

but they were associated with a clinical diagnosis of VAI. These findings suggest that positive tracheal aspirate cultures may not aid clinicians in the diagnosis of VAI, and they highlight the opportunity for improved diagnostic stewardship.

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Presentation Type:

Poster Presentation

Subject Category: Diagnostic/Microbiology

Microbiological Identification and Susceptibility Testing Using an Automated Method in a Tertiary-Care Public Hospital in Brazil

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Background: The use of the automated system for identification and susceptibility tests can improve antimicrobial stewardship. The reduction in the time of identification of the pathogen and the correct dose of antibiotic are factors that contribute significantly to institutional programs and patient outcomes.

Objective: We identified and evaluated the susceptibility tests of microorganisms for common pathogens through antibiograms that accounted for the minimum inhibitory concentration (MIC), in a tertiary-care public hospital in Brazil. **Methods:** This retrospective, cross-sectional study was performed to identify microbiologic profiles after the implementation of a VITEK 2 system at a tertiary-care public hospital in Curitiba, Brazil. Based on data from the medical records, patients with positive cultures of clinical samples from August to December 2017 were included in this study. The analysis included culture results, susceptibility profiles, and MICs of 5 antibiotics: amikacin, cefepime, ciprofloxacin, meropenem and vancomycin. **Results:** In total, 545 antibiograms were evaluated using VITEK 2. The following microorganisms were isolated: 345 gram-negative bacilli (63.3%), 187 gram-positive cocci (34.3%), 9 unidentified microorganisms (1.7%), and 4 yeasts (0.7%). Among the analyzed antibiograms, amikacin was tested in 371 isolates (68.1%), with an MIC of 2 mg/L being the most prevalent value, with a frequency of 224 results (41.1%). Cefepime was tested in 319 isolates (58.5%), with an MIC of 1 mg/L being the most prevalent, with a frequency of 177 results (32.5%). Ciprofloxacin was tested in 470 isolates (86.2%), with an MIC of 0.25 mg/L being the most prevalent value, with frequency of 189 results (34.7%). Meropenem was tested in 318 isolates (58.3%), with an MIC of 0.25 mg/L being the most prevalent value, with a frequency of 223 results (40.9%). Vancomycin was tested in 157 isolates (28.8%), with an MIC of 1 mg/L being the most prevalent value, with frequency of 87 results (16%). **Conclusions:** When analyzing the most frequently isolated microorganisms and their predominant sensitivity profiles in our institution, amikacin proved to be a good therapeutic option, considering the epidemiological profile, as gram-negative bacilli showed greater sensitivity. Furthermore, VITEK 2 systems provided early access to appropriate antimicrobial therapy for patients, which is a known factor for reducing bacterial resistance.

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Subject Category: Disinfection/Sterilization

Using Low-Heat Decontamination to Allow N95 and PPE Reuse During the COVID-19 Pandemic

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Background: US healthcare facilities experienced significant personal protective equipment (PPE) shortages, including N95 masks, in the spring and summer of 2020. The Centers for Disease Control and Prevention issued

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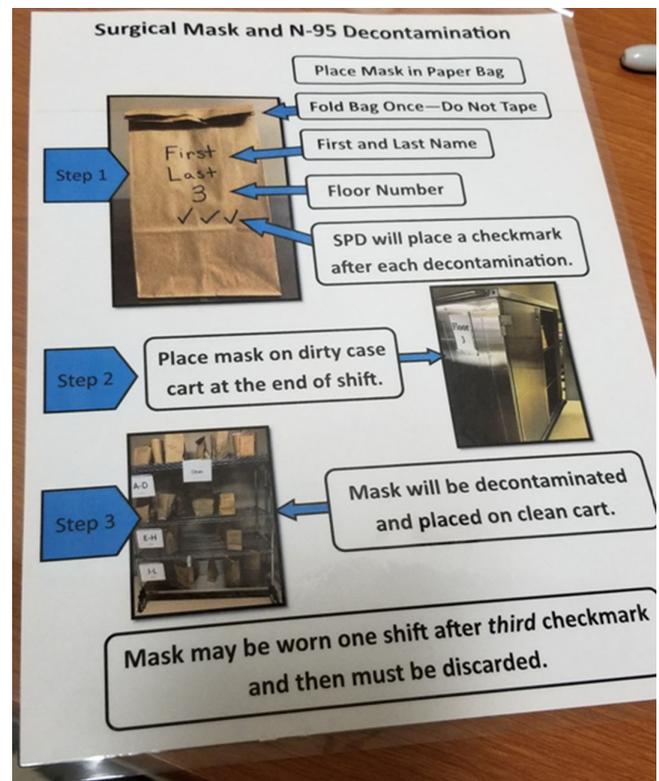


Figure 1.

guidance for extended use, reprocessing, and reuse of N95s. Eskenazi Health (EH) implemented a program to reprocess N95s and other PPE on-site using low-heat decontamination (LHD). EH considered large-scale and small-scale ultraviolet (UV), hydrogen peroxide vapor, and LHD for on-site reprocessing of N95s. All of these methods allowed up to 3 reprocessing cycles according to most literature available at the time. However, each method differed in feasibility and acceptability to staff. EH chose to implement LHD based on both considerations. **Methods:** Numerous small-group meetings were held in April 2020 to determine the feasibility and acceptability of N95 reprocessing methods. Staff wanted a method that was easy for the end user, had quick turnaround, and allowed them to retrieve their own N95s. They favored a method that could be used for all PPE. EH had deployed numerous small UV machines that individuals could use for N95s. The UV machines could not be scaled up easily. To scale up, a multidisciplinary team comprising infection prevention, biomedical engineering, and sterile processing representatives reviewed available methods and implemented LHD. Biomedical engineers determined that existing blanket warmers could be reprogrammed and repurposed for low-heat decontamination. Food warmers were also available but were not needed. Biomedical engineers reprogrammed the blanket warmers to 70°C and developed a wicking system using a towel and water tray to maintain humidity; decontamination took 30 minutes. Testing runs determined that both N95s and eye protection tolerated LHD without apparent damage. Infection prevention staff developed a workflow in which staff deposited all PPE in a paper bag; the PPE bag was centrally reprocessed, marked (Figure 1), and returned to designated locations (Figure 2) for staff to retrieve their original PPE. Sterile processing staff facilitated the reprocessing workflow, and elective surgeries were canceled during the COVID-19 surge. **Results:** From April 20, 2020, to July 19, 2020, 7,512 units were decontaminated with LHD. If each N95 was sterilized thrice (4 uses per N95), then LHD reduced the need to purchase 22,536 N95s. Restarting elective surgeries decreased staff and support from sterile processing; the space was needed for other purposes; and N95 availability increased. All of these factors led to the discontinuation of LHD. **Conclusions:**



Figure 2.

LHD enables reprocessing of N95s and other PPE using existing assets. LHD is advantageous because of scalability and the capacity to provide staff with their own reprocessed PPE.

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Poster Presentation

Subject Category: Emerging Pathogens

Experience of Treating *Candida auris* Cases at a General Hospital in Qatar

Adila Shaukat; Feah Visan; Naser Al Ansari; Walid Al Wali; Manal Hamed; Ihab Elmadhouh; Hassan Mitwally and Edin Karic

Background: So far, there have been no studies on *Candida auris* in Qatar. We describe the clinical spectrum and outcome of *C. auris* infection in patients admitted to a general hospital in Qatar. **Methods:** We conducted this descriptive observational study in a general hospital in Qatar. We have included all patients with *C. auris* infection and colonization admitted to a general hospital from December 2018 to August 2019. **Results:** We identified 13 patients with confirmed *C. auris* infection or colonization, of whom 5 cases represented an actual *C. auris* infection, while the remaining 8 cases were considered colonization. The mean age of the patients with infection was 76.6 years (SD, ±8.4), while the mean age of the patients with colonization was 66.4 years (SD, ±24.7). Among the individuals clinically infected with *C. auris*, 2 had urinary tract infections, 1 had candidemia, 1 acquired a soft-tissue infection, and 1 had a lower respiratory tract infection. All strains of *C. auris* were susceptible to echinocandins, flucytosine, and posaconazole while resistant to fluconazole and amphotericin B. Of the patients with *C. auris* infection who received systemic antifungal therapy, 3 (60%) died during antifungal therapy. **Conclusions:** Our study showed that *C. auris* can cause a wide variety of invasive infections, including bloodstream infection, urinary tract infection, skin infection, and lower respiratory tract infections, especially in critically ill patients. In addition, our isolates showed resistance to the most common antifungal agents such as fluconazole and amphotericin B.

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Subject Category: Environmental Cleaning

Engaging Veterans in Identifying Key Elements of Environmental Cleaning: The Patient Perspective

Kelsey Baubie; Linda McKinley; Julie Keating and Rosemary Bartel

Background: Contaminated surfaces in healthcare settings contribute to the transmission of pathogens. Environmental cleaning and disinfection are important for preventing pathogen transmission and reducing healthcare-associated infections (HAIs). Hospital cleanliness plays a large role in patient perception of the healthcare setting and, consequently, of patient satisfaction. However, patient perceptions of environmental cleaning remain unclear. To engage patients as part of achieving patient-centered care, we undertook a qualitative study to examine patient perspectives on environmental cleaning and disinfection in healthcare settings. **Methods:** We conducted semistructured qualitative interviews with 14 hospitalized patients at a large midwestern Veterans' Administration hospital. Interviews were audio recorded, professionally transcribed verbatim, summarized in a "key domains" template developed by the research team, then coded for emerging themes. **Results:** Patients reported feeling satisfied with hospital cleanliness and especially the daily cleaning they observed while hospitalized. Cleaning activities highlighted included mopping and disinfecting high-touch surfaces, bathrooms, and floors. Despite this overall positive response, some patients expressed worries of being "in the way" or burdensome if they were in their rooms while staff were cleaning. One interviewee stated, "It's easier for them if there isn't a patient in [the room] ... it's hard to do any endeavor when you've got a complete stranger watching you." Patients also acknowledged the importance of careful cleaning, especially during the COVID-19 crisis; "It's got to be something you take seriously, especially during this pandemic." Some patients spoke of the relationship which can develop between environmental services staff during daily hospital room cleaning. **Conclusions:** Patient perceptions of environmental cleaning are important to understand and incorporate into clinical practice. Overall, patients felt that their environments were clean, and they expressed confidence in the staff's work. Interviewees additionally spoke of their own self-efficacy, saying they try to clean up after themselves and would feel comfortable speaking up if something needed to be cleaned. However, some patients acknowledged feeling burdensome to the environmental services staff if patients were present in rooms while staff cleaned. Cleaning activities may become more patient-centric if they are better planned (eg, while patient is out of the room) or based on patient preferences on time of day.

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Subject Category: Environmental Cleaning

A Qualitative Work System Analysis Using a Human Factors Engineering Approach to Evaluate Environmental Cleaning in Veterans' Affairs Hospitals

Linda McKinley; Cassie Goedken; Erin Balkenende; Stacey Hockett Sherlock; Heather Reisinger; Mary Jo Knobloch; Eli Perencevich and Nasia Safdar

Background: Environmental cleaning is important in the interruption of pathogen transmission and subsequent infection. Although recent initiatives have targeted cleaning of high-touch surfaces and incorporated audit-and-feedback monitoring of cleaning practices, practice variations exist and compliance is still reportedly low. Evaluation of human factors influencing variations in cleaning practices can be valuable in developing interventions, leading to standardized practices and improved compliance. We conducted a work system analysis using a human-factors engineering framework [the Systems Engineering Initiative for Patient Safety (SEIPS) model] to identify barriers and facilitators to current environmental cleaning practices within Veterans' Affairs hospitals. **Methods:** We