

December 2018, trained abstractors at 46 Michigan hospitals collected detailed data on a sample of adult, non-intensive care, hospitalized patients with bacteriuria (positive urine culture with or without symptoms) or treated for community-acquired pneumonia (CAP; includes those with the disease formerly known as healthcare-associated pneumonia [HCAP]). Antibiotic prescriptions at discharge were assessed for antibiotic overuse using a previously described, guideline-based hierarchical algorithm.<sup>3</sup> Here, we report the proportion of patients discharged with antibiotic overuse by the hospital. We also assessed hospital-level correlation (using Pearson's correlation coefficient) between antibiotic overuse at discharge for patients with bacteriuria and patients treated for CAP. Finally, we assessed the association of antibiotic overuse at discharge with patient outcomes (mortality, readmission, emergency department visit, and antibiotic-associated adverse events) at 30 days using logit generalized estimating equations adjusted for patient characteristics and probability of treatment. **Results:** Of 17,081 patients (7,207 with bacteriuria; 9,874 treated for pneumonia), nearly half (42.2%) had antibiotic overuse at discharge (36.3% bacteriuria and 51.1% pneumonia). The percentage of patients discharged with antibiotic overuse varied 5-fold among hospitals from 14.7% (95% CI, 8.0%–25.3%) to 74.3% (95% CI, 64.2%–83.8%). Hospital rates of antibiotic overuse at discharge were strongly correlated between bacteriuria and CAP (Pearson's correlation coefficient, 0.76;  $P \leq .001$ ) (Fig. 1). In adjusted analyses, antibiotic overuse at discharge was not associated with death, readmission, emergency department visit, or *Clostridioides difficile* infection. However, each day of overuse was associated with a 5% increase in the odds of patient-reported antibiotic-associated adverse events after discharge (Fig. 2). **Conclusions:** Antibiotic overuse at discharge was common, varied widely between hospitals, and was associated with patient harm. Furthermore, antibiotic overuse at discharge was strongly correlated between 2 disparate diseases, suggesting that prescribing culture or discharge processes—rather than disease-specific factors—contribute to over-prescribing at discharge. Thus, discharge stewardship may be needed to target multiple diseases.

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#### Presentation Type:

Poster Presentation

#### Antimicrobial Bacteria and Viruses Detected Through Systematic Sampling in the Childcare Environment

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**Background:** Approximately two-thirds of children aged <5 years receive out-of-home child care. Childcare attendees have an increased risk of infections compared to children not in childcare settings, possibly due to their close contact in a shared environment. As multidrug-resistant organisms (MDROs) increasingly move from healthcare-associated to community settings, childcare can provide a venue for further transmission of these pathogens. Our objective was to evaluate the bioburden of pathogens present on fomites in childcare centers and how surface contamination changes over time. **Methods:** The study was conducted in the single-room play area of an Ypsilanti, Michigan, childcare center caring for children aged 3–5 years. Polyester swabs were used to collect surface samples from 16 locations in the room, including (1) laminate, wood and plastic tabletops and furniture; (2) a stainless steel sink and adjacent plastic trash bin; and (3) wood, metal and plastic toys. A water sample was also collected at a 17th site. Samples were collected twice weekly for 5 of 6 weeks, followed by 1 additional collection (September–October 2019). Tryptic soy agar was used for standard plate counts and selective media were used to identify methicillin-resistant *Staphylococcus aureus* (MRSA), Vancomycin-resistant *Enterococcus* (VRE), and extended-spectrum  $\beta$ -lactamase (ESBL)-producing *Enterobacteriaceae*. Single-plex RT-PCR was used to detect norovirus and adenovirus. **Results:** Among 175 samples collected on 11 days, MRSA and ESBL-producing *Enterobacteriaceae* were detected from 10.3% (18 of 175) and 8.0% (14 of 175), respectively, of environmental specimens. No specimens were positive for VRE or norovirus. Adenovirus was detected in 20 of 175 specimens (11.4%). Median bioburden by site ranged from 85 CFU/mL to 2,510 CFU/mL. The highest median bioburden was observed at the sink (2,510 CFU/mL), followed by the plastic building block table (1,620 CFU/mL), the small wood blocks (1,565 CFU/mL) and water from a water play area and an adjacent tabletop (1,260 and 1,100 CFU/mL respectively). The highest single day bioburden was 273,000 CFU/mL at the sink. **Conclusion:** The presence of MDROs on childcare center fomites raised concern for exposure to these pathogens among vulnerable populations. More study is needed to determine the degree to which these contaminated fomites drive transmission between children. We found the highest bioburdens on sites where children played or washed with water, identifying potential targets for more frequent cleaning.

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#### Are Patients Preferentially Receiving Oral Vancomycin for *Clostridioides difficile* Infection in 2018? A Population Perspective

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**Background:** Historically, metronidazole was first-line therapy for *Clostridioides difficile* infection (CDI). In February 2018, the Infectious Diseases Society of America (IDSA) and Society for