

Disclosures. All authors: No reported disclosures.

1065. Keeping Score: Utilizing a Prioritization Tool to Create Multidisciplinary Antimicrobial Stewardship Documentation

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Session: 132. Antibiotic Stewardship: Program Evaluation
Friday, October 4, 2019: 12:15 PM

Background. A multidisciplinary approach using pre-authorization and/or prospective audit and feedback combined with institutional guidelines, personnel education, and intervention monitoring is essential for successful antimicrobial stewardship programs (ASP). Assessing the impact of ASPs can be process-based and/or outcome-based. Electronic medical record-based clinical decision support (CDS) tools can be used to prioritize stewardship interventions.

Methods. The Medical University of South Carolina (MUSC) transitioned from Theradoc[®] to Epic[®] for ASP surveillance and data collection in 2018. The ASP team developed a scoring algorithm with integral rules to identify and analyze inpatients who might require ASP interventions. The dynamic list captures and scores patients based on key infection-related data and prioritizes interventions. Additionally, we

created a smart form flowsheet to streamline stewardship efforts for use by physicians and pharmacists. Accuracy of event capture was assessed during the buildout and via daily comparisons between Theradoc[®] and Epic[®]. Our goals are to optimize the treatment of potentially fatal infections (e.g., bacteremia) and delay emerging resistance.

Results. Our ASP module utilizes a scoring algorithm to identify and prioritize patients with positive blood or central nervous system cultures, other positive critical diagnostic tests, and high-risk antimicrobial use. Additional rules identify “bug-drug” mismatches, multiple positive cultures, and de-escalation opportunities. For example, the rules assign a high priority to patients with positive blood cultures and no prescribed antibiotics, but a lower priority score to restricted antimicrobial orders. We created a smart form flowsheet to document microorganism, presumed source, anti-infective use, ASP intervention, and acceptance of recommendations, allowing for multidisciplinary documentation outside of Epic[®] I-vents. Finally, we created a Reporting Workbench report which allows for monthly compilation and analysis of ASP interventions.

Conclusion. The MUSC Epic[®] ASP platform build showcases a CDS system that allows for streamlined, multidisciplinary communication, documentation, and analysis of outcomes.

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1066. Antimicrobial Stewardship Program: Audit and Feedback for Continued Improvement

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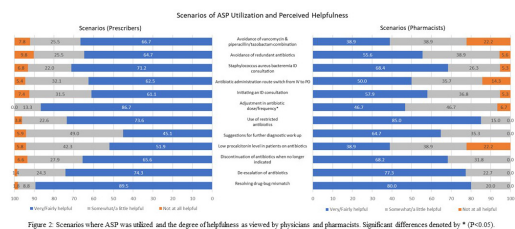
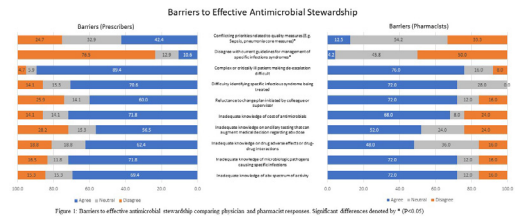
Session: 132. Antibiotic Stewardship: Program Evaluation
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Background. Audit and feedback is a foundational approach used by antimicrobial stewardship programs (ASP) and has been our primary method for ASP intervention for over 7 years. We sought to evaluate and improve our ASP methods as well as identify barriers to effective antimicrobial management.

Methods. We distributed an online survey at our institution, to clinicians (prescribers and pharmacists). Results compared their perceptions of the ASP and barriers to antimicrobial stewardship. Descriptive statistics include counts and percentages for categorical variables. Fisher's exact test was performed to describe the comparison groups for each survey response. We reviewed survey comments and categorized according to themes.

Results. We distributed the survey to 459 clinicians over 4 months with 110 surveys completed for a response rate of 24%. Prescribers comprised 77.3% of respondents. 74.5% of clinicians reported that antibiotic overuse is a problem at our institution. Prescribers were more likely to agree that conflicting priorities to core measures was a barrier to stewardship as well as disagree with current guidelines ($P < 0.05$) compared with pharmacists. Figure 1 demonstrates other barriers. Prescribers found ASP more helpful than pharmacists in antimicrobial dose adjustments ($P < 0.05$). Figure 2 demonstrates other scenarios where ASP provided input with varying degrees of perceived helpfulness. Pharmacists used the ASP website more than prescribers ($P < 0.05$). Text message and phone call were preferred methods of contact with prescribers favoring messages and pharmacists favoring phone calls. Clinicians infrequently used order-sets; Figure 3 demonstrates reasons for lack of use. 17.2% of participants commented about the ASP; of these, 42% were positive and 32% contained suggestions to improve communication and education. Comments are summarized in Figure 4.

Conclusion. Overall, clinicians agree that antimicrobial overuse is a concern at our institution. ASP is generally well received; however, after 7 years of operation, this survey shows that continued improvement is needed, notably in communication, education, and EMR order-sets. Results will be used to refine methods of effective communication and information delivery to nurture an effective relationship.



Reasons why order-sets were not used frequently

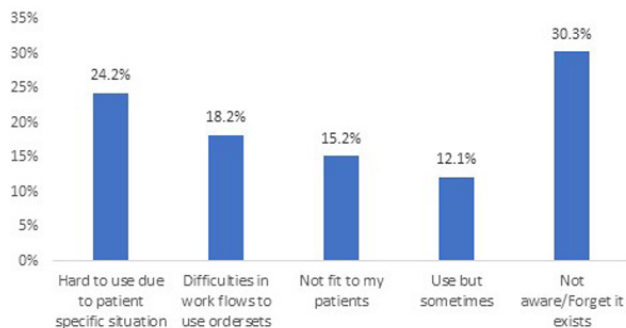


Figure 3: Comments compiled regarding EMR order-set usage amongst clinicians. Comments were categorized into reasons why order-sets were not used more frequently.

Comments regarding ASP	
Positive/General comments	
•	"ASP is a great group and much-needed in a center such as this"
•	"Overall, I feel I get appropriate guidance when needed and am glad the service is there"
•	"ASP is extremely helpful and I appreciate their efforts and guidance"
•	"Good program. Love the website"
Areas for improvement/critiques	
•	"Better communication as to their role and their rules"
•	"ASP acting as police instead of collaborators for improvement"
•	"I think as providers we need to be more educated on what different antibiotics will cover"
•	"Would like to see them take a more proactive/strict role in preventing overuse/mis-use of abx"

Figure 4: General comments as well as areas for improvement gathered from free text responses. Not all comments shown in this table, representative responses were selected.

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1067. Variation of Antimicrobial Stewardship Programs' Membership and Organization Within a Single Health System

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Session: 132. Antibiotic Stewardship: Program Evaluation

Friday, October 4, 2019: 12:15 PM

Background. Antimicrobial stewardship programs (ASPs) vary in terms of members and administrative (admin) structure. Joint Commission (TJC) has member requirements, but little is known about adherence or how ASPs fit into hospitals' admin structures. We reviewed the makeup and organization of ASPs within a single healthcare system.

Methods. Survey of pharmacy directors or ASP pharmacists at 14 system hospitals in January 2019.

Results. All hospitals responded. All are TJC accredited. Thirteen (92%) had a local stewardship committee. Of these 13, 6 (42%) met quarterly, 4 (30%) monthly, and 3 (21%) every other month. 9 (69%) were a subcommittee of Pharmacy and Therapeutics, and 1 (11%) was a separate committee. 3 (23%) had no clearly defined reporting structure. Figure 1 shows ASP committee compositions. 9 (69%) had all TJC required members, if ID physician is considered a required member. All had pharmacy representation but only 4 (30%) had a pharmacist with ID training. Most had representation from ID physicians (10), Infection Prevention (12), other practitioners (11), and microbiology lab (9). Less than half had hospital admin members, and only 2 had nursing members. None had Information Technology (IT) representation. 12 (92%) created minutes, but only 4 (30%) forwarded minutes for review by hospital admin. Tables 1–3 describe relationships between hospitals based on bed size, if they submitted minutes for review, and if they had both an ID pharmacist and ID physician as members. No hospital indicated citations during a TJC visit about membership or organization.

Conclusion. ASPs within even a single health system vary as to membership and organizational structure. Some did not have all TJC required members. With few having admin representation or submitting minutes for admin review, it raises the concern of ASPs being ignored and possible noncompliance with TJC requirements regarding leadership support. ASPs should actively work with hospital admins to ensure they have all needed representation and develop reporting mechanisms that keep hospital admins aware of their successes and needs. Lack of involvement from pharmacists with ID expertise, nursing, and IT are issues also. Larger evaluations are needed to determine whether membership and administrative structure can impact antimicrobial usage.

Figure 1

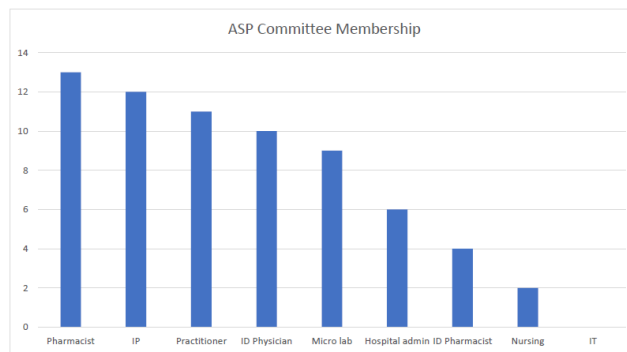


Table 1 Relationship of Hospital Bed size, Antibiotic Usage, and TJC Compliance

Bed Size	Inpatient Antibiotic Usage (Days of Therapy/1000 Patient Days)		All TJC Required Members	
	Above Health System Average	Less Than Health System Average	Yes	No
Large (>200) n=10	5 (50%)	5 (50%)	7 (70%)	3 (30%)
Small (<200) n=4	2 (50%)	2 (50%)	1 (25%)	3 (75%)

Table 2 Relationship of Submission of Minutes for Review, Antibiotic Usage, and TJC Compliance

Submit Minutes	Inpatient Antibiotic Usage (Days of Therapy/1000 Patient Days)		All TJC Required Members	
	Above Health System Average	Less Than Health System Average	Yes	No
Yes n=4	1 (25%)	3 (75%)	3 (75%)	1 (25%)
No n=9	5 (56%)	4 (44%)	5 (56%)	4 (44%)

Table 3 Relationship between ID Involvement, Antibiotic Usage, and TJC Compliance

ID PharmD and ID Physician Members	Inpatient Antibiotic Usage (Days of Therapy/1000 Patient Days)		All TJC Required Members	
	Above Health System Average	Less Than Health System Average	Yes	No
Yes n=4	3 (75%)	1 (25%)	2 (50%)	2 (50%)
No n=9	6 (66%)	3 (33%)	6 (66%)	3 (33%)

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1068. Implementation of an Antimicrobial Stewardship Program (ASP) Managed by an Infectious Disease Physician and Pharmacists in a Community Hospital

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Session: 132. Antibiotic Stewardship: Program Evaluation

Friday, October 4, 2019: 12:15 PM

Background. The implementation of antimicrobial stewardship program (ASP) is one of the basis for the control of multidrug-resistant bacteria (MDR), optimization of antibiotic use, minimization of adverse events, and reduction of unnecessary costs. We demonstrate the design, development, and participation in ASP program following CDC and Prevention Core Elements strategies.^{1,3,4} The objective is to evaluate the impact of clinical pharmacists working in conjunction with infectious disease (ID) physician on tracking and documenting antibacterial utilization in per patient-days, pharmacist clinical interventions, prescriber practices, and antibiotic purchases.

Methods. We conducted a multidisciplinary-team project of pharmacist-led prospective-audit-with-feedback ASP from 2015 to 2018. The ID physician and clinical pharmacist conducted patient care rounds twice weekly to make recommendations