Figure 2. Reasons for patient refusal of penicillin allergy de-labeling

delabeled. For those who declined delabeling, never wanting the label removed under any circumstance and uncertainty about accuracy of the survey results were common reasons for refusal (Figure 2). Additionally, for the 13 patients who refused delabeling, 9 patients did not want or were unsure about following up with an allergy specialist. **Conclusions:** The nurse-driven penicillin-allergy delabeling questionnaire is a no-cost intervention that can successfully identify patients to delabel. In this study, this measure resulted in the removal of 16 (7%) of 242 penicillin allergy labels. However, patients frequently opted to keep penicillin allergy labels, expressing uncertainty and fear of removal. Future work should explore optimal methods to engage nurses and patients in allergy delabeling, as well as the impact on antibiotic use and patient outcomes.
**Funding:** No
**Disclosures:** None

**Presentation Type:**
Poster Presentation
**Subject Category:** Antibiotic Stewardship
**Evaluation of Penicillin Allergies and an Allergy Assessment Pilot in the Emergency Department**

Ashlyn Norris; Kalynn Northam; Lindsay Daniels; Mildred Kwan; Gary Burke; Nikolaos Mavrogiorgos and Renae Boerneke

Penicillin (PCN) allergy is one of the most frequently reported medication allergies, with ~10% of the US population reporting a PCN allergy. However, studies have shown that only 1% of the US population have a true IgE-mediated reaction to PCN. Delabeling and appropriately updating patient allergy profiles could decrease the use of alternative broad-spectrum antibiotics, rates of infectious complications [*C. difficile*, methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus* (VRE)], antibiotic resistance, and overall healthcare cost. The emergency department (ED) is an important setting in which to assess PCN allergies and to delabel patients when appropriate because there are >130 million ED visits in the United States each year. We sought to determine the percentage of PCN allergy–labeled patients who could be delabeled through a PCN allergy assessment interview in an ED. Key secondary outcomes included the percentage of interviewed patients who could not be delabeled based on history alone but would be eligible for an amoxicillin oral challenge or a PCN skin test (PST). A prospective PCN allergy assessment pilot was performed for patients aged >18 years presenting to the UNC Medical Center ED between December 1 and December 17, 2020, with a documented PCN allergy. A pharmacist conducted penicillin allergy assessments on a convenience sample of patients presenting to the ED between 8 A.M. and 3 P.M. on weekdays. Based on patients' reported and documented histories, charts were updated with the most accurate information and allergies were delabeled if appropriate. In total, 95 patients were assessed; 62 (65.3%) were interviewed and 15 (24.2%) were delabeled. In addition, 26 patients (41.9%) were deemed eligible for an oral amoxicillin challenge, 19 (30.6%) qualified for a PST, and 2 (3.2%) patients did not

qualify for further assessment due to having a an IgE-mediated reaction in the past 5 years. Of the 15 patients who were delabeled, 6 (40.0%) received antibiotics during their admission: 4 (73.3%) of those patients received a penicillin and 2 (36.7%) received a cephalosporin, all without adverse reactions. Patient assessments took ~20 minutes to complete, including chart review, patient interview, and postinterview chart updating. The results from this pilot study demonstrate the impact of performing PCN allergy assessments in ED. Interdisciplinary opportunities should be explored to develop processes that will improve the efficiency and sustainability of PCN allergy assessments within the ED to allow this important stewardship intervention to continue.
**Funding:** No
**Disclosures:** None

**Presentation Type:**
Poster Presentation
**Subject Category:** Antibiotic Stewardship
**Associations Between Patient Neighborhood Characteristics and Inappropriate Antimicrobial Use**

Joseph Engeda; Jane Kriengkauykiat and Erin Epson

**Background:** Antimicrobials are among the most commonly prescribed medications in US hospitals; an estimated 50% of hospitalized patients receive an antimicrobial. Research has shown that antimicrobial prescriptions to vary by patient- and hospital-level factors; however, disparities by patient neighborhood characteristics have not been examined. We evaluated associations between hospital and neighborhood indicators of socioeconomic status (SES) and antimicrobial use (AU) for gram-positive bacterial infections (GPBs), and broad-spectrum use for community-acquired infections (BSCAs) and hospital-onset infections (BSHOs). **Methods:** This analysis was conducted among 86 acute-care hospitals in California that submitted AU data via the NHSN in 2019. Hospital-level AU was measured as standardized antimicrobial administration ratios (SAARs) calculated by dividing observed antimicrobial use by risk-adjusted predicted antimicrobial use for GPB, BSCA, and BSHO antimicrobial groupings and categorized as binary (>1 or <1); SAARs >1 indicate potential inappropriate prescribing. California Office of Statewide Health Planning and Development 2018 data were used to obtain hospital characteristics and patient age, race or ethnicity, insurance, and comorbidities (defined by Charlson comorbidity index) for hospitalizations where AU may have been indicated, based on *International Classification of Diseases Tenth Revision* (ICD-10) diagnosis codes. The California Healthy Places Index (HPI) was used to obtain composite neighborhood SES indicators for each patient at the ZIP code level, measured as tertiles. Covariates were aggregated to the hospital level. Poisson regressions were used to evaluate the association between hospital and neighborhood SES indicators and SAAR scores, controlling for potential hospital-level confounders. **Results:** Among 86 hospitals included in the analysis, the mean patient age for hospitalizations where AU may have been indicated was 66 years, the proportion of white patients was 55%, and the mean proportion of Medi-Cal users was 19%. After adjusting for confounders including age, race or ethnicity, insurance status, comorbidities, and number of hospital beds; higher median values of patient SES had a protective effect against hospitals having GP SAAR scores > 1 (relative risk [RR], 0.68; 95% CI, 0.50–0.93) but was not significantly associated with hospitals having BSCA SAAR scores >1 (RR, 0.79; 95% CI, 0.62–1.02) or BSHO SAAR scores >1 (RR, 0.80; 95% CI, 0.61–1.04). **Conclusions:** Considering SES in addition to summary antimicrobial use scores such as SAARs may help identify populations potentially at risk for inappropriate AU; however, patient-level information is still necessary to evaluate appropriateness of antimicrobial prescribing.
**Funding:** No
**Disclosures:** None