EARLY OUTCOMES OF PENICILLIN AND CEPHALOSPORIN ALLERGY ASSESSMENT TOOL

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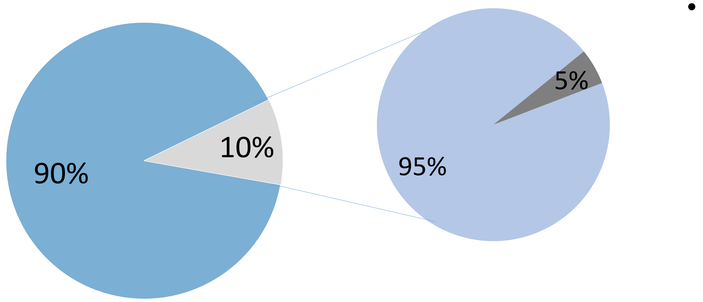
Introduction

10% of U.S. population carries a penicillin allergy label[1] but most could safely tolerate penicillins[2]



Penicillin allergy labels are associated with:

-30-40% higher prescription costs[3]
-Longer hospital stays[3]
-Overuse of broad-spectrum antibiotics[4]
-55% ↑ risk of MRSA[4]
-35% ↑ risk of C. Diff[4]

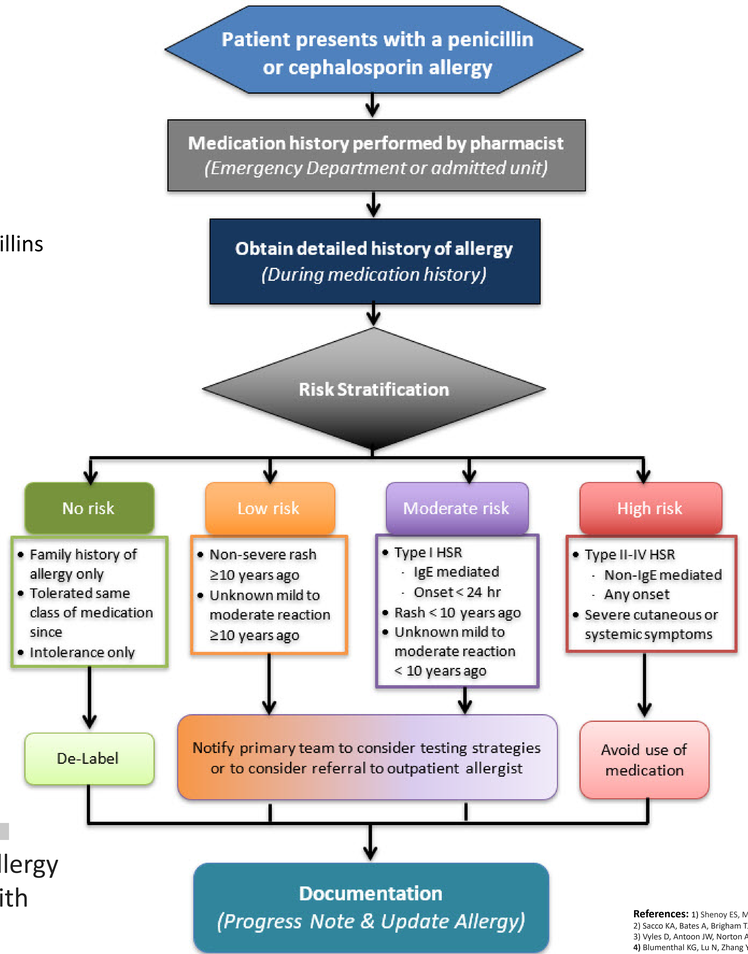
Hypothesis

Implementation of a structured pharmacist-led inpatient allergy assessment will reduce the number of pediatric patients with inaccurate penicillin allergy diagnosis

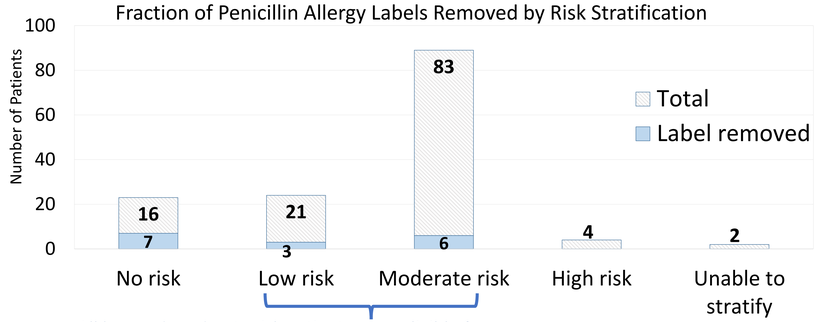
Methods

- From March 2020-August 2022, 126 inpatient allergy assessments were conducted by pharmacists at Masonic Children's Hospital
- Age range: 10mo-27yo (mean 11yo)

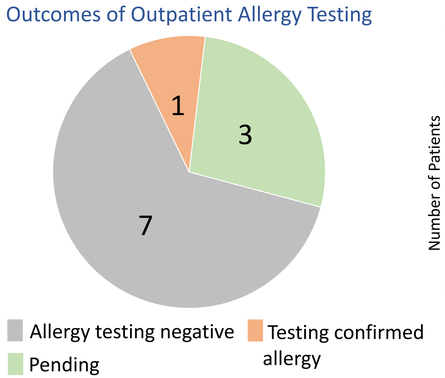
ALLERGY ASSESSMENT ALGORITHM: PHARMACIST

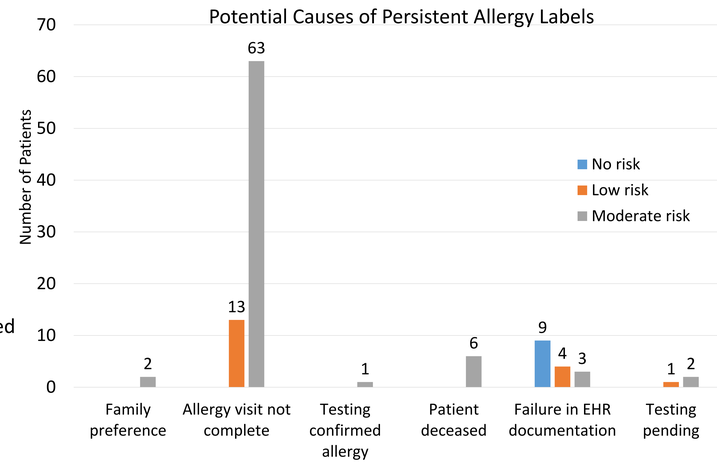


Results



All low and moderate risk patients were eligible for potential outpatient allergy testing referral





Conclusions

- Implementation of an allergy assessment tool led to the removal of 16 penicillin allergy labels
- Most patients did not complete an outpatient allergy visit
- Penicillin allergy labels persisted in the EHR for some patients despite a no risk stratification
- Next steps include: electronic survey to elucidate barriers to testing/de-labeling and consideration of inpatient allergy testing

References: 1) Shenoy ES, Macy E, Rowe T, Blumenthal KG. Evaluation and Management of Penicillin Allergy: A Review. *JAMA*. 2019;321(2):188–199. doi:10.1001/jama.2018.19283
2) Sacco KA, Bates A, Brigham TJ, Imam JS, Burton MC. Clinical outcomes following inpatient penicillin allergy testing: A systematic review and meta-analysis. Allergy. 2017 Sep;72(9):1288-1296. doi: 10.1111/all.13168. Epub 2017 Apr 26. PMID: 28370003.
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4) Blumenthal KG, Lu N, Zhang Y, Li Y, Walensky RP, Choi HK. Risk of meticillin resistant *Staphylococcus aureus* and *Clostridium difficile* in patients with a documented penicillin allergy: population based matched cohort study. BMJ. 2018 Jun 27;361:k2400. doi: 10.1136/bmj.k2400. PMID: 29950489; PMCID: PMC6019853.