Early identification and appropriate treatment of sepsis is key to improving survival. Despite widespread knowledge early treatment, many EDs struggle to meet the CMS sepsis care bundles. Utilizing the Lean framework allowed the improvement team to breakdown a multi-siloed, interdependent care process.

**Conclusion.** Early identification and appropriate treatment of sepsis is key to improving survival. Despite widespread knowledge early treatment, many EDs struggle to meet the CMS sepsis care bundles. Utilizing the Lean framework allowed the improvement team to breakdown a multi-siloed, interdependent care process.

**Disclosures.** All authors: No reported disclosures.

**993. Pharmacist-driven Penicillin Allergy Assessment in the Emergency Department – Antimicrobial Stewardship at the Point of Prescription**

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**Session:** 129. Antibiotic Stewardship: Allergy Evaluation
**Friday, October 4, 2019: 12:15 PM**

**Background.** B-lactam allergy assessment is endorsed by the IDSA as an antimicrobial stewardship tool to enhance the use of first-line agents. We evaluated the impact of pharmacist-driven penicillin (PCN) allergy assessment at the point of prescription on antibiotic use in our emergency department (ED).

**Methods.** Retrospective, quasi-experimental study of adult patients with a PCN allergy receiving antibiotics at a community hospital ED. The intervention comprised an ED pharmacist performing allergy assessment and discussing therapy options with providers at the point of prescription. The primary outcome was to evaluate impact on guideline-preferred antibiotic prescriptions in the ED pre-intervention (March 1, 2017–August 31, 2017) vs. post-intervention (March 1, 2018–August 31, 2018). Secondary outcomes included types of reported allergic reactions, safety of allergy assessment process, and impact on downstream antibiotic use.

**Results.** Overall, 381 patients were evaluated (256 pre-intervention, 125 post-intervention). The median age was similar between groups and 85% of patients presented to the ED from the community. Most common infectious syndromes encountered in the ED were UTIs (35%), respiratory tract infections (25%), and skin/soft-tissue infections (18%). The proportion of guideline-preferred antibiotic prescriptions in the ED increased from 37% pre to 44% post (P = 0.171). Proportion of fluoroquinolone (FQ) prescriptions in the ED was reduced from 37.5% pre to 26% post (P = 0.002).

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patients had tolerated a β-lactam agent since the listed allergy. Overall, 70% of patients were hospitalized from the ED. Similar trends in antibiotic use were observed at admission – decreased FQs (38% pre vs. 27% post, \(P = 0.059\)), increased cephalosporins (24% pre vs. 38.4% post, \(P = 0.021\)). Two patients (1.6%) experienced a severe reaction within 24 hours of β-lactam administration post-allergy assessment.

**Conclusion.** Pharmacists engaged through education and encouraged to place outpatient referrals at the time of allergy consultation.

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995. Impact of Penicillin Allergy Labels on Carbapenem Use in a Multi-Center Study

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**Session:** 129. Antibiotic Stewardship: Allergy Evaluation

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**Background.** Antibiotic allergy labels lead to excess exposure to broad-spectrum antibiotics and can result in patient harm. We aimed to describe the prevalence of antibiotic allergy labels (PAL) across a variety of hospital settings and its association with carbapenem exposure.

**Methods.** We performed a retrospective cohort analysis of inpatient admissions from 14 hospitals in the Duke Antimicrobial Stewardship Outreach Network (DASON) and Duke Health System from 2016 to 2018. Data were collected from the DASON central database which is derived from electronic health record extracts. PAL was defined from drug allergy documentation indicating any reaction to penicillin or its related agents, but did not include labels for other β-lactam agents (e.g., cephalosporins) if it was anticipated that patients were not truly allergic. Carbapenem exposure was defined as a binary variable indicating receipt of at least one dose of meropenem, ertapenem, doripenem or imipenem on an inpatient unit. The association between PAL and carbapenem exposure was assessed using multivariable logistic regression with candidate covariates including age, gender, comorbidity score, and exposure to intensive care or hematology/oncology unit. Hospital-level PAL prevalence was defined as the percentage of inpatient admissions. Hospital-level carbapenem use rates were assessed as days of therapy (DOT) per 1000 patient-days and stratified by PAL to understand the portion of use associated with PAL.

**Results.** Of the 727,168 admissions included in this study, 84,033 (11.6%) patients had a PAL. The majority of admissions with documented PAL were in patients >65 years old (47.9%, \(n = 40,240\)) and female (57.8%, \(n = 41,482\)). PAL was associated with a 2-fold higher risk of receipt of carbapenem (adjusted odds ratio 2.13, 95% CI 1.89–2.40, \(P < 0.0001\) ). PAL prevalence varied among hospitals (median 14%, range 5–20%). Hospitals with antibiotic allergy-focused stewardship programs (ASP) had a similar PAL prevalence (median 13.8% vs. 15.9%, \(P = 0.08\)), but the percent of carbapenem DOT used in patients with PAL was similar (median 23% vs. 24%, \(P = 0.6\)).

**Conclusion.** PAL was associated with increased carbapenem exposure on the patient level. Antibiotic allergy labels may affect PAL but it is unclear whether it reduces carbapenem use based on these observational data.

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997. Practical partners of AntiMicrobial Stewardship to address referrals to Penicillin allergy testing in a VA Medical Center

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**Session:** 129. Antibiotic Stewardship: Allergy Evaluation

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**Background.** The majority of Penicillin (PCN) allergies can be "debunked." During acute medical care, opportunities to refer for formal evaluation are often overlooked, hampered by medication interactions and lack of time and resources for bedside testing. Frequently, inpatients are not referred for PCN debunking evaluations. PCN allergy-focused antibiotic stewardship (PCN-DE) teams can work collaboratively to target those who would benefit from allergy labeling and are unlikely to be referred for formal evaluation.

**Methods.** The DVCVAMC is an urban 240 bed 1a complexity acute and LTC teaching hospital with both on-site AST and well-established ACT. β-lactam allergy was tracked by the AST in inpatient, outpatient and long-term care setting utilizing a clinical surveillance system (TheraDoc, DSS Inc.) and allergy education was incorporated into prospective auditing rounds. PCN-DE involved face-face visit with an Allergist and careful history, chart/medication review. Option for skin testing (PrePen, ALK Abello) with/or without oral challenge performed at the discretion of ACT.

**Results.** We collaborated to develop a PCN-DE outpatient Allergy Clinic on the hospital campus. 2,564 designed β-lactam allergy alerts were identified as part of routine AST workflow prior to the initiation of the clinic in October 2017. Referrals were made to AST prospectively for ACT and by correlation of historical allergy history among acute and LTC admissions. Providers, including trainees, were engaged through education and encouraged to place outpatient referrals at the time of discharge or upon follow-up. ACT evaluated patients in groups of 2–3/session, roughly one clinic/month. Mean age of patients tested 56.3y (24–89y) with 35% >65y; to date, (19/26) 73% have been successfully de-labeled.