In this V A population, the JHH-CDT had low sensitivity, covering only 28.6% of ESLB infections appropriately. These findings are clinically meaningful. Investments of ASP resources to investigate such signals may vary widely depending on statistical method used. Additional research is required to develop AU analysis methods with high positive predictive value.

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

### 1824. Care Transformation in Infectious Diseases: Using a Novel Approach for Tracking Antimicrobial Stewardship Metrics

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**Session:** 219. Antimicrobial Stewardship: New Methods and Metrics

**Background.** A key component of antimicrobial stewardship (AS) programs is the use of adequate metrics to monitor antimicrobial utilization. Limitations have been described in the literature for traditional metrics such as Defined Daily Doses (DDD) and Days of Therapy (DOT), including practitioner's unfamiliarity with the terminology in relation to their meaning. This abstract describes an innovative approach developed by our organization that resulted in improved utilization of high-cost antimicrobials and increased the engagement of practitioners based on real-time (RT) analytics using a novel metric: Defined Daily Goal (DDG).

**Methods.** A RT medication utilization dashboard (DB) for daptoxicin (DAP) was created in October 2017 by clinical analysts and pharmacists. The DB provides a list of patients with active orders for DAP and compares the sum of active orders to the sum of available orders to meet the DDG. At Florida Hospital Orlando (FHO), the DAP goal based on national benchmark data were 6.8 days of therapy (DOT)/1,000 patient days (PDs) or a total of 240 PDs/month. The average PDs/month was calculated to be 35, 380, thus the DAP DDG for FHO was determined to be 8 orders/day to daily DAP orders/month. Visualizing the daily goals for the number of allotted orders for DAP and compares the sum of active orders to the goal of 6.8 DAP orders/month. This goal of 8 DAP orders/day was built into the DB for daily AS team review. This calculation allowed for a conversion of our monthly DDG goal to a DDG equivalent.

**Results.** From October to December 2017, the DB identified an average of 230.7 orders/month at FHO, which was below the goal of 240 orders/month. Visualizing the daily goals for the number of allotted orders for DAP and compares the sum of active orders to the goal of 6.8 DAP orders/month. This goal of 8 DAP orders/day was built into the DB for daily AS team review. This calculation allowed for a conversion of our monthly DDG goal to a DDG equivalent.

**Conclusion.** Implementation of a medication utilization RT DB, combined with the introduction of the DDG concept, allowed for an actionable measure to trend daily and facilitated the goals of our AS program. Based on this valuable information provided by the DB, this initiative has now been expanded to include other high-cost agents across all campuses.

**Disclosures.** All authors: No reported disclosures.
1825. Electronic Measure of Unnecessary Antimicrobial Use in US Veterans Affairs Medical Centers

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Session: 219. Antimicrobial Stewardship: New Methods and Metrics Saturday, October 6, 2018: 12:30 PM

Background. Antimicrobial inappropriateness is highly contextual and dynamic, depending not only on the patient's disease condition but also the information available at the time. To estimate the extent to which antimicrobials could theoretically be decreased with antimicrobial stewardship, we sought to capture unnecessary inpatient antimicrobial use in context over time as manifested in the electronic health record in Veterans Affairs (VA).

Methods. We extracted antimicrobial use, administrative, admission, and laboratory data from all acute care VA medical centers between 2010 and 2016. Information present during choice (hospital day [HD] 1–3), change (HD 4–5), completion (HD 6–7), and post-completion (thereafter) was used to determine context. All antimicrobial use without any documented infection was considered unnecessary (admission, discharge, or otherwise). Choice Anti-MRSA agents were considered unnecessary in celluflitis without history of or current positive culture for MRSA. Choice HOMDR agents were unnecessary in celluflitis without history of positive culture for ceftriaxone-resistant Gram-negative rods. Also unnecessary were broad-spectrum antimicrobials (anti-methicillin-resistant Staphylococcus aureus [MRSA] and hospital-onset multidrug-resistant [HOMDR] organisms antimicrobials as defined by the National Healthcare Safety Network) administered without evidence of multidrug-resistant organisms existed during Change and Completion time frames.

Results. Figure 1 demonstrates the distribution of facility proportions of unnecessary antimicrobials of different classes over time. Table 1 illustrates the percentage of unnecessary antimicrobials administered during choice, change, completion, and post-completion time-frames.

Conclusion. By this measure, unnecessary anti-MRSA and HOMDR use has been decreasing in VA over time. The bulk of unnecessary use is empiric but there is a substantial proportion that is used for longer stays, during which time more information was likely present. More research is necessary to determine how well these simple rules correlate with clinical determinations of appropriateness. Also ECD-10-CM was implemented in October 2015, which may have introduced an ascertainment bias.

Table 1. HOMDR and MRSA columns show the number of antimicrobial days apportioned during Choice, Change, Completion, and Post-completion time frames. The % unnecessary for both is also illustrated.

| Decision context | HOMDR 'unnecessary' | MRSA 'unnecessary' |
|------------------|---------------------|-------------------|
| Choice           | 460524              | 38.0%             |
| Change           | 780971              | 93.2%             |
| Completion       | 346805              | 91.8%             |
| Post-completion  | 217631              | 89.4%             |

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1826. Interventions to Enhance Clinical Nursing Partnership in Acute Care and Nursing Home (NH) Antimicrobial Stewardship Efforts: A Scoping Review

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Session: 220. Antimicrobial Stewardship: Non-hospital Settings Saturday, October 6, 2018: 12:30 PM

Background. Nurses are called upon to partner in antibiotic stewardship programs (ASPs). Yet, the nurses’ role in ASPs and measures of nurses’ contributions to ASPs are poorly defined.

Methods. Scoping review to explore (1) interventions to enhance nurses’ role in optimizing antibiotic use in the inpatient and nursing home (NH) settings and (2) measures to quantify intervention impact. We searched the PubMed, CINAHL, Embase, and Cochrane Library databases for articles published between 2005 and October 2017. We included studies that targeted clinical nurses to improve the appropriateness, timing, and duration of antibiotics. Two researchers reviewed titles, abstracts and extracted data from eligible full-texts.

Results. Sixteen studies met inclusion criteria (figure). Among studies, 10, 5, and 1 were conducted in the NH, inpatient or several settings, respectively. Nearly all studies (N = 15) incorporated nurses into interprofessional efforts to improve antibiotic use. Thirteen studies aimed to improve antibiotic appropriateness. Of these, six educated nurses in culturing technique and/or appropriateness; five educated nurses in antibiotic treatment guidelines; and two incorporated nurses into audit and feedback mechanisms. Six studies aimed to improve the timeliness of antibiotic administration. Of these, all included education on the importance of prompt antibiotic administration; two improved antibiotic availability and one enabled nurses to administer antibiotics before a provider’s evaluation. Two studies, both conducted in the NH, aimed to improve the duration of antibiotics by having nurses track the days of antibiotic therapy or remind prescribers to use treatment guidelines. Nonprescribing outcomes (e.g., timeliness of culture specimens and antibiotic administration, etc.) were evaluated in seven studies and significant improvements were consistently found. Prescribing outcomes (e.g., antibiotic use, appropriate antibiotic use, etc.) were evaluated in 12 studies and eight studies identified significant improvements.

Conclusion. Nurses may successfully contribute to improved antibiotic use. Further research is needed to clarify the nurses’ role in ASPs and to develop validated measures of nurses’ contributions.

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1827. Clinical Staff Retention and Leadership Stability and Antibiotic Utilization in Nursing Homes

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Conclusion. Nurses may successfully contribute to improved antibiotic use. Further research is needed to clarify the nurses’ role in ASPs and to develop validated measures of nurses’ contributions.

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