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Session: 222. Antimicrobial Stewardship: Potpourri  
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**Background.** Treatment of asymptomatic bacteriuria (ASB) is a major driver of inappropriate antibiotic use and an important target for antimicrobial stewardship. We identified patient- and hospital-level factors associated with treatment of ASB and its impact on patient outcomes.

**Methods.** In this retrospective cohort study, detailed data were abstracted from the medical record of adult non-ICU patients hospitalized with a positive urine culture (Ucx) between January 2016 and February 2018 at 46 Michigan hospitals. Exclusions included pregnancy, urologic surgery or abnormality, immune-compromise, or concomitant infection. ASB was defined as a positive Ucx without signs or symptoms attributable to a urinary tract infection (UTI). The treatment group received  $\geq 1$  antibiotic dose. Patient outcomes included mortality, readmissions, *Clostridium difficile* infection, and emergency room visits. Patient and hospital factors associated with ASB treatment were evaluated using logistic generalized estimating equation models; patient outcomes were inverse probability of treatment weighted.

**Results.** Of 2,733 included patients with ASB, 82.9% ( $n = 2,266$ ) were treated with antibiotics for a median 7 days (IQR 4,9). Ceftriaxone (71.1%) was the most frequent initial therapy; fluoroquinolones (33.2%) were most common at discharge. In the multivariable model, patient variables associated with ASB treatment included: increased age, dementia, positive urinalysis, incontinence, indwelling urinary catheter, and non-ambulatory status (Figure 1). Hospitals varied (Figure 2), but those that required a documented indication for antibiotics in the order or medical record had lower ASB treatment rates (OR = 0.5). There was no difference in patient outcomes for patients treated vs. not treated with antibiotics.

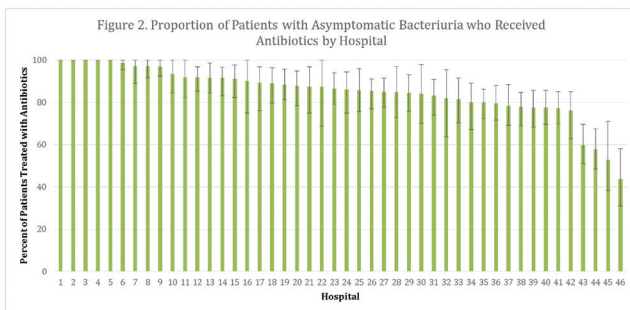
**Conclusion.** Antibiotic treatment of ASB, often broad-spectrum, is widespread. Certain patient characteristics (including advanced age, nonambulatory, dementia, and incontinence) and the misinterpretation of test results (including overemphasis of the urinalysis) drive clinicians to treat ASB. Requiring documentation of antibiotic indication may decrease inappropriate treatment. Future interventions may be more effective by incorporating these drivers of ASB treatment.

Figure 1. Multivariable model of Patient and Hospital-Level Factors Associated with Treatment of Asymptomatic Bacteriuria

Variable	OR (95% CI)	P-value
Non-ambulatory	1.53 (1.12, 2.09)	0.0073
Age (per 10 year increase)	1.12 (1.04, 1.21)	0.004
Any Catheter*	1.55 (1.12, 2.15)	0.008
Dementia	1.66 (1.20, 2.29)	0.002
Urine culture with <i>E. coli</i>	1.66 (1.31, 2.10)	<.0001
Incontinence	1.94 (1.43, 2.64)	<.0001
Positive urinalysis**	3.05 (2.23, 4.16)	<.0001
Non-white race (vs. White)	1.01 (1.00, 1.02)	0.016
Documented Antibiotic Indication***	0.47 (0.29, 0.78)	0.004

\*Includes Foley catheter, intermittent straight catheterization, and suprapubic catheter present on day of urine culture collection or 1 day prior to urine culture collection  
\*\*defined as presence of leukocyte esterase or nitrite, or white blood cell  $>5$  per high power field  
\*\*\* Antibiotic indication documented in the antibiotic order or medical record  
Odds ratios  $> 1$  indicates factors associated with treatment of asymptomatic bacteriuria; P-value  $< 0.05$  is considered significant  
CI, confidence interval; OR, Odds ratio

Figure 2. Proportion of Patients with Asymptomatic Bacteriuria who Received Antibiotics by Hospital



Disclosures. All authors: No reported Disclosures.

### 1877. Discrepant Susceptibilities Have Minimal Impact on Antibiotic Prescribing for Patients With Two or More Blood Cultures Positive for Coagulase-Negative Staphylococci

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**Background.** CoNS are common blood culture (BCx) contaminants resulting in unnecessary antibiotic therapy. Species reporting of CoNS is now possible in many

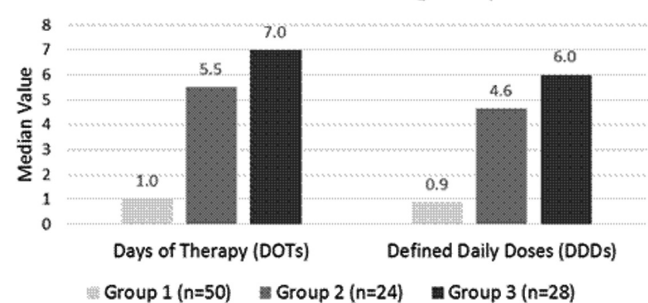
medical centers due to new technology. When CoNS are isolated from multiple BCx, factors such as different susceptibility patterns and/or different species might suggest contamination. The purpose of this study was to characterize antibiotic usage attributable to CoNS positive BCx and to determine whether reporting of CoNS species could help reduce unnecessary antibiotics.

**Methods.** Inpatients from January to June 2017 at our institution were screened retrospectively. During the study period, CoNS species were not reported (except *S. lugdunensis*). Patients (patients)  $\geq 18$  years old with  $\geq 1$  BCx positive for CoNS were included. Patients who were neutropenic, treated with staphylococcal antibiotics (SAbx) for a non-CoNS infection, or treated for CoNS with an antibiotic other than the defined SAbx were excluded. Patients were categorized into pre-defined groups: single positive BCx (Group 1),  $\geq 2$  positive BCx with different (Group 2) or same (Group 3) susceptibilities. A random sample of patients was screened until 50 Group 1 patients met study criteria. Additional data were collected on all remaining Group 2 and 3 patients in the study period, including species name obtained from laboratory database. The primary outcome was attributable use of SAbx among patients in each group. Additional analyses were performed to compare the use of SAbx among Groups 2 and 3.

**Results.** One hundred two patients were included. In the random sample ( $n = 76$ ), 34% had  $\geq 2$  positive BCx. *S. epidermidis* was isolated more frequently in Groups 2 and 3 than in Group 1 (69% vs. 52%,  $P = 0.03$ ). 74% of patients received at least 1 SAbx (97% vancomycin). Attributable use of SAbx was greater among Groups 2 and 3 ( $P < 0.001$ , figure). Differing susceptibilities occurred in 24/52 (46%) patients but did not impact SAbx use ( $P = 0.57$  for DOTs,  $P = 0.35$  for DDDs). Seventeen (33%) of patients with  $\geq 2$  positive BCx had different species.

**Conclusion.** Significantly more SAbx were prescribed when  $\geq 2$  BCx were positive for CoNS. Since differences in susceptibilities has little effect, future studies should evaluate the impact of reporting CoNS species on appropriate antibiotic prescribing.

Attributable Use of SAbx among Groups 1-3\*



\* $P < 0.001$  for Group 1 vs. 2 and Group 1 vs. 3. (DOTs and DDDs).  $P = NS$  for Group 2 vs. 3.

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### 1878. Expanding Kentucky's "One and Done" Tradition: Lipoglycopeptide Administration in the Emergency Department at a Tertiary, Academic Medical Center

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**Background.** Acute bacterial skin and skin structure infection (ABSSSI) incidence continues to rise, accounting for around 3.5 million emergency department (ED) visits per year in the United States. Dalbavancin and oritavancin are lipoglycopeptides with long half-lives allowing for single dose treatment options for eligible patients presenting with ABSSSIs in the ED, avoiding an inpatient admission. The objective of this study was to investigate the financial outcomes of utilizing these agents in the ED.

**Methods.** This was a single-center, retrospective study in adult patients with ABSSSIs that received a lipoglycopeptide in the ED at an academic medical center from April 2016 to February 2018. A multidisciplinary institutional guideline was developed and implemented in April 2016. Data were documented in the electronic medical record and/or REDCap™ database. A comparator group was identified by utilizing similar ICD-10 codes for patients that were admitted for ABSSSI. Variable direct cost-avoidance was examined to explore the financial implication of lipoglycopeptide treatment in this population.

**Results.** The average length of stay in the comparator group who were admitted for ABSSSIs during the predefined time period was 4.3 days. Because patients receiving a lipoglycopeptide did not require admission for intravenous antibiotics, 94.6 patient-days were avoided increasing the capacity by 14.1 patients. Overall, 22 patients received either dalbavancin ( $n = 18$ ) or oritavancin ( $n = 4$ ). The age was  $40.8 \pm 13.2$  years for the study group with 55% male. The age of the comparator group was  $40.5 \pm 19.7$  years. All patients were discharged home from the ED without being admitted. Two patients were readmitted for treatment failure requiring IV antibiotics. Despite 2 of 22 patients