Risk Factors Associated with Community-Onset CRE Colonization and Infection
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BACKGROUND
• Carbapenem-resistance (CRE) is an emerging threat to the healthcare system.
• Little is known about community reservoirs and risk factors for CRE colonization and infection.
• The purpose of this study was to determine risk factors and patient outcomes associated with CRE colonization and infection in the outpatient community.

METHOD
• Patients who visited the ED or hospitalized and tested for CRE colonization or infection within 48 hours of presentation were included in the study.
• Patients who tested positive for CRE (cases) were matched to patients who did not test positive for CRE (controls) on gender, organism, and source at a 1:3 ratio.
• Cases were compared to controls to identify risk factors and patient outcomes associated with positive CRE.

RESULTS
• A total of 44 patients were included in the study. The majority were female (73%) and the average age was 64.
• When comparing cases and controls, CRE colonization/infection was associated with lung disease (p=0.009), nursing home residence (p=0.02), antibiotic exposure in the prior 3 months (p=0.001), and in particular, Fluoroquinolone exposure (p=0.007). Table 1
• Patient outcomes were similar between cases and controls. Table 2
• After logistic regression analysis, lung disease (p=0.03) and prior Fluoroquinolone exposure (p=0.03) remained significant predictors of CRE colonization/infection. Table 3

CONCLUSIONS
• Identifying the risk factors for CRE colonization and infection among community dwelling patients may allow more targeted screening for CRE colonization in order to prevent the spread of these organisms within the healthcare system. Antibiotic stewardship to reduce exposure to fluoroquinolone antibiotics may also reduce CRE acquisition.

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