1058. Decreases in Antibiotic Use Associated with the Implementation of Electronic Antibiotic Visualization Tools for Stewards at Eight Veterans Affairs (VA) Healthcare Facilities

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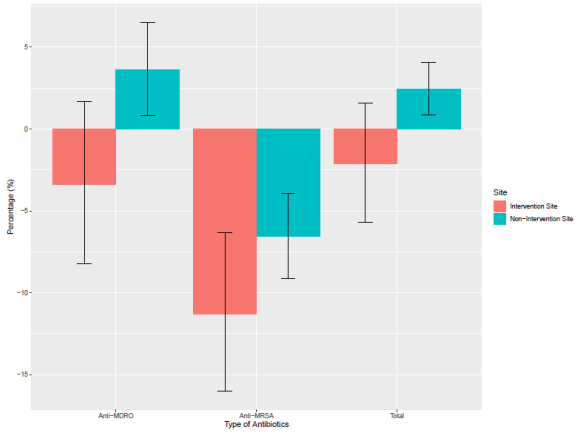
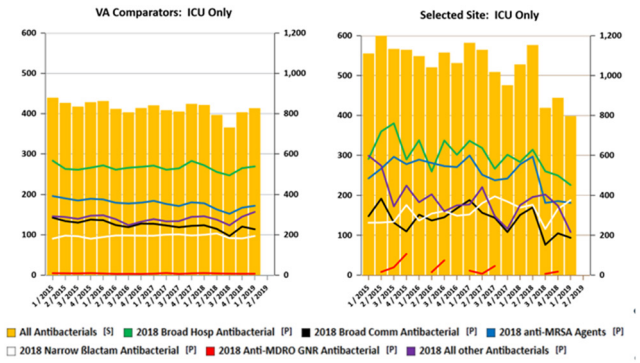
Background. To identify areas for improved antibiotic use, we developed and pilot-tested visualization tools to quantify antibiotic use at 8 VA facilities. These tools allow a facility to review its patterns of total use, and use by antibiotic class, compared with patterns of use at VA facilities with similar (or user-selected) complexity levels.

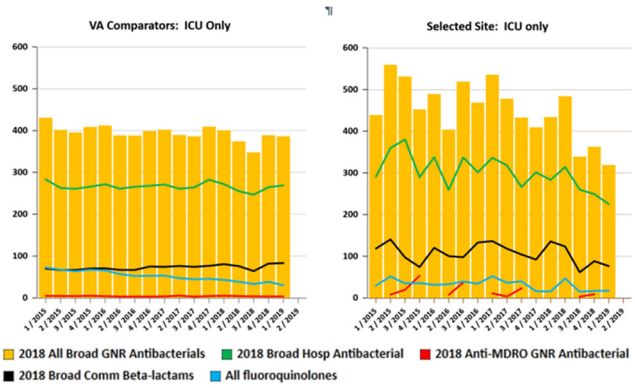
Methods. Antibiotic stewards from 8 VA facilities participated in iterative report development and implementation, with the final product consisting of two components: an interactive web-based antibiotic dashboard and a standardized antibiotic usage report updated at user-selected intervals. Stewards also participated in monthly learning collaboratives. The percent change in average monthly antimicrobial use (all antibiotics; anti-methicillin-resistant *S. aureus* agents (anti-MRSA); and broad-spectrum agents predominantly used for hospital-onset/multi-drug-resistant organisms (anti-MDRO)) was analyzed using a pre-post (January 2014–January 2016 vs. July 2016–January 2018) with un-involved controls (all other inpatient VA facilities, n = 132) design modeled using Generalized Estimation Equations segmented regression.

Results. Intervention sites had a 2.1% decrease (95% CI = [−5.7%,1.6%]) in all antibiotic use pre-post-intervention, vs. a 2.5% increase (95% CI = [0.8%, 4.1%]) in nonintervention sites (P = 0.025 for difference). Anti-MRSA antibiotic use decreased 11.3% (95% CI = [−16.0%,−6.3%]) at intervention sites vs. a 6.6% decrease (95% CI=[−9.1%, −3.9%]) at nonintervention sites (P = 0.092 for difference). Anti-MDRO antibiotic use decreased 3.4% (95% CI = [−8.2%,1.7%]) at intervention sites vs. a 3.6% increase (95% CI = [0.8%,6.5%]) at nonintervention sites (P = 0.018 for difference) (Figure 1). Examples of graphs include overall antibacterial use (Figure 2), and usage of broad-spectrum Gram-negative therapy (Figure 3) in intensive care units.

Conclusion. The use of data visualization tools use and participation in monthly learning collaboratives by antimicrobial stewards in a pilot implementation project at eight VA facilities was associated with decreases in antimicrobial use relative to uninvolved sites.







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

1059. Impact of a Syndrome-Based Antimicrobial Stewardship Intervention on Anti-Pseudomonal β-Lactam Use, *C. difficile* Rates and Cost in an Urban Community Hospital

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Background. The use of anti-Pseudomonal β-lactam (APBL) agents has significantly increased in the past decade, carrying higher costs and contributing to antimicrobial pressure. Antimicrobial stewardship (ASP) can promote evidence-based antimicrobial selection and mitigate excess APBL use. We implemented a comprehensive ASP with syndrome-based prospective audit and feedback (PAF) at an urban community hospital. The goal of this study is to assess the impact of syndrome-based PAF on APBL use, *C. difficile* rates and cost.

Methods. ASP with all CDC core elements was implemented at a 151-bed community hospital in October 2017. Syndrome-based guidelines and PAF was established and overseen via direct communication with an ID physician. Days of therapy (DOT), cost and *C. difficile* rates were assessed 12 months before and after ASP. DOT for APBL and non-APBL utilization was tabulated by unit and paired t-test performed.

Results. Most cases reviewed by PAF (51%) were represented in our syndrome-based treatment guidelines (Figure 1). Soft tissue (33%) and intra-abdominal (24%) infections were the most common syndromes. Change to guideline was the most common PAF intervention (62%) followed by de-escalation (30%). At 12 months, total DOT/1,000 increased (392.5 vs. 404) while the proportion of parenteral antimicrobials used decreased (71% vs. 65%). Antibiotic expenditures decreased by 23%, with a reduction in APBL of 20% and non-APBL of 10% (Table 1). Statistically significant reductions APBL use in non-ICU settings (P = 0.0139) and statistically significant increases in non-APBL in ICU settings occurred (P = 0.0001) (Figure 2 and 3). *C difficile* rates decreased from 21% (3.27 vs. 2.56).

Conclusion. Syndrome-based PAF was successfully implemented. A reduction in APBL use was seen in non-ICU settings, where evidence-based de-escalation may be more feasible. APBL use remained high in the ICU but was guideline consistent. A rise in non-APBL use also occurred. Certain critical illness syndromes warrant APBLs, but PAF may promote culture-directed and syndrome-specific treatments. ASP increased guideline-based therapy and contributed to decreased broad-spectrum antimicrobial use, antimicrobial expenditures and *C difficile* rates. Syndrome based PAF can be successfully implemented in community settings.

Table 1. Expenditures on anti-bacterial agents

	Before	After
Antibacterial expenditures	$172,897	$132,053
APBL expenditures	$31674	$25389
Non-APBL expenditures	$60267	$54416

Figure 1. Cases reviewed by syndrome-based prospective audit and feedback