**Presentation Type:**
Poster Presentation - Poster Presentation
**Subject Category:** MDR GNR
**Colonization with extended-spectrum cephalosporin-resistant Enterobacterales (ESCrE) in hospitalized patients in Botswana**
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**Background:** The epidemiology of extended-spectrum cephalosporin-resistant Enterobacterales (ESCrE) in hospitalized patients in low- and middle-income countries (LMICs) is poorly described. Although risk factors for ESCrE clinical infection have been studied, little is known of the epidemiology of ESCrE colonization. Identifying risk factors for ESCrE colonization, which can predispose to infection, is therefore critical to inform antibiotic resistance reduction strategies. **Methods:** This study was conducted in 3 hospitals located in 3 districts in Botswana. In each hospital, we conducted ongoing surveillance in sequential units hospitalwide. All participants had rectal swabs collected which were inoculated onto chromogenic media followed by confirmatory testing using MALDI-TOF MS and VITEK-2. Data were collected via interview and review of the inpatient medical record on demographics, comorbidities, antibiotic use, healthcare exposures, invasive procedures, travel, animal contact, and food consumption. Participants with ESCrE colonization (cases) were compared to non-colonized participants (controls) using bivariable and multivariable analyses to identify risk factors for ESCrE colonization. **Results:** Enrollment occurred from January 15, 2020, to September 4, 2020, and 469 participants were enrolled. The median age was 42 years (IQR, 31–58) and 320 (68.2%) were female. The median time from hospital admission to date of sampling was 5 days (IQR, 3–12). There were 179 cases and 290 controls (ie, 38.2% of participants were ESCrE colonized). Independent risk factors for ESCrE colonization were a greater number of days on antibiotic, recent healthcare exposure, and tending swine prior to hospitalization. (Table). **Conclusions:** ESCrE colonization among hospitalized patients was common and was associated with several exposures. Our results suggest prior healthcare exposure may be important in driving ESCrE. The strong link to recent antibiotic use highlights the potential role of antibiotic stewardship interventions for prevention. The association with tending swine suggests that animal husbandry practices may play a role in community exposures, resulting in colonization detected at the time of hospital admission. These findings will help to inform future studies assessing strategies to curb further emergence of hospital ESCrE in LMICs.
**Disclosures:** None

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**Table. Multivariable Risk Factors for ESCrE**

| Covariate | Adjusted Odds Ratio (95%CI) | P value |
|---|---|---|
| Age (per year) | 1.00 (0.99, 1.01) | 0.590 |
| Days from Hospital Admission to Study Enrollment | 1.01 (0.99, 1.03) | 0.092 |
| Inpatient Antibiotic Days Prior to Study Enrollment | 1.07 (1.02, 1.11) | 0.002 |
| Visited Hospital for Care in Past 3 Months | 1.71 (1.01, 2.89) | 0.045 |
| Foreign Travel in Past 6 Months | 2.81 (0.88, 9.02) | 0.082 |
| Tended Swine at Home in Week Prior to Hospitalization | 2.90 (1.25, 6.74) | 0.013 |

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**Carbapenem-resistant Enterobacterales susceptibility patterns to new antimicrobials: A single-center analysis**
Miranda Monk; Sarah Turbett; Christine Yang and Ramy Elshaboury

**Background:** Multidrug-resistant bacteria are of high concern, and empiric antimicrobial choice for infections caused by these pathogens, while awaiting susceptibilities, is increasingly encountered. We describe the susceptibility patterns of ceftazidime-avibactam (CZA), imipenem-rel-ebactam (I-R), meropenem-vaborbactam (MVB), cefiderocol (FDC), ceftolozone-tazobactam (C/T), minocycline (MIN), and tigecycline (TGC) for carbapenem-resistant Enterobacterales at an academic medical center. **Methods:** We performed a single-center analysis of Enterobacterales isolates from 110 hospitalized adult patients who had CZA, I-R, MVB, FDC, MIN, or TGC susceptibility testing performed between October 2020 and September 2022. The study included 1 isolate per patient per infection site per year. Isolates were divided into carbapenem susceptible and non susceptible categories. For carbapenem nonsusceptible isolates, phenotypic confirmatory testing of carbapenem nonsusceptibility was performed using disk diffusion, gradient diffusion, and/or broth microdilution. Interpretive categories were applied using CLSI- or FDA-approved break-points where applicable. Carbapenemase testing was also performed using the modified carbapenem inactivation method (mCIM) and, where applicable, this testing was confirmed at the Massachusetts State Public Health Laboratory using genotypic methods. **Results:** In total, 125 unique isolates were reviewed: 34 meropenem-susceptible and 91 meropenem-intermediate or resistant isolates. CZA, I-R, MVB, and FDC were active against all tested meropenem-susceptible isolates; however, 50% of tested isolates were susceptible to C/T. MIN and TGC, when tested, were active against 2 of 11 isolates (18%) and 14 of 16 isolates (86%), respectively. Of 91 meropenem-nonsusceptible isolates, most tested isolates were susceptible to MVB (59 of 72, 82%), followed by CZA (63 of 82, 77%), I-R (8 of 11, 73%), FDC (9 of 16, 56%), and C/T (1 of 12, 8%). TGC retained activity against 78 of 81 (96%) tested isolates. In contrast, MIN retained activity against 8 of 45 isolates (18%). Additionally, all (28 of 28, 100%) isolates that were nonsusceptible to at least 1 novel agent (CZA, I-R, MVB, FDC, or C/T) remained susceptible to TGC. State laboratory confirmatory testing was available for 75 isolates. Of 43 mCIM-positive isolates, all 28 KPC-producing isolates were susceptible to CZA, I-R, MVB, FDC and TGC. **Conclusions:** Among Enterobacterales, CZA, MVB, and I-R retained activity against most non-NDM CRE isolates in this local analysis, with comparable susceptibilities. TGC demonstrated excellent susceptibility for CRE and meropenem-susceptible isolates, offering an alternative for nonbloodstream infections. Choice of empiric agent with a newβ-lactam, β-lactam–β-lactamase inhibitors, or TGC appear to be reasonable empiric therapeutic options at our institution. CT and MIN warrant confirmatory testing prior to use due to low susceptibility rates among meropenem nonsusceptible isolates.
**Disclosures:** None

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**Real-world clinical outcomes of cefiderocol therapy in the Veterans Health Administration, 2019–2022**
Eva Amenta; Barbara Trautner; David Ramsey and Andrew Chou

**Background:** Cefiderocol is a novel siderophore cephalosporin with broad-spectrum activity. In the CREDIBLE-CR phase 3 clinical trial examining treatment of carbapenem-resistant gram-negative infections, cefider-