

	NON-PUI (n = 4,751)	PUI, PCR NEGATIVE (n = 1,530)	PUI, PCR POSITIVE (n = 1,002)	p-value
Male, n (%)	2,234 (47.0)	792 (51.8)	506 (50.6)	0.002
Race, n (%)				
Black	3,306 (70.0)	1,090 (71.2)	787 (78.5)	<0.001
White	407 (8.6)	104 (6.8)	49 (4.9)	
Other/Unknown	1,038 (21.9)	336 (22.0)	166 (16.6)	
Age, median (IQR)	59.0 (26.0)	61.0 (26.0)	67.0 (19.0)	<0.001
Expired, n (%)	224 (4.7)	163 (10.7)	341 (34.0)	<0.001
Length of Stay, days, median (IQR)	6.0 (6.0)	7.0 (9.0)	9.0 (10.0)	<0.001
Patients that Received Specific Antibiotics, n (%)				
Cefepime	1,052 (22.1)	497 (32.5)	385 (38.4)	<0.001
Ceftriaxone	1,431 (30.1)	579 (37.8)	601 (60.0)	<0.001
Doxycycline	782 (16.5)	396 (25.9)	528 (52.7)	<0.001

Table 1. Baseline characteristics and antimicrobial prescribing stratified by COVID-19 status.

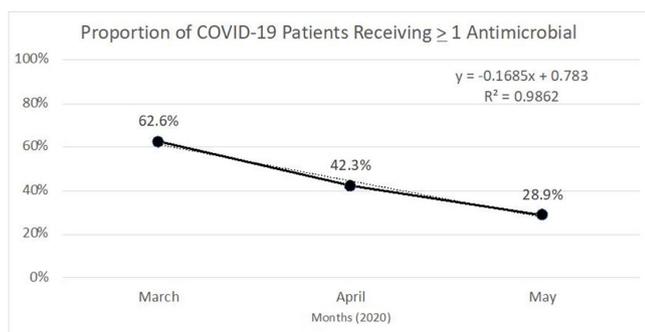


Figure 1.

decreased over time, likely due to (1) faster TATs, (2) real-time education to clinicians and subsequent de-escalation of unnecessary antimicrobials, and (3) development of treatment guidelines as new research emerged.

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Subject Category: Antibiotic Stewardship

Evaluation of Penicillin Allergy Prevalence and Antibiotic Prescribing Patterns for Patients within the Emergency Department

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As the point of entry into healthcare for many patients, the emergency department (ED) is an ideal setting in which to assess penicillin (PCN) allergies. An estimated 10% of the United States population has a reported PCN allergy; however, few studies have evaluated the prevalence and impact of PCN allergies on antibiotic selection within the ED. Patients with a documented PCN allergy are more likely to be exposed to costly alternative broad-spectrum antibiotics that have higher rates of adverse events, including *C. difficile* infections. We sought to determine the prevalence of PCN allergies within the UNC Medical Center ED. Key secondary outcomes included the percentage of patients with a documented PCN allergy who (1) received alternative antibiotics (carbapenems, aztreonam, fluoroquinolones, clindamycin, vancomycin), (2) received β -lactam antibiotics and experienced an allergic reaction during their ED visit, and/or (3) had received a β -lactam antibiotic during a past hospitalization or ED visit without their chart being appropriately updated. A retrospective evaluation included patients aged >18 years with a documented PCN allergy who were discharged from the ED between January 1, 2017, and December 31, 2019. Over the study period, there were 14,635 patient encounters with a documented PCN allergy that comprised 8,573 unique patients. The prevalence of PCN allergies was 14.3% for all ED encounters. PCN allergy-labeled

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patients received alternative antibiotics in 59.4% of ED encounters in which antibiotics were prescribed. Of the 454 β -lactam antibiotics (62 penicillins, 380 cephalosporins, 12 carbapenems) administered to PCN allergy-labeled patients within the ED, there were zero allergic reactions. Also, 18.6% of PCN allergy-labeled patients had received and tolerated a β -lactam antibiotic during prior hospitalizations or ED visits (1.7% penicillins, 14.4% cephalosporins, 2.6% carbapenems) without appropriate updated documentation to reflect β -lactam antibiotic tolerance. These findings confirm the utilization of non- β -lactam antibiotics in PCN allergy-labeled patients, highlighting the importance of accurate and updated allergy documentation in the electronic medical record. These findings also demonstrate the need for improved allergy documentation and protocols to proactively assess penicillin allergy labels while in the ED.

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Impact of an Inpatient Nurse-Initiated Penicillin Allergy Delabeling Questionnaire

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Background: Penicillin allergy is the most common drug allergy, with ~10% of all patients in the United States reporting a penicillin allergy. A penicillin allergy label is associated with the use of inappropriate or broad-spectrum antibiotics, worse patient outcomes, increased bacterial resistance, and increased healthcare costs, yet no studies have explored the unique role nurses may play in allergy delabeling through history taking as a part of broader antimicrobial stewardship efforts. Here, we describe the impact of using an inpatient nurse-initiated penicillin-allergy questionnaire. **Methods:** We implemented a nurse-driven intervention focused on penicillin allergy delabeling in inpatient noncritical care units (surgery, neurology, medicine, oncology, and cardiovascular medicine) at an academic hospital from July 9, 2019, to July 24, 2020. Patients with a penicillin allergy listed in the electronic health record (EHR) were identified and invited to participate. The intervention consisted of a questionnaire administered by nurses who elicited details of penicillin allergy history. If a patient was deemed eligible for penicillin allergy removal, nurses requested approval from both the patient as well as a physician member of the study team. **Results:** In total, 306 patients with a penicillin allergy label were identified in the EHR, of whom 242 patients were eligible for and agreed to participate in the delabeling interview (Figure 1). Of the 34 (14%) of 242 patients potentially eligible for delabeling by the questionnaire based on their history, the study physicians agreed with delabeling for 23 (68%) of 34 patients. Of these 34 patients, 18 (53%) agreed with delabeling (pending physician approval), and 16 (47%) of these 34 patients were ultimately

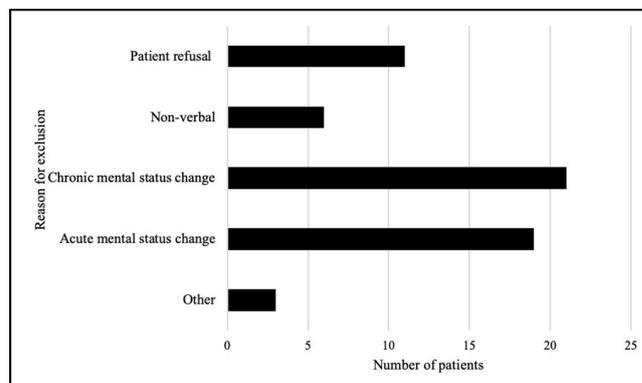


Figure 1. Reasons for patient exclusion

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