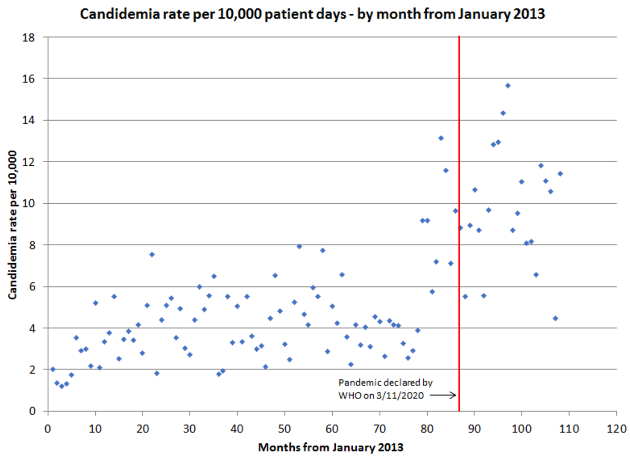

Fig. 1.

and 110 cases were identified after the pandemic began. Moreover, 33 (16.3%) patients were diagnosed with COVID-19 during the admission and 169 (83.7%) did not have COVID-19. Patients with COVID-19 were significantly more likely to be older (median, 64.5 vs 54.8 years; *P* = .0006) and to have a higher body mass index (32.8 vs 29.1; *P* = .03) than patients without COVID-19. Patients with COVID-19 were less likely have some of the traditional risk factors (eg, abdominal surgery, total parenteral nutrition, history of injecting drugs) for candidemia compared to patients without COVID-19. Patients with COVID-19 were significantly more likely to require ICU care (97.0% vs 67.5%; *P* < .001) and to require mechanical ventilation (90.9% vs 53.9%; *P* < .001), and they had higher mortality at 30 days (66.7% vs 31.4%; *P* < .001). A multivariate logistic regression model showed that COVID-19 (OR, 2.53; 95% CI, 1.09–5.90) and higher age (OR 1.45, 95% CI, 1.11–1.91) were significant predictors of 30 day mortality. Using a Poisson regression model, the incidence rate ratio for candidemia per month after the start of the COVID-19 pandemic was 2.09 (95% CI, 1.85–2.36; *P* < .0001) compared to the years prior. **Conclusions:** Rates of candidemia significantly increased after the start of the COVID-19 pandemic. Patients with candidemia in the post–COVID-19 era tend to have nontraditional risk factors, to be more critically ill, and to have increased mortality compared to patients in the pre–COVID-19 era. COVID-19 and higher age were independent predictors of mortality. More studies are needed to further define risk factors for candidemia in patients with COVID-19.

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Poster Presentation - Oral Presentation
Subject Category: Environmental Cleaning

Multicenter evaluation of contamination of the healthcare environment near patients with *Candida auris* skin colonization

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Background: *Candida auris* is an emerging multidrug-resistant yeast that is transmitted in healthcare facilities and is associated with substantial morbidity and mortality. Environmental contamination is suspected to play an important role in transmission but additional information is needed to inform environmental cleaning recommendations to prevent spread. **Methods:** We conducted a multiregional (Chicago, IL; Irvine, CA) prospective study of environmental contamination associated with *C. auris* colonization of patients and residents of 4 long-term care facilities and 1 acute-care hospital. Participants were identified by screening or clinical cultures. Samples were collected from participants' body sites (eg, nares, axillae, inguinal creases, palms and fingertips, and perianal skin) and their environment before room cleaning. Daily room cleaning and disinfection by facility environmental service workers was followed by targeted cleaning of high-touch surfaces by research staff using hydrogen peroxide wipes (see EPA-approved product for *C. auris*, List P). Samples were collected immediately after cleaning from high-touch surfaces and repeated at 4-hour intervals up to 12 hours. A pilot phase (n = 12 patients) was conducted to identify the value of testing specific high-touch surfaces to assess environmental contamination. High-yield surfaces were included in the full evaluation phase (n = 20 patients) (Fig. 1). Samples were submitted for semiquantitative culture of *C. auris* and other multidrug-resistant organisms (MDROs) including methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant *Enterococcus* (VRE), extended-spectrum β-lactamase–producing Enterobacterales (ESBLs), and carbapenem-resistant Enterobacterales (CRE). Times to room surface contamination with *C. auris* and other MDROs after effective cleaning were analyzed. **Results:** *Candida auris* colonization was most frequently detected in the nares (72%) and palms and fingertips (72%). Cocolonization of body sites with other MDROs was common (Fig. 2). Surfaces located close to the patient were commonly recontaminated with *C. auris* by 4 hours after cleaning, including the overbed table (24%), bed handrail (24%), and TV remote or call button (19%). Environmental cocontamination was more common with resistant gram-positive organisms (MRSA and, VRE) than resistant gram-negative organisms (Fig. 3). *C. auris* was rarely detected on surfaces located outside a patient's room (1 of 120 swabs; <1%). **Conclusions:** Environmental surfaces near *C. auris*–colonized patients were rapidly recontaminated after cleaning and disinfection. Cocolonization of skin and environment with other MDROs was common, with resistant

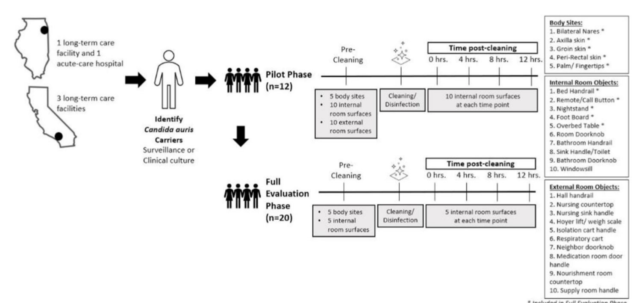

Figure 1. Schematic of Study Design

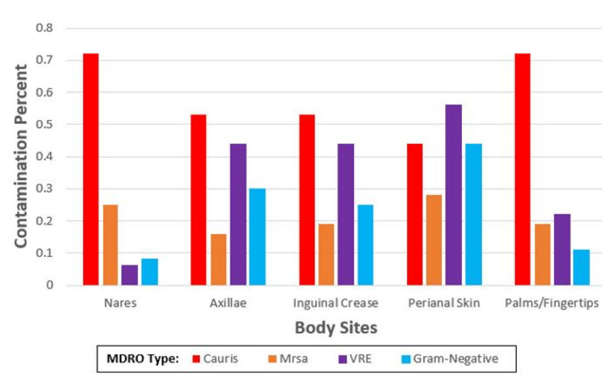

Figure 2. Body site colonization with *Candida auris* and other multidrug-resistant organisms (MDROs)

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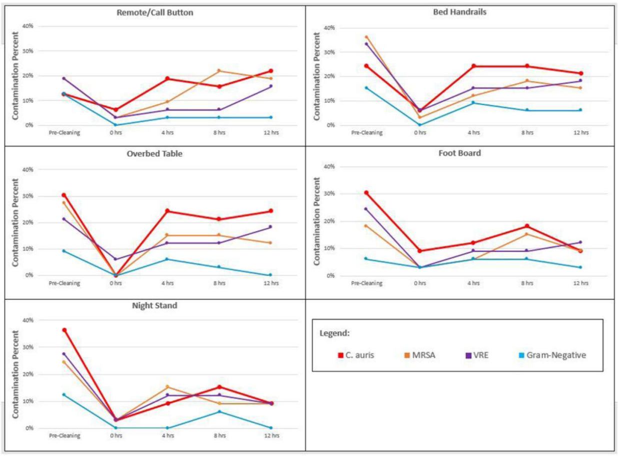

Figure 3. Environmental contamination with *Candida auris* and other multidrug-resistant organisms (MDROs) by time since room cleaning/disinfection.

gram-positive organisms predominating over gram-negative organisms on environmental surfaces. Limitations include lack of organism sequencing or typing to confirm environmental contamination was from the room resident. Rapid recontamination of environmental surfaces after manual cleaning and disinfection suggests that alternate mitigation strategies should be evaluated.

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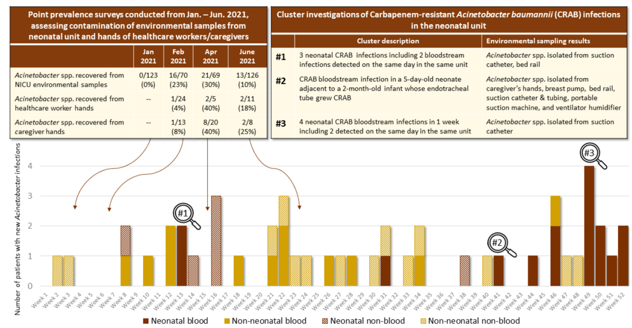
Presentation Type:
Poster Presentation - Oral Presentation
Subject Category: Infection Control in Low- and Middle-Income Countries

Carbapenem-resistant *Acinetobacter baumannii* at a tertiary-care hospital in Botswana: Focus on perinatal environmental exposures

Background: Bloodstream infections (BSIs) due to carbapenem-resistant *Acinetobacter baumannii* (CRAB) are difficult to treat and are associated with high mortality, particularly in neonates. Healthcare-associated CRAB infections have been linked to environmental reservoirs and are associated with seasonal clustering. CRAB outbreaks are being reported more frequently in sub-Saharan Africa, but published reports from this region that incorporate comprehensive surveillance data and environmental investigations are rare. **Methods:** We reviewed microbiology surveillance records at a 530-bed, public, tertiary-care hospital in Botswana from January 1 to December 13, 2021, and we collected data regarding age, specimen type, and onset date for all cultures from unique patients growing *Acinetobacter* spp. An automated blood-culture system was used for organism detection, manual biochemical tests were used for identification, and disc and agar diffusion methods were used for antimicrobial sensitivity testing. During this time, we conducted 4 point-prevalence environmental sampling surveys at this hospital's 36-bed neonatal unit from January through June 2021 in addition to 3 neonatal CRAB cluster investigations. Environmental samples from surfaces, hands of caregivers and healthcare workers, and equipment were collected using flocked swabs. Extended-spectrum β-lactamase–producing organisms from environmental samples were identified using selective and differential chromogenic media (CHROMagarTM ESBL). **Results:** Overall, 48 *Acinetobacter* infections were identified, including 28 BSIs (among 3,699 blood cultures processed, approximately one-third of which were from neonates). More than half of cases were perinatal, which included 16 neonatal BSIs (median age, 4 days; case fatality rate, 56%), and 1 fatal case of postpartum sepsis in a 37-year-old mother. Among isolates tested, 35 (92%) of 38 demonstrated carbapenem resistance. Treatment information was not available for all neonatal

Figure 1. Weekly incidence of *Acinetobacter* infections at a tertiary hospital in Botswana, by specimen and patient type, corresponding with results from environmental sampling conducted as part of four point-prevalence surveys and three cluster investigations, 1 January – 31 December 2021



patients, but delays in appropriate antimicrobial therapy were cited in all fatal cases. Most neonatal CRAB cases clustered in time and space (Fig. 1). For example, 15 (71%) of 21 neonatal cases occurred in the same unit and same week as another case. In the neonatal unit, CRAB clusters were associated with increased *Acinetobacter* recovery during environmental point-prevalence surveys (Fig. 1). *Acinetobacter* contamination was identified on feeding equipment (breast pumps, feeding tubes), respiratory equipment (suction machines or catheters, ventilator humidifiers), and hands of caregivers and healthcare workers. **Conclusions:** We report hyperendemic rates of CRAB infections with evidence of spatotemporal clustering, especially among neonates. Higher CRAB incidence coincided with increased *Acinetobacter* recovery during environmental sampling. We identified plausible transmission vehicles (respiratory or feeding devices, hands) in the neonatal care environment highlighting the value of environmental sampling to support CRAB investigations and reinforcing the importance of comprehensive and consistent disinfection practices, especially in resource-limited settings where equipment is shared or reused.

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Poster Presentation - Oral Presentation
Subject Category: Infection Control in Low- and Middle-Income Countries

Readiness assessment: Implications for COVID-19 infection prevention and control (IPC) preparedness in health facilities

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Background: Monitoring uptake of infection prevention and control (IPC) interventions is critical for the targeted and rational use of limited resources. A national facility readiness assessment conducted in August 2020 provided key information for targeted interventions to strengthen priority IPC areas. We assessed the level of COVID-19 preparedness in the facilities, identified priority COVID-19 IPC gaps, and generated a baseline report to further guide IPC investments at all levels. **Methods:** The Kenya Ministry of Health in collaboration with the CDC and International Training and Education Center for Health adapted a WHO Facility Readiness Assessment tool to include COVID-19–specific areas. In August 2020, data were collected using tablets through an Android-based electronic platform and were analyzed using descriptive statistics. Assessments were conducted in public, private, and faith-based health facilities nationally after 4 months of preparedness and investment in the healthcare system. **Results:** We assessed 684 facilities of the targeted 844 (81%). Overall facility readiness in Kenya was rated above average (61%), and the performance score significantly increased with the Kenya Essential Package for Health level, with level 5 and 6 facilities scoring an average of 83% and 79% respectively. Of the assessed facilities, 82% had an appointed IPC coordinator. Only 14% of the facilities had all the

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