minated. Among 266 out-of-room visits, 17% had surfaces contaminated with MDROs, most commonly involving dialysis [4 (31%) of 13], radiology [2 (25%) of 8], and rehabilitation therapy [29 (18%) of 159] (Fig. 1).Transmission of MDROs during out-of-room visits was common and occurred in 18% of visits with 8% (9 MRSA and 12 VRE) acquiring a new MDRO on their hands and 12% (9 MRSA and 23 VRE) of MDRO transmission occurring from hands to a surface that the patient touched (Fig. 1). In 18 (58%) of 31 cases, the organism transmitted to a surface was on patient hands at the start of the visit. Transmission was most common during visits to dialysis (3 to patients and 2 to surfaces), radiology (1 to a patient and 2 to surfaces), and rehabilitation therapy (13 to patients and 21 to surfaces) (Fig. 2). **Conclusions:** New MDRO acquisition during VHA CLC stay was common, and nearly one-fifth of out-of-room visits resulted in MDRO transmission. Our analyses suggest that veterans' hands may shed MDROs (MRSA and VRE) to surfaces. Interventions to reduce MDRO transmission during visits for rehabilitation, dialysis, and other therapies are needed.

Disclosures: None

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Subject Category: Occupational Health

3D printers in hospitals: Reducing bacterial contamination on 3D-printed material

Katelin Jackson; Douglas Call and Eric Lofgren

Background: COVID-19 has presented hospitals with unique challenges. An SHEA Research Network survey showed that 40% reported "limited" or worse levels of personal protective equipment (PPE) and that 13% were self-producing PPE to address those deficits, including 3D-printed items. However, we do not know how efficiently, if at all, 3D-printed materials can be disinfected. Additionally, 2 filaments, PLACTIVE and PUREMENT, claim to be antimicrobial; they use copper nanocomposites and silver ions to reduce bacterial populations. We assessed how PLACTIVE and PUREMENT may be contaminated and how well they reduce contamination, and how readily polylactic acid (PLA), a standard 3D-printed material, may be disinfected. **Methods:** We grew methicillin-resistant and -susceptible *Staphylococcus aureus*, *Escherichia coli*, and *Klebsiella pneumoniae* on 3D-printed disks and conducted bacterial survival assays to determine whether bacteria grow on PLA, PLACTIVE, and PUREMENT. We performed a time series (with 3- and 24-hour dry times) followed by serial dilutions to attain colony-forming unit (CFU) averages for each strain per disk. To determine whether 3D-printed material can be cleaned, we used 70% EtOH on PLA only. We conducted the same time series followed by a disinfectant time series (with dry times 30 seconds, 2.5, minutes, 5 minutes, and 10 minutes). Again, serial dilutions were performed to attain the PLA CFU averages with disinfectant. The CFU averages from the control group (PLA) and testing group (PLACTIVE and PUREMENT) were compared to see how well the antimicrobial material decreased bacterial load. We also compared the CFU averages of PLA with and without disinfectant to see how well 70% EtOH decreased bacterial load. **Results:** 3D-printed material is readily contaminated with bacteria common in hospitals and can sustain that contamination. Antimicrobial materials, PLACTIVE and PUREMENT, had lower levels of bacterial contamination when compared to PLA. However, disinfected disks had lower overall CFU averages than those that were not, but the level of disinfection was variable and bacterial populations recovered hours after disinfection application. **Conclusions:** Proper disinfection and using appropriate 3D-printed materials are essential to limiting bacterial contamination. 3D printers and their products can be invaluable for hospitals, especially when supplies are low and healthcare worker safety is paramount. Environmental services should be made aware of the presence of antimicrobial 3D-printed materials, and patients should be discouraged from printing their own items for use in hospital environments.

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Subject Category: Other

Active surveillance and contact precautions for preventing MRSA healthcare-associated infections during the COVID-19 pandemic

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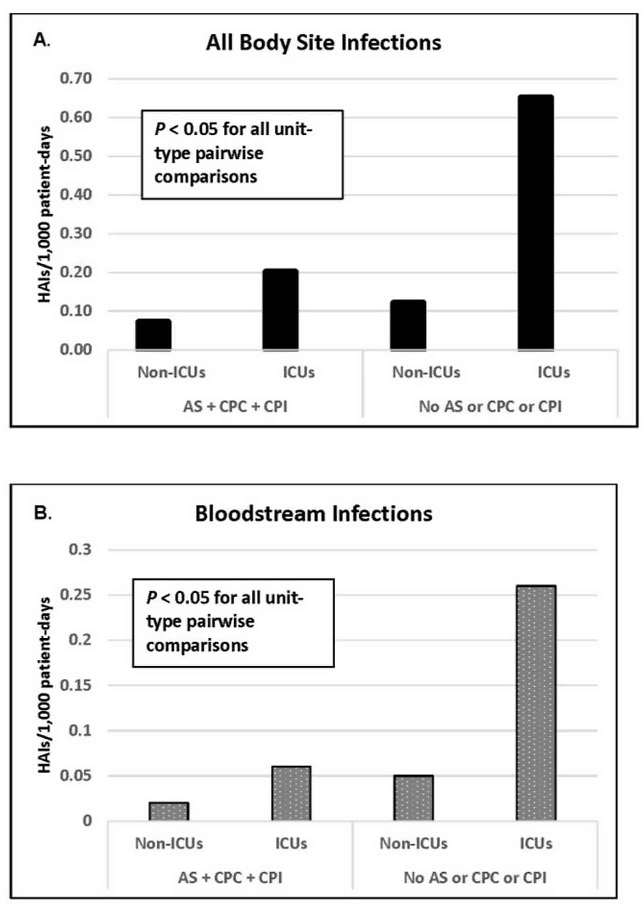
Background: Statistically significant decreases in methicillin-resistant *Staphylococcus aureus* (MRSA) healthcare-associated infections (HAIs) occurred in Veterans Health Administration (VA) facilities from 2007 to 2019 using active surveillance for facility admissions and contact precautions for patients colonized (CPC) or infected (CPI) with MRSA, but the value of these interventions is controversial. **Objective:** To determine the impact of active surveillance, CPC, and CPI on prevention MRSA HAIs, we conducted a prospective cohort study between July 2020 and June 2022 in all 123 acute-care VA medical facilities. In April 2020, all facilities were given the option to suspend any combination of active surveillance, CPC, or CPI to free up laboratory resources for COVID-19 testing and conserve personal protective equipment. We measured MRSA HAIs (cases per 1,000 patient days) in intensive care units (ICUs) and non-ICUs by the infection control policy. **Results:** During the analysis period, there were 917,591 admissions, 5,225,174 patient days, and 568 MRSA HAIs. Only 20% of facilities continued all 3 MRSA infection control measures in July 2020, but this rate increased to 57% by June 2022. The MRSA HAI rate for all infection sites in non-ICUs was 0.07 (95% CI, 0.05–0.08) for



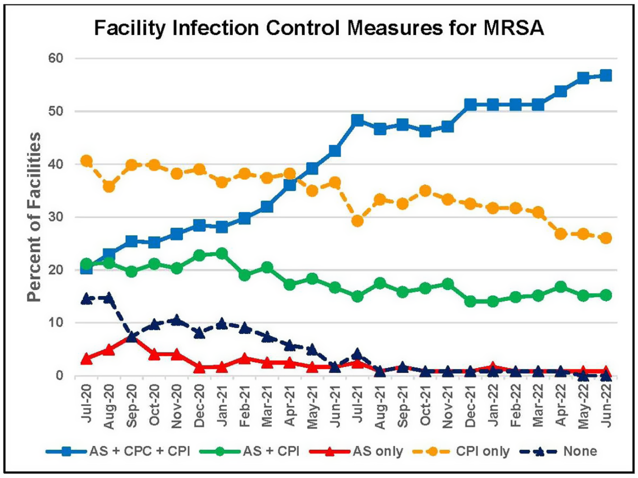


Table 1. Methicillin-resistant *Staphylococcus aureus* (MRSA) healthcare-associated infection (HAI) rates, all acute care units, all infection sites, by facility infection prevention and control policy category

Policy Category	Number of Data Months	Number of HAIs	Patient-Days	Rate*	95% CI†
AS + CPC + CPI§	1,163	153	1,708,867	0.09	0.08 - 0.10
AS + CPI	519	106	1,075,329	0.10	0.08 - 0.12
AS alone	63	15	131,613	0.11	0.06 - 0.19
CPI only	1,015	250	2,105,012	0.12	0.10 - 0.13
No AS or CPC or CPI	142	44	204,353	0.22	0.16 - 0.29

*Number of HAIs/1,000 patient-days, †95% confidence interval, §AS = active surveillance for MRSA upon facility admission, CPC = contact precautions for MRSA colonized patients, CPI = contact precautions for MRSA infected patients

Table 2. Comparisons of methicillin-resistant *Staphylococcus aureus* (MRSA) healthcare-associated infection (HAI) rates by facility infection prevention and control policy category, infection site, and unit type

All Body Site Infections									
	All Units			Non-ICUs			ICUs		
Policy Category	HAI Rate*	95% CI†	P‡	HAI Rate	95% CI	P	HAI Rate	95% CI	P
AS + CPC + CPI	0.09	0.08-0.10		0.07	0.05-0.08		0.20	0.15-0.26	
No AS or CPC or CPI	0.22	0.16-0.29	**<0.001**	0.12	0.08-0.19	**0.01**	0.65	0.41-0.98	**<0.001**
Bloodstream Infections									
AS + CPC + CPI	0.03	0.02-0.04		0.02	0.01-0.03		0.06	0.03-0.09	
No AS or CPC or CPI	0.09	0.05-0.14	**<0.001**	0.05	0.02-0.10	**0.01**	0.26	0.12-0.48	**<0.001**

*Number of HAIs/1,000 patient-days, †95% confidence interval, ‡P values for X^2 pairwise comparison, §AS = active surveillance for MRSA upon facility admission, CPC = contact precautions for MRSA colonized patients, CPI = contact precautions for MRSA infected patients

facilities practicing active surveillance plus CPC plus CPI compared to 0.12 (95% CI, 0.08–0.19; $P = .01$) for those not practicing any of these strategies, and in ICUs the MRSA HAI rates were 0.20 (95% CI, 0.15–0.26) and 0.65 (95% CI, 0.41–0.98; $P < .001$) for the respective policies. Similar differences were seen when the analyses were restricted to MRSA bloodstream HAIs. Accounting for monthly COVID-19 admissions to facilities over the analysis period using a negative binomial regression model did not change the relationships between facility policy and MRSA HAI rates in the ICUs or non-ICUs. There was no statistically significant difference in monthly facility urinary catheter-associated infection rates, a nonequivalent dependent variable, in the categories during the analysis period in either ICUs or non-ICUs. **Conclusions:** In Veterans Affairs medical centers, there were fewer MRSA HAIs when facilities practiced active surveillance and contact precautions for colonized or infected patients during the COVID-19 pandemic. The effect was greater in ICUs than non-ICUs.

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Subject Category: Outbreaks

Multifacility outbreak of *Candida auris* during the COVID-19 pandemic—Maricopa County, Arizona, April 2022–December 2022

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Background: *Candida auris*, an emerging and potentially multidrug-resistant fungus, was first identified in Maricopa County, Arizona, in 2020. On April 21, 2022, an acute-care hospital reported *C. auris* in a bronchoalveolar lavage (BAL) specimen, followed by a second case reported on April 26 identified via retrospective laboratory review and species identification in yeast isolated from a clinical specimen. The Maricopa County Department of Public Health (MCDPH) investigated, and we describe the largest ongoing *C. auris* outbreak containment response in Maricopa County. **Methods:** The MCDPH conducted clinical case and contact investigations in accordance with CDC novel organism containment strategy guidelines. In Maricopa County healthcare facilities (HCFs) with suspected transmission, virtual Infection Control Assessment Responses (ICARs) were administered to identify initial infection prevention and control (IPC) gaps; subsequent regular virtual visits were also provided. HCFs with confirmed transmission completed point-prevalence surveys (PPSs) every 2 weeks until transmission halted as evidenced by 2 sequential negative PPSs. Outreach education to affected HCFs was provided to increase awareness about the public health significance of *C. auris* and the importance of implementation and sustained adherence to standardized IPC protocols. **Results:** In total, 97 HCFs received IPC outreach education, of which 22 HCFs (23%) had suspected transmission and received a virtual ICAR. Contact investigation identified 1,990 contacts, of whom 1,028 (52%) were discharged to the community, 863 (43%) were admitted to other HCFs, and 99 (5%) died. Of the 863 transferred contacts, 10 (1.2%) declined colonization screening, 853 (98.8%) were screened, and 46 (5%) tested positive for *C. auris*. Through sequential PPSs, 101 (5%) of 1,914 screened patients tested positive for *C. auris*. By December 31, 16 clinical and 147 colonized cases were epidemiologically linked to the outbreak. Their median age was 60 years (IQR, 20), and 3 pediatric cases (median age, 17 years) were identified with no pediatric unit admissions. Also, 7colonized cases (5%) developed noninvasive infection and 3 (2%) developed candidemia. **Conclusions:** The MCDPH's established partnerships with HCFs were key to this ongoing *C. auris* outbreak response spanning 22 facilities over 8 months. Challenges included delays in specimen collection and laboratory processing, operational burden of repeated PPS, and ensuring appropriate precautions for readmitted close contacts at subsequent HCFs. The MCDPH assisted facilities in balancing public health surveillance with facility capacity to execute guidance, including repeated PPS. Consistent adherence to stringent IPC practices, interfacility communication, and proactive *C. auris* education of healthcare workers are paramount to halting transmission.

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Subject Category: Outbreaks

Investigation of the first cluster of *Candida auris* cases among pediatric patients in the United States——Nevada, May 2022

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Background: *Candida auris* is a frequently drug-resistant yeast that can cause invasive disease and is easily transmitted in healthcare settings.