

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.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s147

doi:10.1017/ash.2024.322

Presentation Type:

Poster Presentation - Poster Presentation

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

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Implementation Science in Population Health and Karen Alroy, NYC Department of Health and Mental Hygiene

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.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s147

doi:10.1017/ash.2024.323

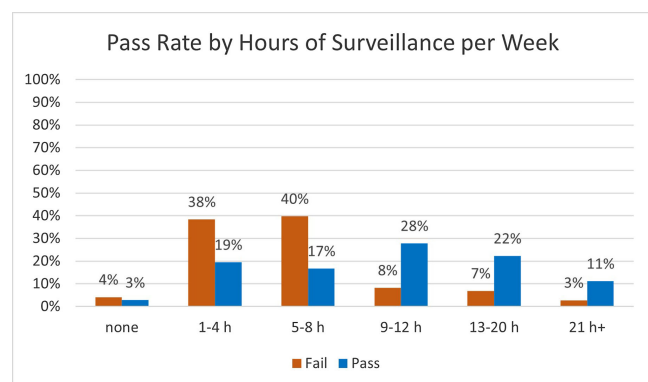
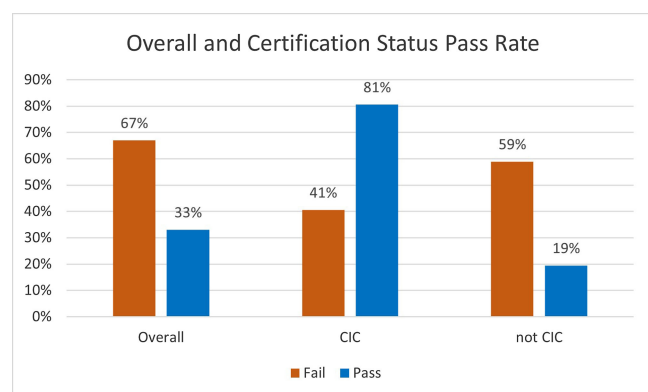
Presentation Type:

Poster Presentation - Poster Presentation

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



applying the National Healthcare Safety Network (NHSN) surveillance definitions (5,6). **Methods:** Case study scenarios determined to have high item discrimination were added to an online test bank and distributed annually to Ips of varying experience levels and care settings as part of a mandatory training program (5). The test bank currently consists of forty-two validated questions. Each year, the participants receive approximately thirty questions, including twenty randomly selected from the test bank and ten beta scenarios under development. Only validated test bank scenarios are used to calculate the passing score of 85%. Participants are blinded to which questions are test bank scenarios versus beta scenarios. Additional information was gathered at the beginning of the test to determine CIC status, years of experience, and weekly hours spent doing surveillance. Data was analyzed for passing score on the first attempt for testing years 2019, 2021, 2022, and 2023. **Results:** Thirty-six Ips passed the IRR test on the first attempt (33%). Of those who passed on the first attempt, twenty-nine (81%) were certified and twenty-two (61%) reported at least nine hours a week performing surveillance. Of the seventy-three Ips (67%) who did not pass on the first attempt, thirty were certified (41%) and sixty (82%) reported performing surveillance for 8 hours or less per week. **Conclusion:** The first-time pass rate for certified and non-certified Ips was 33%, markedly lower than the self-reported proficiency rate of 60%. The majority of Ips who passed on the first attempt were certified and spent at least nine hours per week performing surveillance. certified and non-certified Ips who did not regularly perform surveillance as part of their weekly job tasks were less likely to pass the test on the first attempt. Given the first-time pass rate among all participants is below optimal, establishing inter-rater reliability systems and ongoing surveillance education for Ips is crucial to ensure accuracy of publicly reported data.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s147-s148
doi:10.1017/ash.2024.324

Presentation Type:

Poster Presentation - Poster Presentation

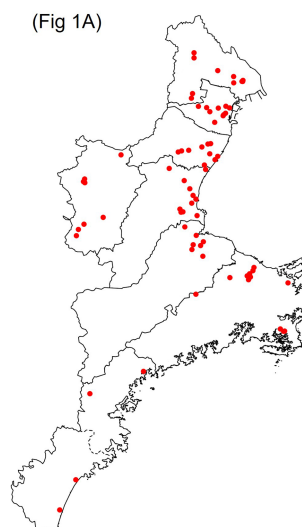
Subject Category: Surveillance

Comparison of COVID-19 Sentinel Surveillance and COVID-19 School Absentee Surveillance in Japan

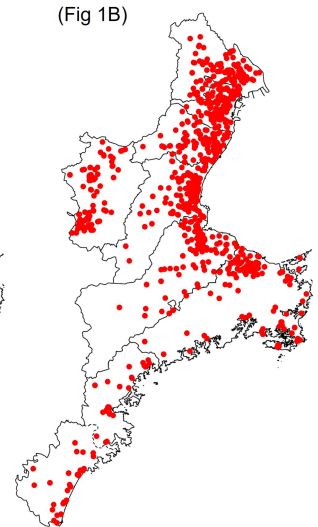
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Background: In Japan, notifiable infectious disease surveillance ended and was replaced by sentinel surveillance following the COVID-19 reclassification in May 2023. Since COVID-19 sentinel surveillance is integrated into seasonal influenza surveillance, the number of reported cases varies depending on the extent to which sentinel facilities provide COVID-19 care. Therefore, we compared COVID-19 sentinel surveillance with school absentee surveillance, which is limited to high school equivalent age or younger, but provides reliable information on absences in the target population. **Method:** The 17-week period from week 23 (June 5 to June 11) to week 39 (September 25 to October 1) of 2023 was used as the target period. The number of weekly COVID-19 reports from 72 sentinel sites in Mie Prefecture (Population 1.7 million) as for sentinel surveillance and the number of COVID-19 absentees at a total of 998 facilities (401 kindergartens and nursery schools, and 597 elementary, junior high, and senior high schools) registered for school absentee surveillance in Mie Prefecture as for school absentee surveillance were compared across Mie Prefecture and eight health centers (Fig 1). **Result:** Except for the summer vacation period from week 29 to 35, sentinel surveillance and school absentee surveillance showed a significant positive correlation. During the summer vacation period, a decrease in the number of COVID-19 absentees was observed, especially in the elementary, junior high, and senior high school groups of the school absentee surveillance, compared to the sentinel surveillance (Fig 2 and 3). When compared by health center, no regional differences

(Fig 1A)



(Fig 1B)



(1A) indicates the 72 sentinel sites in COVID-19 and seasonal influenza sentinel surveillance, and (1B) indicates the 998 facilities participating in school absentee surveillance.