

De-labeling Inaccurate Penicillin Allergies: Improving Referral Rates for Penicillin Allergy Testing

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BACKGROUND

- An estimated 8-25% of the global population has a penicillin allergy label.
- An estimated 1% of the population have a true allergy to penicillin.
- Patients with a penicillin allergy label incur higher healthcare costs, have worse health outcomes, and are more often prescribed broad-spectrum antibiotics.
- The healthcare team can address penicillin allergy labels during routine visits

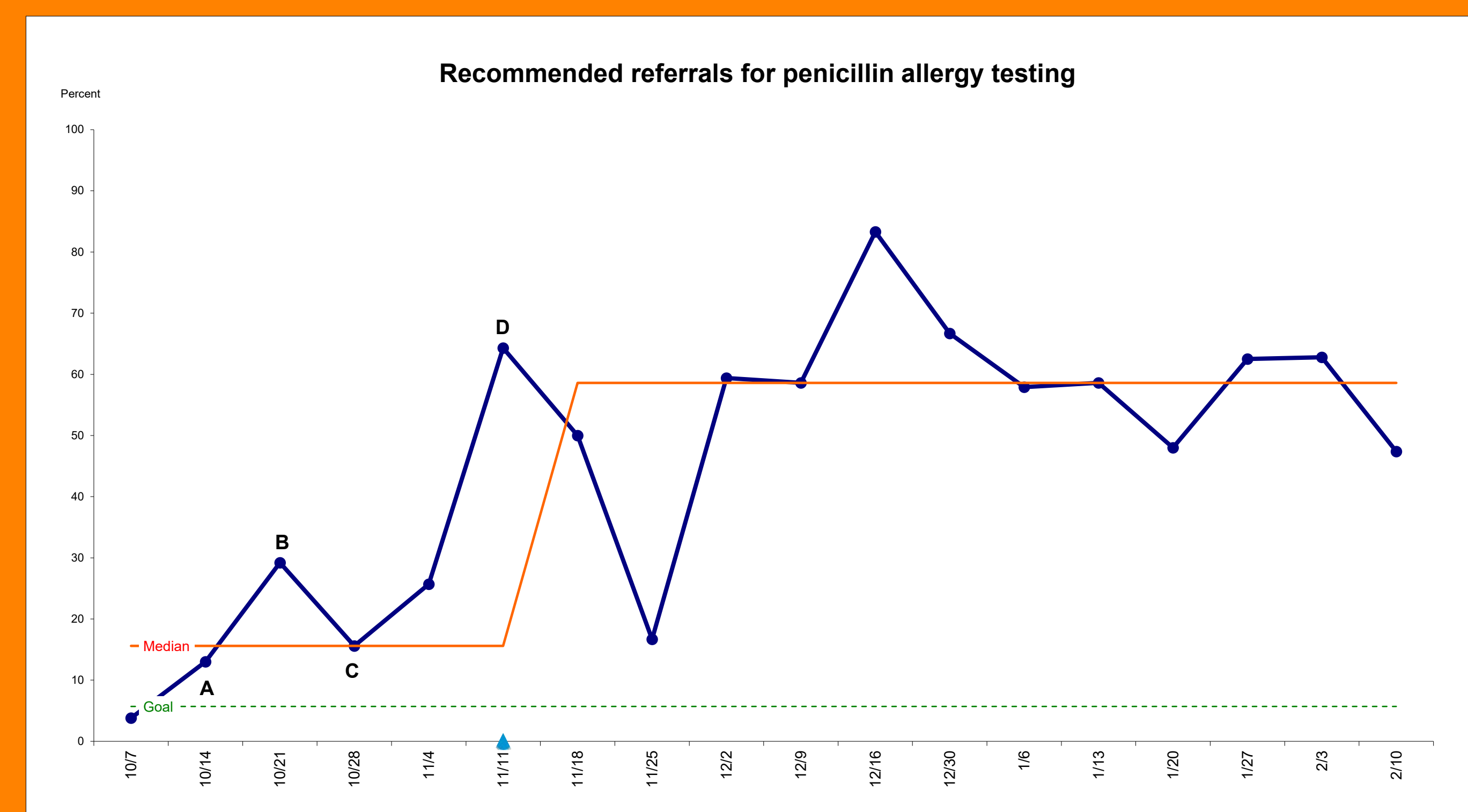
LOCAL PROBLEM

- The site for the evidence-based quality improvement project was a student health clinic at a private university in Tennessee.
- The project site often treats illnesses that are commonly treated with beta-lactam antibiotics.
- Prior to implementation of the practice change intervention, penicillin allergy referral rates were low at 3.8%.
- Project purpose: Implement a standardized process to review penicillin allergy labels and recommend referral for penicillin allergy testing process.
- Project aim: Increase recommended penicillin allergy testing referrals for patients with penicillin allergy labels by 50% within three months of implementation.

METHODS

- The Evidenced-based Practice Improvement Model was the framework used to guide the project.
- Literature search and critical appraisal demonstrated consistent evidence that use of an educational session and reminder in the electronic medical record increased rates of referrals for penicillin allergy testing.
- Outcome measures evaluated the number of patients recommended to receive a referral for penicillin allergy testing for a 3-month period pre-implementation and post-implementation.
- Process measures evaluated the percentage of patients where penicillin allergies were addressed and the percentage of patients where PEN-FAST rule was used.

Implementation of an EHR-integrated standardized penicillin allergy label assessment process significantly increased referral recommendations for allergy testing.

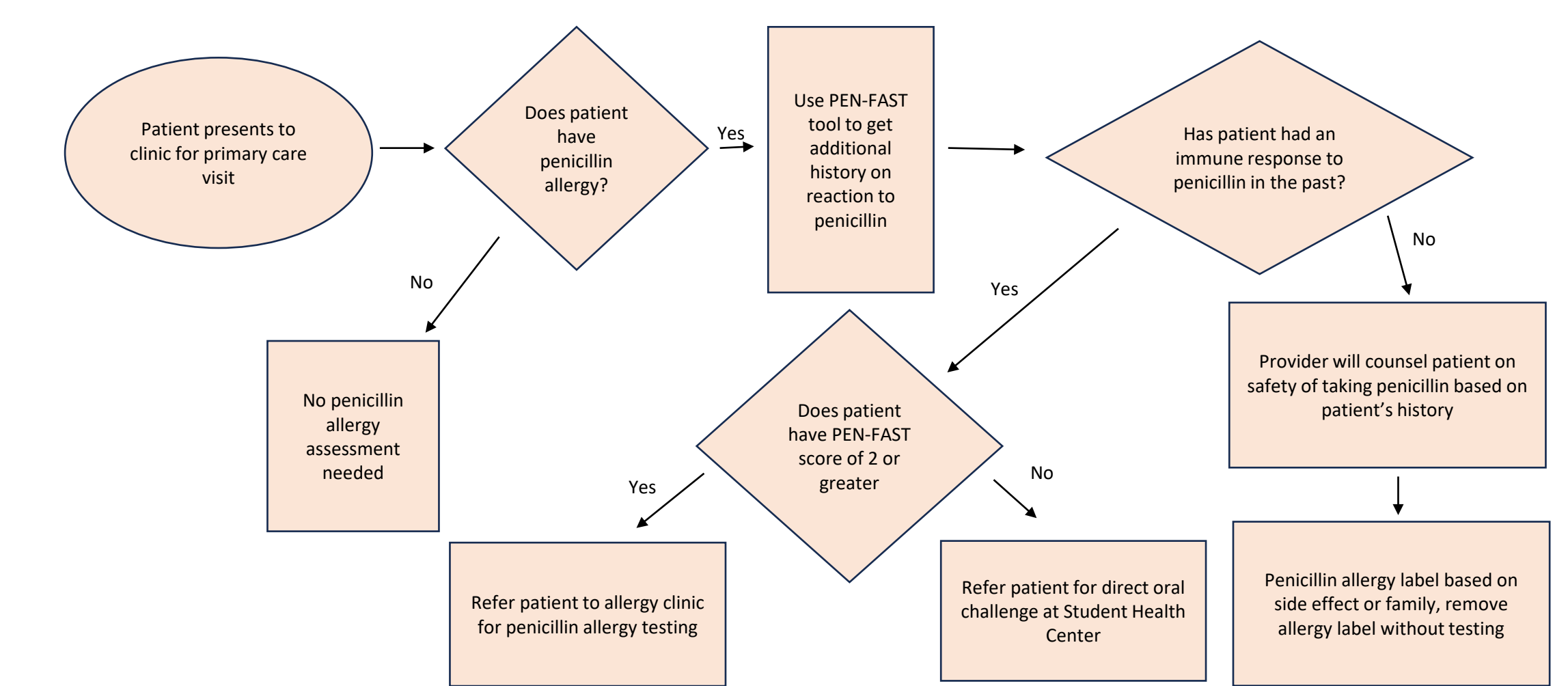


A – PDSA cycle 1 - Provider education session, B – PDSA cycle 2 – project leader implemented changes, C – PDSA cycle 3 – two providers implemented changes, D- PDSA cycle 4 – full implementation begins, all providers implement changes



INTERVENTIONS

- An educational session was provided to clinicians to discuss the importance of addressing penicillin allergy labels and to provide information and tools developed for the scholarly project.
- A standardized penicillin allergy assessment template was integrated into the electronic health record (EHR) workflow to prompt providers to address penicillin allergy labels.



RESULTS

- Recommended referrals for penicillin allergy testing in patients with penicillin allergy labels increased from 3.8% to 57.8%, a 1421% increase over pre-implementation rates.
- There were variations in recommended referral rates between providers. Provider buy-in was associated with higher rates of recommended referral.
- Penicillin allergies were addressed in 58.4% of visits.
- PEN-FAST rule was used during 46.8% of visits.

CONCLUSIONS

- The use of a standardized process to review penicillin allergy labels and recommend referral for penicillin allergy testing increased recommended penicillin allergy testing referral rates.
- The results of this project demonstrate that with simple interventions, primary care providers can be key drivers in addressing inaccurate penicillin allergy labels and increasing referrals for penicillin allergy testing
- Project sustainability is high since the process is integrated and accepted into clinic flow and there was no cost associated with the process