intravenous to oral treatment switch, and discontinuation of therapy. **Results:** There were 318 interventions, and 64.82% of the interventions performed by the AMS team were accepted by prescribers. The interventions provided a total savings of BR$ 119,706 (~US$30,000) in direct antimicrobial spending. Correlating the interventions with the defined daily dose (DDD) measurement and comparing data from the same period in 2018, we detected a reductions in the consumption of several antimicrobials: ceftriaxone (25.6%), ciprofloxacin (45.7%), meropenem (34%), piperacillin/tazobactam (12.7%), teicoplanin (18.8%), vancomycin (20.6%), cefepime (23.9%) and polymyxin B (26%). We also detected reductions in days of therapy (DOT) for most of these drugs, such as polymyxin B, with an average reduction of 2 DOT. **Conclusions:** Reducing antimicrobial use is one of the key strategies for avoiding unnecessary exposure and selective pressure leading to the emergence of resistant microorganisms. The measured data point to a favorable trend in the rational use of antimicrobials in our institution with simple interventions. The results presented were used to reaffirm the importance of the AMS team in our institution. More data on length of stay, indirect costs, reduction of side effects, mortality, and occurrence of microbial resistance should be made.

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Evaluation of Novel "No-Touch" Technologies for Decontamination of Toys in Pediatric Healthcare Settings

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Background: Toys in playrooms are often shared among patients in pediatric healthcare settings; they can present a risk for transmission of bacterial and viral pathogens. Effective cleaning and disinfection of toys using disinfectant wipes is labor intensive and difficult due to irregular surfaces. **Methods:** We conducted a point-prevalence culture survey to determine the frequency of contamination of in-use toys and high-touch surfaces in playrooms in a pediatric healthcare facility with methicillin-resistant *Staphylococcus aureus* (MRSA), vancomycin-resistant enterococci (VRE), and *Clostridioides difficile*. Using a variety of toys inoculated with pathogens, we evaluated efficacy and ease-of-use of 3 novel "no-touch" technologies: (1) an electrostatic sprayer, (2) a small ultraviolet-C (UV-C) box (18.9 × 9.9 × 1.8 inches) for smaller toys, and (3) a high-level disinfection cabinet using ultrasonic submicron droplets of peracetic acid and hydrogen peroxide. Test pathogens included *C. difficile*, MRSA, and *Candida auris*. **Results:** Of 135 items cultured in playrooms, 6 (4.4%) were contaminated with MRSA, 1 (0.7%) was contaminated with VRE, and none were contaminated with *C. difficile*. Each of the technologies reduced all pathogens by >4 log10 CFU on all types of toys tested (plastic, soft rubber, and tablet). The electrostatic sprayer was considered the easiest to use by all users because large numbers of toys could be processed much more quickly (ie, spray for 20 seconds and allow to air dry) than with disinfectant wipes. The disinfection cabinet required 21 minutes for cycle completion, whereas the decontamination cycle for the UV box was only 30–90 seconds but with limited capacity to hold toys. **Conclusions:** Three "no-touch" technologies were effective for disinfection of toys contaminated with healthcare-associated pathogens. The electrostatic spray application of disinfectant was considered the easiest to use for rapid decontamination of toys.

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Evaluation of Patient Risk Factors for Carbapenemase-Producing Organism Colonization

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Background: Carbapenemase-producing organisms (CPOs) are a growing antibiotic resistance threat. Colonization screening can be used to identify asymptomatically colonized individuals for implementation of transmission-based precautions. Identifying high-risk patients and settings to prioritize screening recommendations can preserve facility resources. To inform screening recommendations, we analyzed CPO admission screens and screening conducted on point-prevalence surveys (PPSs) performed through the Antibiotic Resistance Laboratory Network's Southeast Regional Laboratory (SE AR Lab Network). **Methods:** During 2017–2019, the SE AR Lab Network collected data via a REDCap survey for a subset of CPO screens on a limited set of easily determined patient risk factors. Rectal swabs were collected and tested with the Cepheid Carba-R. Specimens collected within 2 days of admission were classified as admission screening and the remainder were classified as PPS. Index cases were excluded from analyses. Odd ratios (ORs) and 95% confidence intervals were calculated, and a value of 0.1 was used for cells with a value of zero. **Results:** In total, 520 screens were conducted, which included 366 admission screens at 2 facilities and 154 screens from 27 PPSs at 8 facilities. CPOs were detected in 14 (2.7%) screens, including in 10 (2.7%) admission screens and in 4 (2.6%) contacts during PPSs; carbapenemases detected were *Klebsiella pneumoniae* carbapenemase (KPC) (n = 12), New Delhi Metallo-β-lactamase (NDM) (n = 1) and Verona Integron-Encoded Metallo-β-lactamase (VIM) (n = 1). One long-term acute care hospital (LTACH) performed universal admission screening, which accounted for 96% of admission screens and all 10 CPOs detected by admission screening. Mechanical ventilation (OR, 5.0; 95% CI, 1.4–18.0) and the presence of a tracheostomy (OR, 5.4; 95% CI, 1.5–19.4) were associated with a positive admission screen. Moreover, 8 facilities conducted PPSs: 4 acute care hospitals, 2 long-term acute care hospitals, and 2 nursing homes. CPO prevalence in long-term acute care hospitals was 4.8% (2 of 42), 2.4% (1 of 41) in acute care hospitals, and 1.5% (1 of 69) in nursing homes. Requiring assistance with bathing (OR, 4.8; 95% CI, 1.6–8.0) and stool incontinence (OR, 16.6; 95% CI, 13.4–19.8) were associated with a positive screen on PPSs. All 7 roommates of known cases tested negative for CPO colonization.

Conclusions: Findings suggest that patients with certain easily assessed characteristics, such as mechanical ventilation, tracheostomy, or stool incontinence or who require bathing assistance, may be associated with CPO positivity during screening. Further data collection and analysis of such risk factors may provide insight for the development of more targeted admission and contact screening strategies.
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Evaluation of Sampling Methods for Detection of Pathogens from Steel Surfaces; Contact Plates, Foam Swabs, and Flocked Swabs

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Background: Contaminated healthcare surfaces can serve as reservoirs for the transmission of pathogens. Sensitive sampling methods are needed to investigate sources of pathogens for implementing effective disinfection strategies and thereby preventing environmental transmission. Conventional approaches employ swabs to sample environmental surfaces. Contact plates represent an alternative approach for sampling healthcare surfaces that does not require lab processing, though little is known about their performance. A contact plate is an agar plate that is overfilled with selective or nonselective media. It can be gently applied to the surface, then simply incubated at a temperature optimal for target organism (s), thus saving time and resources. **Methods:** In this study, contact plates containing trypticase soy agar with 5% sheep blood (TSAII), foam swabs, and flocked swabs were evaluated for their ability to recover 4 pathogens that persist on healthcare surfaces. Stainless-steel coupons (4 in^2) were inoculated with the following pathogens (10^2 CFU): *Acinetobacter baumannii* (AB, strain type 12), carbapenemase-producing *KPC+ Klebsiella pneumoniae* (KP; ATCC BAA-1705); methicillin-resistant *Staphylococcus aureus* (MRSA; ATCC 43300); and vancomycin-resistant *Enterococcus faecalis* (VRE; Van A + 256). The plates were allowed to dry 1 hour. Sampling with CPs was performed in 2 ways; (1) a single contact plate was used to sample 1 stainless-steel surface and (2) a composite was collected by 3 sequential contact-plate samplings of the same stainless-steel surface. The contact plates were then incubated at 35±1°C. Foam and flocked swabs were premoistened with phosphate-buffered saline + 0.02% polysorbate 80 (PBST) and were used to sample the stainless-steel coupons. Swabs were held for 1 hour and processed by sonication and vortexing in 5 mL of PBST, then the eluent was cultured and CFU counted. Mean percentage recoveries (%R) relative to the inoculum were calculated and compared. **Results:** When the %R for all 4 pathogens were pooled, the composite contact-plate sampling method yielded the highest, ($P < .05$) (66.0%; SD, 0.22), followed by the single contact plate method (39.7%; SD, 0.12), foam swab (32.9%; SD, 0.18), and flocked swab (20.3%; SD, 0.20). The composite contact plate method yielded the highest %R for VRE (102.1 %; SD, 0.17), and the lowest %R was observed when using flocked swabs to recover KP (6.3%; SD, 0.05). **Conclusions:** The contact-plate composite method may provide investigators with minimal environmental microbiology capacity an alternative method for environmental sampling and detection of organisms from surface areas (≤4 in 2) with low bioburden.
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Evaluation of Surgical Site Infections After Change in Surgical Prophylaxis in VAD Patients

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Background: In October 2013, the University of Maryland Medical Center established a formal antibiotic prophylaxis protocol for patients undergoing ventricular assist device (VAD) placement, replacing a previous system of various broad-spectrum antibiotic combinations typically for prolonged durations based on surgeon preference. This new protocol consisted of a standardized regimen of 72 hours of vancomycin and ceftriaxone after the procedure. The objective of this project was to evaluate the rate of surgical site infection (SSI) related to VAD placement to ensure that implementing the new protocol did not cause an increase in SSI rates. **Methods:** The study was a retrospective cohort study of patients who had undergone VAD placement before the protocol change (January 1, 2011, to October 1, 2013) and after the change (October 1, 2013, to November 15, 2015). The primary outcomes was the difference in SSI rate before and after the protocol change using CDC NHSN definitions. Pertinent data points of interest included reason for VAD placement, duration/type of antibiotics used, delayed sternal closure, SSI, characterization of infection (bloodstream, driveline, or pocket), organism identified on culture and mortality at 30 days and 1 year. SSI rates were assessed using the Fischer exact test, and descriptive statistics were used for other outcome variables. **Results:** In total, 75 patients were included before the protocol and 46 after the protocol change. Overall, 27% and 17% of patients were on therapeutic antibiotics prior to the VAD placement, respectively ($P = 0.23$). Also, 8 (6.6%) patients in the preintervention group had an SSI compared to 1 patient (0.8%) in the postintervention group ($P = .15$). Adherence to the protocol was suboptimal, with 27% of patients in the postintervention group receiving non–protocol-adherent antibiotics and 65% of patients receiving antibiotics >96 hours postoperatively. When evaluating the patients collectively, SSI rates were the same when antibiotics were discontinued <72 hours postoperatively versus when antibiotics were continued beyond 72 hours postoperatively or were not given at all postoperatively (3.1% vs 10.7% vs 0%; $P = .24$). SSI rates were also no different among patients who received cefazolin monotherapy (0%), vancomycin and ceftriaxone (2.7%), vancomycin and piperacillin tazobactam (2%), and other antibiotic combinations (7.7%) for surgical prophylaxis ($P = 0.1$). **Conclusions:** No change in SSI rates was noted after a protocol change narrowing the spectrum and duration of antibiotic prophylaxis was implemented. Evaluation of optimal surgical prophylaxis in this patient population is difficult due to low event rates and frequent therapeutic indications for antibiotics outside the standard prophylaxis. Despite these challenges, this study supports the safety of studying SSI prophylaxis reduction