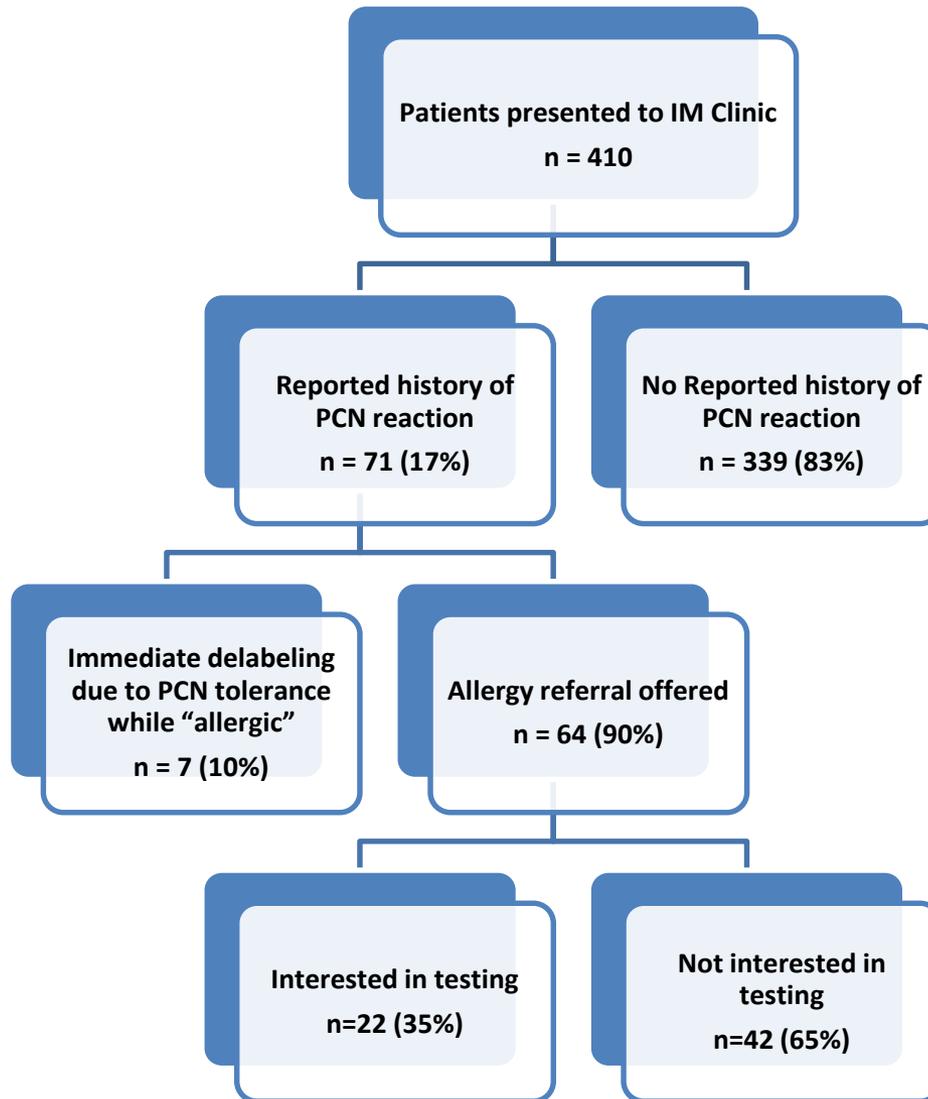
The American Academy of Allergy, Asthma & Immunology. (2018). *Penicillin Allergy FAQ | AAAAI*. [online] Available at: <https://www.aaaai.org/conditions-and-treatments/library/allergy-library/penicillin-allergy-faq> [Accessed 30 Nov. 2018].

# Methods

- Residents reviewed EMR for subsequent penicillin tolerance despite “allergy label”
  - If patient tolerated PCN/Amoxicillin while penicillin allergic, they were immediately delabeled
- All patients were asked why they were not interested in referral
  - Only a minority cited a reason
- EMR review is underway to assess allergy referral, scheduling & visit attending rates

# Study Participants

- All patients who presented to IM clinic in December 2018 underwent screening for a history of an adverse drug reaction to PCN

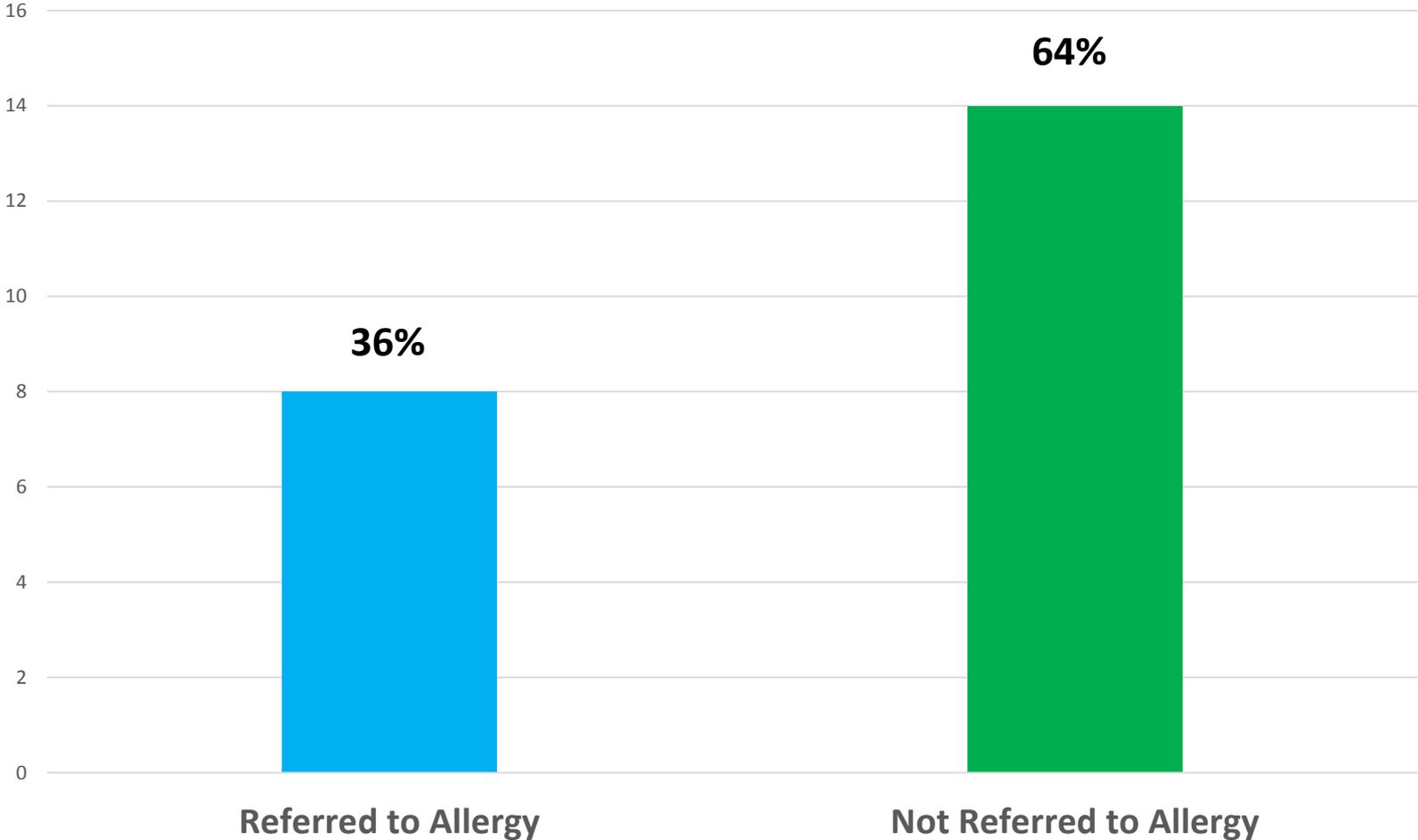


# Reasons for No Interest in Testing

- Severe reaction history
- Strong family history
- Fear
- Disbelief
- “Would like to avoid”

(65% of those asked were not interested in testing; only 43% of those offered reason)

# Patients Interested in PCN Skin Testing



# Key Lessons

- Implementation of a standardized screening protocol can quickly identify appropriate candidates for PCN allergy testing and help delabel some patients
- Even with penicillin allergy focused education, only ~1/3 of patients with a history of PCN reaction are interested in PCN allergy skin testing
- Despite patients being interested in PCN allergy skin testing, a minority of patients received a referral to allergy for further evaluation & testing

# Future Directions

- To explore reasons for patient disinterest in penicillin testing and identify additional interventions to better address these reasons
- To further evaluate barriers to allergy referral
- To identify and target high risk patient populations that would receive most benefit from PCN allergy de-labeling
  - Transplantation, CF, immunocompromised patients
  - OB/GYN population
- To refine and expand PCN allergy screening protocols to other clinics
- To improve patient and provider awareness of long term benefits of PCN allergy testing and de-labeling

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