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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 ≥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.

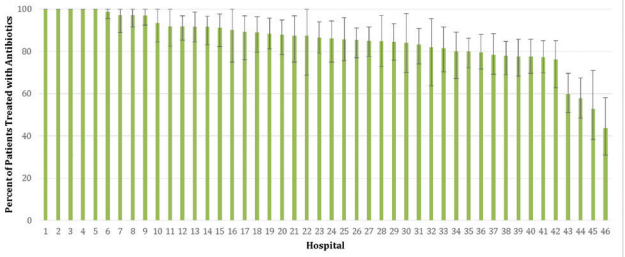
Conclusion. Antibiotic treatment of ASB, often broad-spectrum, is widespread. Certain patient characteristics (including advanced age, nonambulatory, dementia, and incontinence) and the misinterpretation of test results (including overemphasis of the urinalysis) drive clinicians to treat ASB. Requiring 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 *E. coli*	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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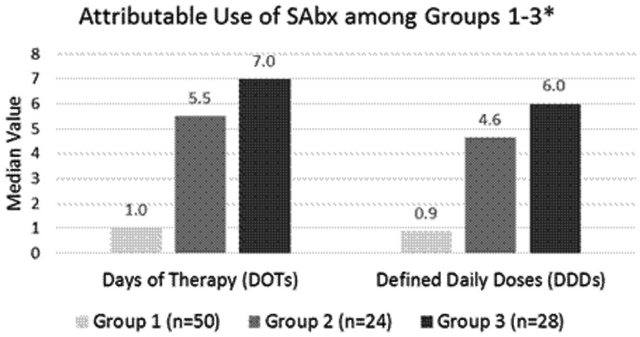
Background. CoNS are common blood culture (BCx) contaminants resulting in unnecessary antibiotic therapy. Species reporting of CoNS is now possible in many medical centers due to new technology. When CoNS are isolated from multiple BCx, factors such as different susceptibility patterns and/or different 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) ≥18 years old with ≥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), ≥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 ≥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 ≥2 positive BCxhad different species.

Conclusion. Significantly more SAbx were prescribed when ≥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.



*P < **0**.001 for Group 1 vs. 2 and Group 1 vs. 3 (DOTs and DDDs). P = NS for Group 2 vs. 3.

Disclosures. **All authors:** No reported disclosures.

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 ± 13.2 years for the study group with 55% male. The age of the comparator group was 40.5 ± 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

receiving a lipoglycopeptide without insurance, the variable direct cost avoidance was $4,560 per case, or $1,060 per day.

Conclusion. The use of lipoglycopeptides offers patient convenience and financial benefits, warranting its consideration for use in the ED at tertiary academic medical centers.

Disclosures. **All authors:** No reported disclosures.

1879. A Point Prevalence Study of Antibiotic Utilization in 61 Geographically Diverse Acute Care Hospitals (2017)

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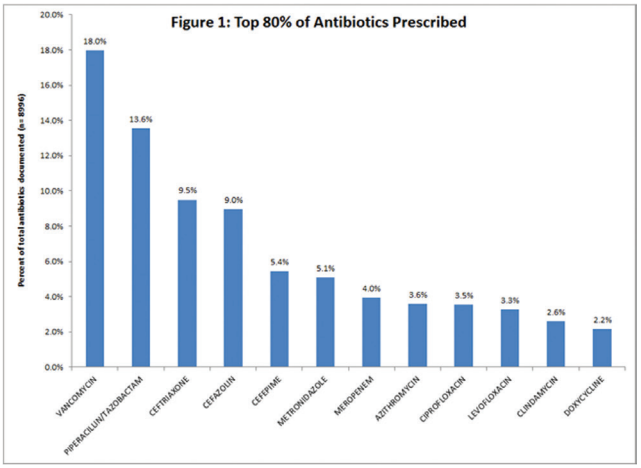
Background. Antibiotic utilization for geographically diverse areas can be difficult to obtain. The purpose of this study was to characterize patterns of US antibiotic use over a defined period to provide comparative data for benchmarking and to assist with identifying antibiotic stewardship opportunities.

Methods. Data were obtained as part of a larger study evaluating antibiotic time out practices. Participating institutions submitted de-identified patient-level antibiotic use data from a single day (between October 16, 2017 and November 17, 2017). Indication, expected duration, and antibiotic stop dates were documented. Antibiotics were classified by American Hospital Formulary Service (AHFS) therapeutic category and evaluated to identify duplicate anti-anaerobic, anti-MRSA, and AHFS classes. Hospital teaching status and US Census region were recorded.

Results. A total of 6,184 courses of therapy (8,996 individual antibiotics) were evaluated from 61 hospitals. Sixty-four percent of therapy courses submitted were from academic medical centers. Distribution by census region was Midwest (44.7%), Northeast (15.11%), South (23.2%), and West (16.9%). Over half (53.7%) of therapy was empiric and 33.4% was directed. Sixty-six percent of courses did not include a stop date within the electronic medical record. Twelve drugs comprised 80% of total antibiotic use. Percentage of antipseudomonal use was similar across regions, but anti-MRSA therapy was higher in the South and Midwest. Duplicate β-lactam therapy and duplicate anti-anaerobe therapy were identified in 1.5% of total courses (each). Duplicate anti-MRSA therapy occurred in 0.29% of therapy courses. Three percent of patients developed a *Clostridium difficile* infection during their hospitalization.

Conclusion. Vancomycin and piperacillin–tazobactam were the most common antibiotics used which is consistent with other analyses, but anti-anaerobic use as a percentage of overall use was higher than expected. Duplicate anti-anaerobe and β-lactam therapy is less frequent, but still represents an opportunity for stewardship. Antipseudomonal and anti-MRSA agents represent two key categories for stewardship given the high percentage of use. The addition of a stop date to the antibiotic order presents an opportunity to improve overall utilization.

Figure 1: Top 80% of Antibiotics Prescribed



Disclosures. **All authors:** No reported disclosures.

1880. Does the Label Matter: Initial Use of Newly Approved Antimicrobial Agents in Community Hospitals Without Robust Antimicrobial Stewardship Programs

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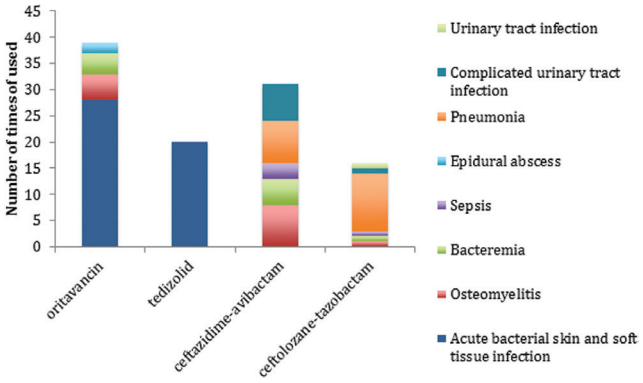
Background. Antimicrobial agents are often used for indications not approved by the Food and Drug Administration (FDA). While this can be appropriate at times, they may be used in settings with no published experience. Judicious use of new agents is critical for conserving their utility. This study characterized initial use after FDA approval of select antimicrobial agents in community hospitals without robust antimicrobial stewardship programs (ASP).

Methods. Initial use of systemic antimicrobials approved by the FDA since 2014 was retrospectively reviewed at 6 community hospitals (50–350 beds). Up to 10 charts of first use were reviewed per drug at each hospital. Time from FDA approval to first administration was measured for the following agents: ceftazidime–avibactam, ceftolozane–tazobactam, dalbavancin, isavuconazonium, oritavancin, and peramivir. Clinical indications, prescribing service, and empiric uses were recorded.

Results. Mean time from FDA approval to first administration ranged from 12 (tedizolid) to 26 months (dalbavancin). Of frequently used agents (Figure 1), adherence to initial FDA indications ranged from 7% (ceftolozane–tazobactam for complicated urinary tract infection) to 100% (tedizolid for acute bacterial skin and soft-tissue infection). Pneumonia (35%) and osteomyelitis (35%) were the most common off-label indications for ceftazidime–avibactam. Pneumonia was the most common off-label indication for ceftolozane–tazobactam (78%). The most common off-label indications for oritavancin were osteomyelitis (14%) and bacteremia (11%). Infectious Diseases was the main prescribing service for all agents (range 74–95%). Use of Gram-positive agents was mostly empiric whereas Gram-negative agents were targeted against specific pathogens.

Conclusion. Newly approved antimicrobial agents were used at these six community hospitals within 1–2 years after FDA approval. Agents with primarily Gram-positive activity were more often used for FDA approved indications. Given frequent use of novel Gram-negative agents for pneumonia, there is need for early trials to determine their role for this indication. In the meantime, ASP's should consider off-label indications such as pneumonia when developing local criteria for use.

Figure 1. Clinical Indications of the Top Antimicrobials



Disclosures. **All authors:** No reported disclosures.

1881. Empiric Pseudomonal Monotherapy vs. Combination Therapy for Community-Onset Pneumonia in Older Adults

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Background. Patients with pseudomonal pneumonia have a poor prognosis; therefore, IDSA guidelines recommend empiric antipseudomonal combination therapy when *Pseudomonas* is suspected, at least until treatment can be adjusted based on susceptibilities. However, combination antipseudomonal therapy is controversial. This study compared all-cause 30-day mortality in older patients who received antipseudomonal monotherapy (PMT) or antipseudomonal combination therapy (PCT) for the treatment of community-onset pneumonia.

Methods. This population-based cohort study used data from over 150 Veteran Health Administration hospitals. Patients were classified as low, medium, or high risk of drug-resistant pathogens according to a published rule. Patients were assigned to PCT or PMT groups based on antibiotics received in the first 48 hours of hospital admission. Separate multivariable logistic regression models were constructed to determine whether the choice of PCT or PMT was associated with 30-day mortality, after accounting for divergent baseline characteristics. Adjusted odds ratios (aORs) and 95% confidence intervals (95% CI) were calculated for the overall, low, medium, and high-risk groups.

Results. Of the 31,027 patients who met study criteria, 23% received PCT and 77% received PMT. Patients belonged to low (59%), medium (24%), and high (18%) risk groups. 30-day mortality was 18% overall, and increased among the groups: low (13%), medium (21%), and high (36%). Patient age (median of 78 years), race (>80% white), and sex (>98% male) were similar for patients receiving PCT and PMT. The unadjusted mortality difference between PCT and PMT was most pronounced in the