Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Disinfection/Sterilization
Reduction in IUSS (Immediate Use Steam Sterilization) Associated with Reduction in Surgical Site Infections
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Background: Immediate use steam sterilization (IUSS) is a potential risk factor for surgical site infection (SSI). During a regulatory survey, it was discovered that IUSS rates for a 767-bed hospital exceeded what had been reported to Infection Prevention (IP) and surgery leaders (estimated at an average of 60 instances per month, with approximately 40 of those in orthopedic cases). A Quality Improvement (QI) project to reduce IUSS was implemented. **Methods:** The QI project started with the requirement of three signatures for every cycle of IUSS (surgery management, sterilization management, and IP). Additional trays were ordered to provide an ample supply for cases. Surgery personnel were no longer allowed to perform IUSS, and the number of sterilizers available for IUSS was reduced from 8 to 1. The project was fully implemented as of December 2019. To evaluate the impact, SSI rates for hip and knee prothesis were compared using chi square analysis (Epi Info, CDC); before QI project rates were measured from 2017-2019 and after QI project rates were measured for 2020-2022. No other changes were made that were anticipated to impact orthopedic SSI rates. **Results:** There were no instruments or implants processed by IUSS after December 2019. Prior to the project, there were 9 hip SSI (rate = 0.54 per 100 procedures) and 14 knee SSI (rate = 0.49 per 100 procedures). After the project, hip SSI decreased by 76% (2 SSI, rate = 0.13 per 100 procedures, p = < 0 .05) and knee SSI decreased by 18% (7 SSI, rate = 0.41 per 100 procedures, p=0.67). **Conclusion:** A multidisciplinary QI project was successful at drastically reducing the use of IUSS, and a correlating statistically significant decrease in hip SSI and clinically significant decrease in knee SSI was seen for 3 years after the project was completed. **Disclosure:** Kathleen McMullen: Speaker - 3M

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s89
doi:10.1017/ash.2024.226

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Poster Presentation - Poster Presentation
Subject Category: Disinfection/Sterilization
Navigating the Challenges: Construction Lessons in Establishing an Orthopedic Institute in a Sterile Environment
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Background: In order to become a new, state-of-the-art orthopedic institute with additional operating rooms, and a brand new sterile processing department (SPD), construction needed to be done within a sterile environment. Expansion of the operating room (OR) included adding a whole new wing, with smaller construction work within the open and active OR. While construction for a new SPD occurred in the midst of an active and open SPD; unlike the addition of the OR, new SPD construction included heavy demolition and multiple dust generating projects. There were many lessons learned from the built of this brand new institute, which took place in the middle of a pandemic era. **Method:** Each project involved in the making of the new orthopedic institute required an Infection Control Risk Assessment (ICRA), as well as walkthroughs and team meetings prior to the start of work. Team meetings involved the hospital Infection Preventionist (IP), the construction project manager, and the departments [involved] managers. Requirements, to mitigate dust dispersal into the neighboring sterile environment, were listed in the ICRA. In addition, weekly rounding was conducted by the team to ensure air flow requirements were followed, and there were no accumulation of dust dispersing to the sterile side. Reprocessing was also conducted at sister facilities when existing reprocessing items (sterilizers, instrument washers, cart washers, etc) were shut down; the hospital also went on bypass a few times in order to accommodate patients who emergently needed operating services. **Result:** By April 2022, after two years of construction, the new orthopedic institute with 12 new operating rooms, new ambulatory surgery units (ASU), new post anesthesia care units (PACU), and a brand new SPD went live. There were more than 100 shutdown notices, over 50 alternative practices in place to continue daily operations while also allowing construction work to continue. Noncompliance to any of the requirements was immediately followed up with an urgent notice to the project manager. **Conclusion:** Hindsight, heavy construction in a sterile environment is not preferred and it would have been easier to add on a new SPD, similar to how the OR additions were added; instead of building within an actively open sterile environment. Multidisciplinary team meetings conducted at the very beginning of the project would have prevented many shut downs and alternate practices; . It is pertinent that IPs and clinical department managers are involved at the most earliest phases of the construction.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s89
doi:10.1017/ash.2024.227

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Emerging Pathogens
Resistance to Antifungals in Non-albicans Candida Species Isolates in the Southeast Region
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Background: Antimicrobial resistance is a growing problem in Candida spp., leading to treatment challenges and increased morbidity and mortality. The World Health Organization (WHO) fungal priority pathogens list classifies C. glabrata, C. tropicalis, and C. parapsilosis as high priority and leading causes of candidemia with high fluconazole resistance. In the US, these organisms are the most frequently isolated non-albicans Candida species. In 2016, the Antibiotic Resistance Laboratory Network (ARLN) was created to monitor resistance threats, including in Candida spp. This study describes the proportion of resistance in C. glabrata, C. parapsilosis, and C. tropicalis isolates sent to the Southeast ARLN from 2017 to 2023. **Methods:** This study evaluated C. glabrata, C. parapsilosis, and C. tropicalis submitted to the Southeast ARLN from Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee from February 2017-September 2023. Species identification was confirmed by Bruker Biotyper matrix assisted laser desorption-ionization time of flight (MALDI-TOF). Antifungal susceptibility testing (AFST) was performed using TREK frozen broth microdilution panels. Minimum inhibitory concentration values from the clinical instrument were used to determine susceptibility based on Clinical and Laboratory Standards Institute (CLSI) standard interpretations from the 2020 CLSI M60 guidelines. Data were extracted from the laboratory information management system. Analyses were conducted using SAS v9.4. **Results:** AFST testing was performed on 660 C. glabrata, 500 C. parapsilosis, and 233 C. tropicalis isolates from within the Southeast region. The predominant specimen sources by species were blood 25.30% C. glabrata; other/not specified 27.80% C. parapsilosis; and lower respiratory 36.91% C. tropicalis. Resistance to fluconazole is as follows: C. glabrata, 12.88%; C. parapsilosis, 3.41%; C. tropicalis, 36.64%. Resistance to voriconazole is as follows: C. parapsilosis, 1.00%; C. tropicalis 30.04%. Resistance to at least one echinocandin (Anidulafungin, Capsofungin, Micafungin) is as follows: C. glabrata, 1.67%; C. parapsilosis, 0.60%; C. tropicalis, 0.43%. Overall, there was a decreasing trend in resistance to fluconazole, and voriconazole in all three species between 2017