574. Reporting of Vancomycin-Resistant Enterococcus Bacteremia among National Healthcare Safety Network Acute Care Hospitals
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Session: 63. HAI: VRE Epidemiology
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Background. The National Healthcare Safety Network’s (NHSN) Multidrug-resistant Organism/Clostridioides difficile (MDRO/Cdiff) Module serves as a surveillance platform for tracking antibiotic-resistant laboratory-identified (LabID) organisms. LabID surveillance, which does not require submission of clinical data to NHSN, provides proxy measures for MDRO burden. While surveillance of some organisms is federally mandated, these requirements do not extend to vancomycin-resistant Enterococcus (VRE). We sought to describe the extent of acute care hospital (ACH) participation in NHSN VRE surveillance and identify facility-level factors associated with VRE bacteremia. These could explain differences in VRE incidence and be used in preparation for a national risk-adjusted benchmark.
Methods. ACHs that reported at least one month of facility-wide inpatient (FacWideIN) VRE bacteremia LabID Event data to NHSN in 2017 were included in the analysis. LabID events were categorized as healthcare facility-onset (HO) defined as a specimen collected <4 days after admission, or community-onset (CO) defined as a specimen collected ≥4 days after admission, or community-onset (CO), defined as a specimen collected ≥4 days after admission, or community-onset (CO)
Results. A total of 544 HO VRE bacteremia events were reported by 498 hospitals in 37 states. About 67% of reporting hospitals and patients were associated with VRE bacteremia. These could explain differences in VRE incidence and be used in preparation for a national risk-adjusted benchmark.
Disclosures. All authors: No reported disclosures.

575. Evaluation of Risk Factors and Clinical Outcomes of Patients with Vancomycin-Resistant Enterococcus Infections
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Background. Vancomycin-resistant Enterococci (VRE) occurs with enhanced frequency in hospitalized patients and are usually associated with poor clinical outcomes. The purpose of this study was to evaluate the risk factors and clinical outcomes of patients with VRE infections.
Methods. This study was an IRB-approved multi-center retrospective chart review conducted at a three-hospital health system between August 2016-November 2018. Inclusion criteria were patients ≥18 years and admitted for ≥24 hours with cultures positive for VRE. Patients pregnant or colonized with VRE were excluded. The primary endpoint was to analyze the association of potential risk factors with all-cause in-hospital mortality (ACM) and 30-day readmission. The subgroup analysis focused on the association of risk factors with VRE bacteremia. The secondary endpoint was to evaluate the impact of different treatment groups of high dose daptomycin (HDD) (216 mg/kg/day) vs. low dose daptomycin (LDD) (<10 mg/kg/day) vs. linezolid (LZD) on ACM and 30-day readmission. Subgroup analysis focused on the difference of length of stay (LOS), length of therapy (LOT), duration of bacteremia (DOB) and clinical success (CS) between the treatment groups.
Results. There were 81 patients included for analysis; overall mortality was observed at 16%. Utilizing multivariate logisitic regression analyses, patients presenting from long-term care facilities (LTCF) were found to have increased risk for mortality (OR 4.125, 95% CI 1.149-14.814). No specific risk factors were associated with 30-day readmission. Patients with previous exposure to fluoroquinolones (FQ) and cephalosporins (CPS), nosocomial exposure and history of heart failure (HF) showed association with VRE bacteremia. ACM was similar between HDD vs. LDD vs. LZD (16.7% vs. 15.4% vs. 0%, P = 0.52). No differences were seen between LOS, LOT, CS, and DOB between the groups.
Conclusion. Admission from LTCFs was a risk factor associated with in-hospital mortality in VRE patients. Individuals with history of FQ, CPS and nosocomial exposure as well as history of HF showed increased risk of acquiring VRE bacteremia. There was no difference in ACM, LOS, LOT, and DOB between HDD, LDD and LZD.
Disclosures. All authors: No reported disclosures.

576. A Multicenter Epidemiology Study on Risk Factors of Vancomycin-Resistant Enterococcus Infections in China: Results from the China Antimicrobial Surveillance Network (CHINET) in 2016
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Session: 63. HAI: VRE Epidemiology
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Background. Vancomycin-resistant Enterococcus (VRE) occurs with enhanced frequency in hospitalized patients and are usually associated with poor clinical outcomes. The purpose of this study was to evaluate the risk factors and clinical outcomes of patients with VRE infections.
Methods. This study was an IRB-approved multi-center retrospective chart review conducted at a three-hospital health system between August 2016-November 2018. Inclusion criteria were patients ≥18 years and admitted for ≥24 hours with cultures positive for VRE. Patients pregnant or colonized with VRE were excluded. The primary endpoint was to analyze the association of potential risk factors with all-cause in-hospital mortality (ACM) and 30-day readmission. The subgroup analysis focused on the difference of length of stay (LOS), length of therapy (LOT), duration of bacteremia (DOB) and clinical success (CS) between the treatment groups.
Results. There were 81 patients included for analysis; overall mortality was observed at 16%. Utilizing multivariate logistic regression analyses, patients presenting from long-term care facilities (LTCF) were found to have increased risk for mortality (OR 4.125, 95% CI 1.149-14.814). No specific risk factors were associated with 30-day readmission. Patients with previous exposure to fluoroquinolones (FQ) and cephalosporins (CPS), nosocomial exposure and history of heart failure (HF) showed association with VRE bacteremia. ACM was similar between HDD vs. LDD vs. LZD (16.7% vs. 15.4% vs. 0%, P = 0.52). No differences were seen between LOS, LOT, CS, and DOB between the groups.
Conclusion. Admission from LTCFs was a risk factor associated with in-hospital mortality in VRE patients. Individuals with history of FQ, CPS and nosocomial exposure as well as history of HF showed increased risk of acquiring VRE bacteremia. There was no difference in ACM, LOS, LOT, and DOB between HDD, LDD and LZD.
Disclosures. All authors: No reported disclosures.

Table 1: Facility factors associated with healthcare facility-onset VRE bacteremia

| Facility Factors | Healthcare facility-onset VRE bacteremia incidence rate per 10,000 patient days | 95% confidence interval | P-value |
|-----------------|-------------------------------------------------------------|------------------------|-----------|
| Hospital type   | General acute care | 0.275 | 0.250 | 0.300 | 0.0088 |
|                 | Pediatric or other specialty | 0.067 | 0.035 | 0.145 | Referent |
| Total bed size  | < 75 beds | 0.106 | 0.052 | 0.195 | 0.0054 |
|                 | ≥ 151 beds | 0.231 | 0.197 | 0.266 | 0.0002 |
|                 | 75–183 beds | 0.205 | 0.164 | 0.246 | 0.0235 |
|                 | 284 beds | 0.337 | 0.305 | 0.372 | Referent |
| Medical-school affiliation | Major teaching | 0.074 | 0.036 | 0.134 | 0.0015 |
|                 | Graduate teaching | 0.175 | 0.110 | 0.297 | 0.0007 |
|                 | Undergraduate teaching | 0.179 | 0.145 | 0.210 | 0.0044 |
|                 | None | 0.347 | 0.314 | 0.382 | Referent |
| Average length of stay (in days) | ≤ 3.4 days | 0.107 | 0.073 | 0.151 | < 0.0001 |
|                 | 3.5–4.6 days | 0.119 | 0.107 | 0.177 | < 0.0001 |
|                 | 4.7–5.8 days | 0.243 | 0.206 | 0.283 | 0.0026 |
|                 | ≥ 5.9 days | 0.431 | 0.384 | 0.482 | Referent |
| Cronology unit  | Present | 0.196 | 0.153 | 0.242 | < 0.0001 |
|                 | Absent | 0.187 | 0.164 | 0.212 | Referent |

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