

(25.6%) patients were diagnosed with UTIs: 71 with cystitis (8.9%), 86 (10.8%) with complicated UTI (cUTI), and 48 (6%) with pyelonephritis. Furthermore, 125 patients (15.6%) were diagnosed with SSTI: 59 (7.4%) purulent and 66 (8.3%) nonpurulent. 31 (3.9%) patients had an IAI. The most commonly used antibiotics were cephalosporins in 536 patients (67%), azithromycin in 252 patients (31.5%), and fluoroquinolones and tetracyclines in 231 patients (28.9%). Fluoroquinolones were the most frequent antibiotic prescribed at discharge in 210 patients (26.3%). Figure 1 displays the average DOT relative to specific indications. The median duration of total antibiotic therapy exceeded institutional guideline recommendation for multiple conditions, including AECOPD (7 days vs recommended 5 days), CAP with COPD (8.3 vs 7 days), CAP without COPD (7.7 vs 5 days), and pyelonephritis (11 vs 7–10 days). Also, 269 (33.6%) patients received unnecessary therapy; 218 (27.3%) of these were due to excess duration. **Conclusions:** Among a cross-section of hospitalized patients, the average DOT, including after discharge, exceeded the optimal therapy for many patients. Further understanding of patterns and influences of antibiotic prescribing is necessary to design effective AMS interventions for improvement.

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#### Presentation Type:

Poster Presentation

#### Point Prevalence Surveys and Customized Interventions Are Good Strategies to Improve Antimicrobial Use: The Brazilian Experience

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**Background:** Although antimicrobial stewardship is recommended by Brazilian government, data regarding prescription practices in the country are scarce. **Objective:** To describe the impact of 2 point-prevalence surveys and customized interventions on antimicrobial consumption among 8 hospitals in 3 regions of Brazil. **Method:** In 2017 and 2018, 8 tertiary-care Brazilian hospitals conducted the Global Point Prevalence Survey of Antimicrobial Consumption and Resistance (Global-PPS). All enrolled

hospitals were provided the 2017 results. The group discussed intervention strategies by WhatsApp and e-mail. Hospitals customized interventions, including feedback to prescribers, discussion with pharmacists, and antimicrobial use data in accreditation process. A web-based program was used for data entry, validation, and reporting of details on AMC prescriptions. The Global-PPS was developed by the University of Antwerp and was funded by bioMérieux. The 1-day prevalences in 2017 and 2018 are presented as risk ratios. The main outcomes are whole antimicrobial use in hospitals and intensive care units (ICUs). Prevalence of infections caused by multidrug-resistant organisms (MDROs) were reported. **Results:** Overall, 1,716 patients were evaluated, of whom 420 (52.5%) and 429 (46.8%) were using antimicrobials in 2017 and 2018, respectively ( $P = .02$ ). In 33 ICUs, 170 patients (61.4%) and 204 patients (56.8%) were on antimicrobials, in 2017 and 2018, respectively ( $P = .20$ ). Significant decreases of overall use were observed for vancomycin (from 11% to 7%;  $P = .01$ ), meropenem (from 12% to 9%;  $P = .04$ ), and linezolid (from 1.5% to 0.33%;  $P = .01$ ). There was no significant increase in any singular drug or class of drugs. Within ICUs, vancomycin use decreased significantly (from 19% to 11%;  $P = .005$ ), linezolid use decreased significantly (from 2.9% to 0.3%;  $P = .01$ ), colistin use decreased significantly (from 4.3% to 1.7%;  $P = .05$ ), and metronidazole use decreased significantly (from 6.5% to 2.8%;  $P = .03$ ). We observed a nonsignificant decrease of infections caused by MDROs across the whole hospital (from 8.7% to 6.6%;  $P = .10$ ) and in the ICUs (from 15.2% to 12.3%;  $P = .30$ ). The most frequent infectious diagnoses were pneumonia (27%), intra-abdominal sepsis (14%), skin and soft-tissue infection (SSTI) (9.4%), urinary tract infection (9.1%), and sepsis and septic shock with no identified focus (SSNIF) (7.4%). There was a significant increase in SST (from 7.6% to 11.4%;  $P = .03$ ) and a decrease in SSNIF (from 10.7% to 4.1%;  $P = .00002$ ). In 2018, there were significantly fewer antimicrobial prescriptions for healthcare-acquired infections (from 52.6% to 43.6%;  $P = .0007$ ) and more antimicrobial prescriptions for community-acquired infections (from 27.4% to 34.6%;  $P = .003$ ). We detected no difference for medical or surgical prophylaxis. **Conclusions:** Feedback of prescription practices might have had an impact on local policies of antimicrobial use, as demonstrated by an overall decrease in antimicrobial use and a decrease in the ICU.

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#### Profile of Nursing Homes Enrolled in the National Health Safety Network: Focus on Interfacility Communication

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**Background:** A robust infection prevention infrastructure is critical for creating a safe resident environment in nursing homes. The

Table 1.

Table 1. Nursing Home, Infection Prevention Characteristics with CDC's National Health Safety Network (NHSN) Enrollment Status

	Total (n=50)	NHs enrolled in NHSN (n=11)	NHs not enrolled in NHSN (n=39)
Nursing home (NH) bed size	Mean = 127 (Range = 24-283)	Mean = 130 (Range = 57-283)	Mean = 127 (Range = 24-219)
*For-Profit Facility	44/50 (88%)	9/11 (82%)	35/39 (90%)
NH has a committee to review healthcare-associated infections (HAIs)	48/50 (96%)	11/11 (100%)	37/39 (95%)
NH collects infection data using electronic health record (EHR) system	44/49 (90%)	11/11 (100%)	33/38 (87%) No response = 1
NH has an antibiotic stewardship program	44/50 (88%)	11/11 (100%)	33/39 (85%)
NH shares infection surveillance data w/all nursing staff	36/49 (71%)	11/11 (100%)	25/38 (66%) No response = 1
NH infection preventionist has received specific infection prevention training	34/50 (68%)	9/11 (82%)	25/39 (64%)
NH routinely uses verbal communication to report infections prior to transfer (in/out facility)	21/50 (42%)	8/11 (73%)	13/39 (33%)
NH routinely uses verbal communication to report multi-drug-resistant organism (MDRO) history prior to patient transfer out of facility	21/50 (42%)	8/11 (73%)	13/39 (33%)
NH has a policy or criteria for accepting patients with history of MDRO	31/48 (65%)	8/9 (89%) No response = 2	23/39 (59%)

CDC NHSN provides a standardized approach to infection surveillance and analysis, which can drive internal quality improvement efforts in nursing homes and could serve as an indicator of facilities' infection prevention aptitude. The purpose of this study was to compare the characteristics of nursing homes enrolled to those not enrolled in the NHSN, including interfacility communication methods, as an essential part of reducing resident infection-related risks. **Methods:** Over a 2-year period, 50 nursing homes participated in a 12-month program designed to reduce healthcare-associated infections (HAIs) by enhancing relationships between nursing homes and hospitals. Overall, 11 demographic surveys were administered to nursing homes prior to the start of the phase 1 pilot year between January and March 2018, and another 39 were administered prior to beginning phase 2 in January–February 2019. The survey consisted of 36 questions on facility characteristics, including NHSN enrollment, infection prevention and control (IPC) program and infection preventionist characteristics, and communication methods related to interfacility transfer of care. We compared facility, IPC program characteristics, and communication methods between nursing homes stratified based on NHSN enrollment. These were compared using the Fisher exact test. **Results:** In total, 50 nursing homes, varying in size and services provided, completed the demographic survey (Table 1). Of these 50 nursing homes, 11 (22%) were enrolled in the NHSN. Nursing

homes enrolled in the NHSN were more likely to use a telephone report prior to resident transfer in and out of the facility ( $P = .04$ ) and to disseminate infection data to all facility nursing staff ( $P = .02$ ). Overall, less than half of nursing homes included a telephone report as part of their routine hand-off communication, and most nursing homes relied only on written transfer forms or discharge documentation. Moreover, 65% of the nursing homes reported use of a standardized method to accept new residents with history of multidrug-resistant organism (MDRO), including a review of infection or MDRO type, antibiotic orders, and ambulation status. NHSN-enrolled nursing homes were also more likely to have an antibiotic stewardship program and to use the electronic health record (EHR) to facilitate infection surveillance, though these differences were not statistically significant. **Conclusions:** A higher percentage of nursing homes enrolled in the NHSN engaged in activities connected with resident safety including verbal report prior to interfacility transfer and antimicrobial stewardship programs. Dedicating resources for nursing homes to enhance their IPC program including NHSN enrollment should be encouraged.

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