POSTER ABSTRACTS

356. Epidemiology of Community-Associated Carbapenem-Resistant *Enterobacteriaceae* Identified through the Emerging Infections Program

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Background. Carbapenem-resistant Enterobacteriaceae (CRE) is an emerging public health problem in the United States with acquisition mostly in the inpatient healthcare setting. Other drug-resistant *Enterobacteriaceae* cause community-associated (CA) infections; the spread of CRE in non-healthcare settings could have important public health implications. We analyzed CRE surveillance data to identify CA cases.

Methods. From January 2012-December 2013, 5 Emerging Infections Program (EIP) sites (CO, GA, MN, NY, OR) participated in active laboratory- and population-based CRE surveillance. A CRE case was isolation of *Escherichia coli, Enterobacter* or *Klebsiella spp.* from normally sterile sites or urine that was carbapenem-nonsusceptible (excluding ertapenem) and resistant to all 3rd generation cephalosporins tested. Cases underwent medical record review; a subset of CRE isolates underwent PCR for carbapenemase genes. Cases were classified as CA if they had no hospital admissions, long term care residence or chronic dialysis in the prior year and no indwelling devices in the 2 days before culture; cases with these exposures were considered healthcare-associated (HA).

Results. Of 430 total CRE cases, 414 (representing 329 patients) with known CA/HA status were evaluated. Thirty-nine of 329 (12%) patients had CA CRE. Most CA patients were female (72%); all had CRE isolated from urine only; 44% had a symptomatic UTI; none traveled internationally in the 2 months prior to onset. Both patient groups were similar in age (58 vs 62 years, $p = 0.18$). CA patients had a lower mean Charlson Comorbidity Index (0.90 vs 3.14, $p < 0.0001$) compared to HA patients. CA CRE cases were more likely to be caused by *Enterobacter aerogenes* (40% vs 11%, $p < 0.0001$) and less likely to be caused by *Klebsiella pneumoniae* (30% vs 62%, $p < 0.0001$) than HA cases. Fewer CA CRE isolates were *K. pneumoniae* carbapenemase positive by PCR than HA isolates (2/15, 13%, vs 50/94, 53%, $p = 0.004$).

Conclusion. In-depth review of CRE cases from geographically diverse EIP surveillance sites revealed a few patients did not have major healthcare exposures in the year prior to their CRE culture. It will be important to determine whether these patients have less intensive outpatient or remote inpatient healthcare exposures.

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