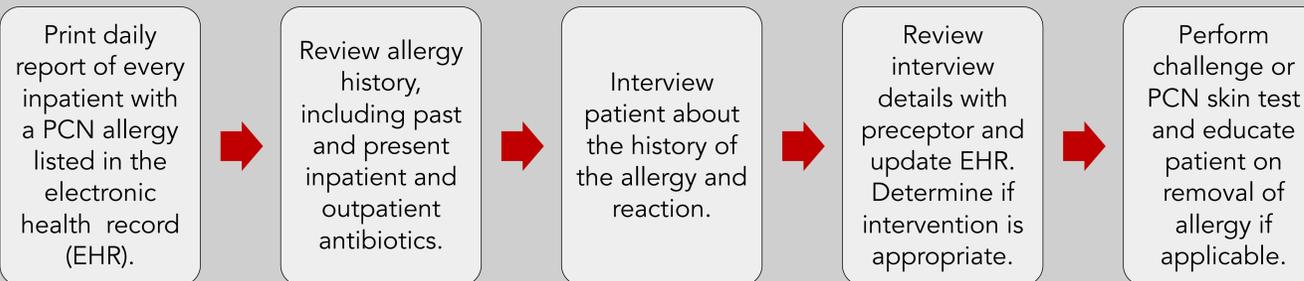


# Evaluating the Utility of a Penicillin Allergy Reconciliation Program within an Infectious Diseases Consult Population in a Community Health System

Emily A. Plauche, PharmD Candidate 2021<sup>2</sup>; Bruce M. Jones, PharmD, BCPS<sup>1,2</sup>; Susan E. Smith, PharmD, BCPS, BCCCP<sup>2</sup>; Christopher M. Bland, PharmD, FCCP, FIDSA, BCPS<sup>1,2</sup>  
St. Joseph's/Candler Health System, Savannah, GA<sup>1</sup>; The University of Georgia College of Pharmacy, Savannah, GA<sup>2</sup>

## Background

- Up to 10% of the population, and 15% of inpatients, report a penicillin (PCN) allergy, while ~90% are not true allergies. Over-reported PCN allergies lead to higher drug costs, worse patient outcomes, and increased risk of resistance.<sup>1,2</sup>
- Our 714-bed community health system includes two hospitals, Candler and St. Joseph's, and has 4 Infectious Diseases (ID) physicians that rotate between both hospitals.
- Our institution (Candler) uses a Penicillin Allergy Reconciliation Program (PARP) led by an ID pharmacist, pharmacy residents, and Advanced Pharmacy Practice Experience (APPE) students to clarify, update, challenge, and remove allergies as appropriate.
- There is no formal allergy reconciliation program in place at St. Joseph's.
- PARP process:



## Objectives

- To evaluate allergy reconciliation and intervention among ID consult patients admitted with a penicillin allergy
- To determine the percentage of ID consultation patients with a PCN allergy in our health system

## Outcomes

### Primary

- Documented penicillin allergy reconciliation in the EHR at an institution with PARP versus one without PARP

### Secondary

- Percentage of ID consultation patients in 2019 with a self-reported PCN allergy
- Percentage of patients admitted in 2019 with a self-reported PCN allergy

## Methods

- Study design: retrospective chart review
- Reconciliation was defined as an edit or clarification to a patient's PCN allergy in the EHR, which included updating the severity, reaction, or comments section as well as deleting the allergy

### Inclusion Criteria

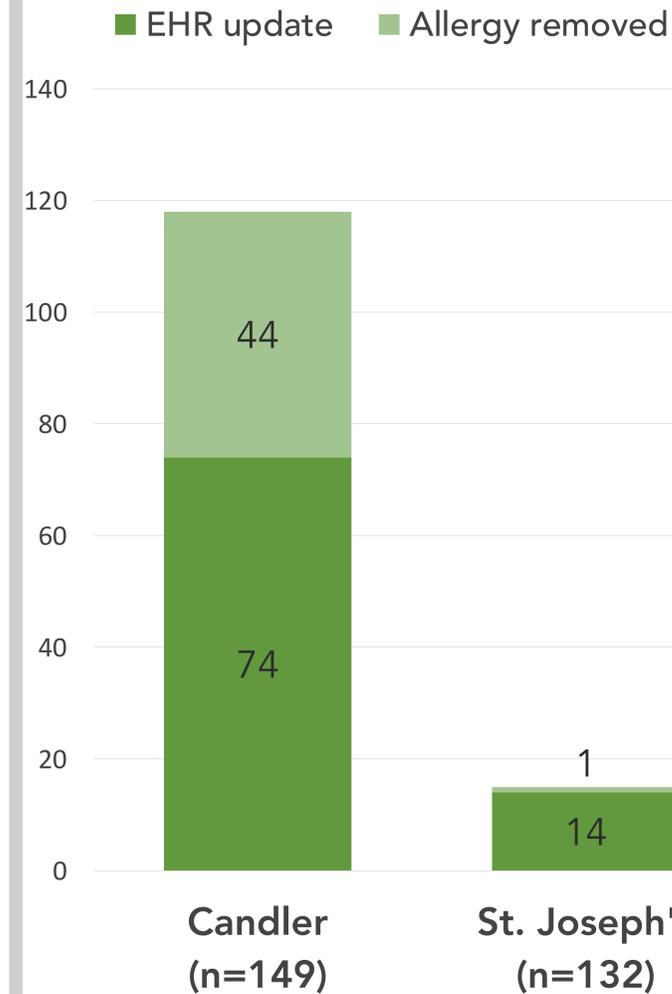
- Inpatient at Candler Hospital or St. Joseph's Hospital with at least one ID consultation from 1/1/2019 – 12/31/2019
- Self-reported PCN allergy
- Adults ≥ 18 years old

### Exclusion Criteria

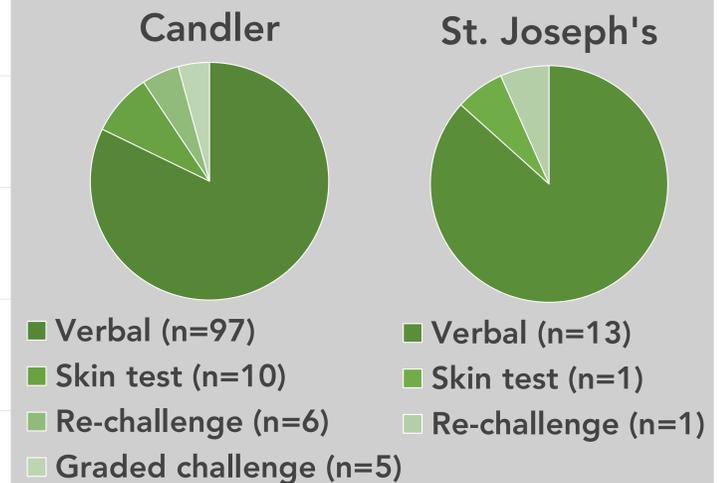
- Patients admitted to Day Surgery, 23-hour observation, Emergency Department without subsequent admission, or Labor and Delivery/ Mother Baby units

## Results

### PCN Allergy Reconciliations



### Reconciliations by Type



### Percentage of patients admitted in 2019 with a PCN allergy

Candler	12.0% (1209/10071)
St. Joseph's	14.0% (1512/10797)
<b>Health System</b>	<b>13.1% (2721/20868)</b>

### Percentage of ID consultation patients in 2019 with a PCN allergy

Candler	13.2% (149/1132)
St. Joseph's	11.9% (132/1108)
<b>Health System</b>	<b>12.5% (281/2240)</b>

## Conclusions & Discussion

- A PARP was an effective method to perform penicillin allergy reconciliations and interventions, even in the presence of an ID consult. Reconciliations and interventions are not routinely being performed without a formalized program.
- Reconciliations at Candler were done by pharmacy (n=118; 100%), and reconciliations at St. Joseph's were done by pharmacy (n=10, 66.7%) and nursing (n=5, 33.3%).
- The ID consult population had a similar percentage of patients with a listed PCN allergy as all inpatients in 2019.
- Future research: Percentage of PCN allergies that are re-added following removal

## References

1. Jones BM, Bland CM. "Penicillin Skin Testing an Antimicrobial Stewardship Initiative". *Am J Health Syst Pharm*. Feb 2017, 74 (4) 232-237.
2. Lee CE, Zembower TR, Fotis MA, Postelnick MJ, Greenberger PA, Peterson LR, Noskin GA. The incidence of antimicrobial allergies in hospitalized patients: implications regarding prescribing patterns and emerging bacterial resistance. *Arch Intern Med*. 2000;160(18):2819-22.