

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: Surveillance**Candida auris Screening of High-Risk Patients: A Descriptive Comparison of 2 Strategies.**

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Background: *Candida auris* infection is associated with high morbidity and mortality. *C. auris* can persist in the healthcare environment and is associated with outbreaks. We compare screening strategies for *C. auris* in two high-risk patient populations. **Methods:** Our center is a tertiary, 865-bed hospital. In the context of known regional outbreaks of *C. auris* in post-acute care (PAC) facilities, we experienced extended clusters of apparent *C. auris* acquisition across several hospital units. Hospital acquisition was defined as new *C. auris* in clinical cultures in patients with no known history of *C. auris* colonization/infection. We performed point prevalence surveys (PPS) on affected units weekly until all tests were negative for two consecutive weeks. We also initiated admission screening for *C. auris* for patients admitted from PAC. All screening swabs were collected per CDC's procedure. Tests were performed either by RT-PCR or Chromagar *C. auris* media, depending on availability. We compared the overall positivity rates of exposure PPS versus PAC admission screenings using Z-test for two proportions with statistical significance set at $p < 0.05$. **Results:** From 2/2023-12/2023, a total of 533 tests on 367 unique patients were processed during PPS; 512 tests were negative and 21 were positive (3.9% positivity rate). Three additional samples were either unable to be processed or indeterminate. There were 68 patients who had repeat testing weekly for ≥ 2 weeks. Most remained negative, but 5 tested positive after variable amounts of negative-week intervals: 3 patients at week 2, 1 patient at week 4 and 1 patient at week 5. From 8/2023 to 12/2023, a total of 89 patients admitted from 35 different PAC facilities underwent admission screening for *C. auris*. Only three patients were positive (3.4%), each from a different facility. The difference in the positivity rates between PPS and PAC was not statistically significant (Z-score 0.25, $p = 0.79$). **Discussion:** Our *C. auris* screening strategies found similar positivity rates for patients admitted to the hospital from PACs compared to targeted PPS in the setting of apparent hospital acquisition events. These strategies may be considered as complementary. Facilities experiencing apparent acquisition events should consider screening high-risk admissions to identify and isolate colonized patients, particularly if standard infection prevention practices are being performed with high fidelity.

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Subject Category: Surveillance**Community-associated Carbapenem-Resistant Organism Case Investigations in New York City, December 2020-May 2023**

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Epidemiology of carbapenem-resistant organisms (CRO) has focused on transmission in acute care hospital or long-term care facility (LTCF) settings. Few investigations have examined community-associated (CA)-CRO, with no consensus about common exposures. To explore possible exposures, the New York City (NYC) Department of Health and Mental Hygiene investigated suspected CA-CRO cases through routine surveillance among NYC residents with specimens collected during December 2020-May 2023. CA-CRO cases were defined as urine or skin specimens with bacterial cultures exhibiting carbapenem resistance, among individuals aged ≤ 70 years with no international travel, hospitalization, or LTCF stays within 12 months before specimen collection. Inclusion was determined by reviewing data from health information exchanges, when available electronic medical records, and telephone screening for those not excluded through record review. We identified 426 suspected cases for review, those not meeting the case definition were excluded; 44 individuals were not reached for screening. A preliminary questionnaire was fielded with 12 individuals and then refined to capture additional potential exposures. Analyses were completed with 23 individuals interviewed with the refined questionnaire. Of the 23, 70% were female; 39% were Hispanic, 17% Black, and 17% White; their median age was 60 years (range: 26-70 years). Further, 83% reported an outpatient appointment, 48% reported an outpatient procedure/surgery, and 9% reported having a hospitalized household member, all within 12 months before specimen collection; 26% had a urinary catheter or indwelling device within 2 days of specimen collection. Additionally, 30% reported taking antibiotics within 3 months of specimen collection, 52% denied taking antibiotics, 9% were unsure about antibiotic use, and 9% did not answer the question. Whole genome sequencing (WGS) was performed on 14 available isolates from CA-CRO cases by the NYC Public Health Laboratory or Wadsworth Center (WC), of which only 7 could be compared with isolates previously sequenced at WC (2017-2023). Six isolates were separated by >50 mutation events, suggesting no close genomic relationship. One isolate from 2021 was 11 mutation events from a 2018 isolate from the same individual, consistent with the expected evolutionary rate. While infrequent, CA-CRO cases occur in NYC. Outpatient healthcare, antibiotic use, and urinary catheters or indwelling devices were common self-reported exposures. Analyses were limited by screening non-response. Increased specimen availability for WGS could enhance investigation of CA-CRO exposure patterns. Health information exchange data were often incomplete and future surveillance could benefit from healthcare and public health partnerships and better documentation for more complete electronic medical histories.

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Subject Category: Surveillance**Ensuring Accuracy: Making the Case for Inter-rater Reliability in Hospital Acquired Infection Surveillance**

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Background: Infection preventionists (Ips) have self-reported surveillance as the most time-consuming job task (1,2). APIC's MegaSurvey 2020 reported that 60% of Ips consider themselves proficient or expert within this competency domain (2). Accurate coding of health care acquired infections is critical to identifying epidemiologically significant events, using data to improve practice, and compliance with state and federal mandated CMS reporting (3,4). Validated case study scenarios were distributed to infection preventionists to better understand how experience level and time spent performing surveillance affects interrater reliability (IRR) in