Research Database, Becton, Dickinson & Company). ESBL was defined as an EN that was ESBL-positive per commercial panels or intermediate or resistant (non-susceptible, [NS]) to a third-generation cephalosporin; CRE was defined as an EN that was NS to imipenem, meropenem, doripenem or ertapenem. Urine isolates were classified as community-onset (CO) < 3 days of an inpatient admission and no previous admission within the 14 days or hospital-onset (HO) ≥ 3 days post-admission or within 14 days of discharge) period. Prevalence and rates per 100 admissions were calculated overall, by onset location (CO vs. HO), and by US Department of Health and Human Services (HHS) geographic region.

**Results.** In 2018, there were 193,476 non-duplicate EN urine isolates across 4,623,333 admissions; 63.6% were *E. coli* (EC), 19.5% were *K. pneumoniae*/*oxytoca* (KPO), and 8.7% were *P. mirabilis* (PM). Overall, 12.6% were ESBL and 0.9% were CRE. Rate per 100 admissions was 0.484 and 0.037 for ESBL and CRE, respectively. Among CO, 11.8% were ESBL and ESBL rates per 100 admissions were 0.358; 0.7% were CRE and CRE rates per 100 admissions was 0.024. Among HO, 15.7% were ESBL and ESBL rates per 100 admissions was 0.126; 1.5% were CRE and CRE rates per 100 admissions was 0.013. Regional differences in both ESBL and CRE EN were noted (table).

**Conclusion.** The prevalence of ESBLs/CRE among adult hospitalized patients with EN in a urine culture was 13% and 1%, respectively. The % ESBL/CRE was higher among patients HO urine isolates whereas ESBL/CRE rates per 100 admissions were higher among patients with CO urine isolates. Considerable geographic varia
tions were observed. Region and site of onset differences in ESBL/CRE epidemiology should be considered when making empiric antibiotic treatment decisions.

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### 1441. Comparison of Cefpodoxime vs. Oral Cefuroxime for Urinary Tract Infections at a Large Academic Medical Center

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**Session:** 157. Urinary Tract Infections

**Friday, October 4, 2019: 12:15 PM**

**Background.** Cefpodoxime (CPD) and cefuroxime (CFX) are both oral cephalosporins indicated for urinary tract infection (UTI) treatment. CPD may have unfavorable pharmacokinetics (PK) given the lesser degree of renal excretion and urine concentration vs. CFX and risk of collateral damage. The objective of this study was to compare the efficacy and safety of these two agents for UTI treatment.

**Methods.** We conducted a retrospective evaluation among adult patients who received CPD or oral CFX for ≥24 hours for UTI treatment between January 2013 and July 2018. The primary outcome was the rate of subsequent UTI within 90 days following therapy. Safety outcomes included the rate of *Clostridium difficile* infection (CDI) and development of isolates resistant to third-generation cephalosporins (TGC) within 90 days. We also examined missed opportunities for antibiotic de-escalation in culture-positive patients.

**Results.** Of 747 patients assessed for study inclusion, 295 patients met eligibility criteria (CPD n = 165, CFX n = 130). Median age was 72 years (IQR 55–84) and 71% were female. More patients in the CPD vs. CFX group had pyelonephritis (29% vs. 11%, *P = 0.0005) and were treated in the emergency department (42% vs. 16%, *P = 0.0005)). *Escherichia coli* was most commonly isolated (n = 139), followed by *Klebsiella pneumoniae*. The rate of subsequent UTI for CPD vs. CFX was 18% vs. 16%, *P = 0.647* at median of 25 vs. 32 days, *P = 0.399*. CDI rate was 1% vs. 2%, *P = 0.324* and resistance to TGC was detected in 4% vs. 1%, *P = 0.068* for CPD vs. CFX, respectively. Missed opportunities to de-escalate antibiotics based on cultures were found in one-third of patients. After adjusting for multiple factors in multi-variante analysis, genitourinary abnormality (Odds Ratio [OR] 2.2, 95% CI 1.10–4.29, *P = 0.026*) and prior history of UTI within 180 days (OR 2.2, 95% CI 1.08–4.398, *P = 0.03*), but not the choice of oral cephalosporin, were the only independent predictors of subsequent UTIs.

**Conclusion.** Despite less favorable urinary PK of CPD compared with CFX in this patient cohort, no differences in efficacy or safety between the two agents for UTI treatment were found. These findings warrant further exploration. Stewardship strategies for de-escalation from higher generation cephalosporins to narrow-spectrum antibiotics based on susceptibilities should be implemented.

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

### 1443. N-Acetyl Cysteine Coadministration in Prevention of Amphotericin-B-Induced Electrolyte Abnormalities in Children

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**Session:** 157. Urinary Tract Infections

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**Background.** Amphotericin B (AmB) can cause electrolyte abnormalities, including hypokalemia, hypomagnesemia, hypernatremia, and metabolic acidosis; and most important, acute renal failure.

**Methods.** We conducted a randomized prospective cohort study from March 2012 to February 2018 at Hacettepe University İhsan Doğramacı Children Hospital to children receiving AmB.

**Results.** A total of 87 patients including 37 patients with NAC and 50 patients without NAC received liposomal amphotericin B during the study period. Serum creatinine, blood urea nitrogen, phosphorus were not different statistically in both groups during the study period. Serum sodium, potassium, calcium, magnesium, and phosphate were not different statistically in both groups. Mean serum magnesium value was higher in NAC received group on...