



Oral Abstracts

Antimicrobial and Diagnostic Stewardship

ADS-01

Containment of a Multi-facility Outbreak of *Candida Auris* in a Texas Metropolitan Area During COVID-19 Pandemic

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Background: During the coronavirus disease 2019 (COVID-19) pandemic, healthcare facilities are experiencing shortages of staff, personal protective equipment (PPE), environmental disinfectants, and patient beds. *Candida auris*, a fungus often resistant to common antifungals, requires staff to wear gown and gloves and use the correct surface disinfectant. A regional epidemiology approach is needed when a multi-facility outbreak occurs.

Methods: In May 2021, an acute care hospital reported a clinical *C. auris* case to the local health department (LHD). Discussions were initiated between LHD and state partners on the Centers for Disease Control and Prevention (CDC) tiered *C. auris* approach. Infection Control Assessment Responses (ICARs) were conducted at identified facilities and point prevalence studies were initiated upon identification of infection control gaps. LHD implemented aggressive colonization testing and isolation protocol after discussions with CDC and state partners. Active surveillance was implemented throughout the jurisdiction. An interfacility transfer form helped communicate isolation needs during patient transfers. *C. auris* isolates confirmed at the state laboratory were sent to the Antibiotic Resistance (AR) Laboratory Network laboratory. Whole genome sequencing (WGS) was performed by the CDC Laboratory.

Results: From May through October 2021, the LHD received 149 *C. auris* case reports. Collection dates ranged from May 1, 2021, to October 15, 2021. Sixteen were clinical cases and 133 were colonized cases. Of the 149 cases, 55% (n=82) were males. Ages ranged from 24 years to 90 years with a mean and median of 65 years. Of the 1725 screening swabs tested, 8% (n=133) were positive for *C. auris*. Twenty-two ICARs were conducted. WGS was performed on 15 isolates, which showed relatedness between the isolates.

Conclusions: AR testing helped epidemiologists identify colonized *C. auris* cases that would have otherwise not been identified. WGS

results supported the epidemiology data showing relatedness between the cases and indicated transmission within and between facilities.

ADS-02

Impact of Blood Culture Pathway on CLABSI Rates in a Pediatric Cardiac Intensive Care Unit

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Background: Arterial lines, especially in Cardiac Intensive Care Units (CICU) are important in caring for patients. While not central lines, blood cultures are often drawn from them, potentially leading to contamination and over-diagnosis of central line-associated bloodstream infections (CLABSI). Diagnostic stewardship is needed to ensure that correct cultures are obtained, increase the identification of true-positive bacteremia, reduce contamination, and eliminate false-positive CLABSIs.

Methods: A retrospective review was performed to determine effects of a clinical work pathway (CWP) on blood culture practices and CLABSI rates in a 12-bed pediatric CICU from August 1st, 2019, to July 31, 2021. A multidisciplinary and multi-unit team developed a blood culture pathway in August 2020 discouraging culturing of often colonized arterial lines in favor of peripheral venous draws. The primary outcome was the total number of arterial line cultures collected per 100 patient-days. The secondary outcomes were the National Healthcare Safety Network standardized infection ratio (SIR) for the unit and the CLABSI rate per 1000 device-days.

Results: In the pre-intervention period, 763 blood culture were sent over 4316 patient days. For the post-intervention period, 632 cultures were sent over 5151 patient days. CICU had 981 additional device days in the post-period as compared to the pre-intervention period. Arterial line cultures decreased significantly from 3.99 arterial line cultures/100 patient days to 0.29 cultures/100 patient days ($p < 0.001$). The SIR went from 2.428 to 2.107 between the pre- and post-implementation period. The CLABSI rate decreased from 3.13 infections/1000 device days to 2.71 infections/1000 device days.

Conclusions: Standardization of blood cultures in the CICU decreased the number of arterial line cultures and contributed to a reduction in the SIR and CLABSI rate. The impact of the COVID-19 pandemic on blood culture practices is unclear although higher patient acuity was evident by the increase in device days post implementation of the CWP.