

Table 3. Prospective Intervention Data

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Total patients	13	
Indications		
Bacteremia	1	
Cellulitis	2	
Empiric/Sepsis	1	
Pneumonia	6	
Urinary tract infection	3	
Route of administration		
Intravenous (IV)	20	
Oral (PO)	0	
Specific antimicrobials		
Azithromycin	2	
Cefepime	2	
Ceftriaxone	5	
Clindamycin	1	
Daptomycin	1	
Meropenem	1	
Metronidazole	1	
Piperacillin-tazobactam	4	
Vancomycin	3	
Total interventions	16	
	Accepted	Not accepted
De-escalation	1	1
Discontinuation	3	1
Dose adjustment	2	0
Duration of therapy	5	0
Regimen optimization	2	1
Total	13 (81.3%)	3 (18.8%)

**Conclusion:** Close to half of patients receiving antimicrobials at the end of life are eligible for interventions to improve antibiotic regimens. These patients are often overlooked in antimicrobial stewardship, and, despite small sample size, our study shows the benefit of targeted stewardship in palliative care populations with an intervention acceptance rate of over 80%.

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### 161. Assessing Antimicrobial Stewardship Engagement among Frontline Oncology Nurses and Chartering a Path Forward

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**Session:** P-6. Antimicrobial Stewardship: Program Development and Implementation

**Background:** Developing robust, multidisciplinary antimicrobial stewardship programs to combat drug resistance is a priority of healthcare institutions, in accordance with Joint Commission standards and national legislature. However, the involvement of nurses in stewardship programs has trailed behind that of physicians and pharmacists, despite their unique position as frontline providers. In particular, oncology nursing staff can play a key role in extending stewardship to their high acuity patients, who frequently require antimicrobials. We sought to conduct a survey study of oncology nursing providers on their understanding, perceptions, and attitudes about antimicrobial stewardship.

**Methods:** A voluntary and anonymous survey was emailed to oncology nursing staff on adult and pediatric oncology wards and clinics throughout our hospital system. We used an adapted 28-item Likert scale-based survey to assess understanding of antimicrobial stewardship attitudes and perceived barriers to greater involvement in stewardship programs. A survey reminder was emailed weekly for 8 weeks and completion was encouraged by nursing leadership in unit staff meetings.

**Results:** The survey was emailed to 281 nurses, of whom 39% (n=109) responded. 54.1% of nurses believed that an antibiotic stewardship program was very important in their healthcare setting. However, 56% of respondents were unfamiliar with the meaning of antibiotic stewardship, and 83.5% were not aware of how to contact the antimicrobial stewardship team with questions. More than 75% felt that nurses could help with antibiotic use, though 76% indicated wanting to know more about which antibiotics treat different infections and 74% wanted to know more about appropriate durations of antibiotics.

**Conclusion:** Oncology nurses have the potential to play a valuable role in antimicrobial stewardship. Barriers to nursing involvement include knowledge gaps on antibiotics and unfamiliarity with existing stewardship programs and their functions within hospital systems. Nursing education and orientation to available resources are key steps to involving nursing staff in antimicrobial stewardship programs, maximizing benefits for both patients and hospitals.

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### 162. Assessment of Beta-lactam Allergies as Rationale for Receipt of Vancomycin for Surgical Prophylaxis

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**Session:** P-6. Antimicrobial Stewardship: Program Development and Implementation

**Background:** Beta-lactam (BL) antibiotics are first-line agents for most patients receiving antimicrobial prophylaxis in surgical procedures. Despite evidence showing low cross-reactivity between classes of BLs, patients with allergies commonly receive vancomycin as an alternative to avoid allergic reaction. The objective of this study was to identify potentially inappropriate use of vancomycin surgical prophylaxis among patients with reported BL allergies.

**Methods:** Adult patients (≥18 years) receiving vancomycin for surgical prophylaxis with a reported penicillin and/or cephalosporin allergy at our institution between August 2017 to July 2018 were retrospectively evaluated for potential eligibility for penicillin allergy testing and/or receipt of standard prophylaxis. Surgery type and allergy history were extracted from the electronic medical record. Per our institution's penicillin-testing protocol, patients with IgE-mediated reactions < 10 years ago were eligible for penicillin skin testing (PST), mild reactions or IgE-mediated reaction > 10 years ago were eligible for direct oral amoxicillin challenge, and severe non-IgE mediated allergies were ineligible for penicillin allergy evaluation or BL prophylaxis.

**Results:** Among 830 patients who received vancomycin for surgical prophylaxis, 196 reported BL allergy and were included in the analysis (155 with penicillin allergy alone; 21 with cephalosporin allergy; 20 with both cephalosporin and penicillin allergy). Approximately 40% of surgeries were orthopedic. Six patients were ineligible for BL prophylaxis. Per institutional protocol, 73 of 155 patients (48%) may have qualified for PST; 81 of 155 (52%) patients may have received a direct oral amoxicillin challenge. Only 3 of 22 patients with history of methicillin-resistant *Staphylococcus aureus* appropriately received additional prophylaxis with vancomycin and a BL.

**Conclusion:** Patients with BL allergies often qualify for receipt of a first-line BL antibiotic. An opportunity exists for improved BL allergy assessment as an antimicrobial stewardship intervention. Future studies should evaluate outcomes associated with BL allergy evaluation and delabeling in patients receiving surgical prophylaxis.

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### 163. Automation of an Inpatient Provider Specific Antimicrobial Use Report

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**Session:** P-6. Antimicrobial Stewardship: Program Development and Implementation

**Background:** The use of individual prescriber report cards has shown to be an effective strategy in optimizing antimicrobial use in the pediatric outpatient setting. This is more difficult in an inpatient setting with prescribing often being done by a resident, but the decisions regarding antimicrobials are often made by the attending physician. This concept was tackled at a tertiary children's hospital but was a manual and time-consuming process. The purpose of this review is to compare provider specific antimicrobial use between a manual chart review and an automated report.

**Methods:** An automatic report was developed that calculates antimicrobial days of therapy per 1000 patient days for each Pediatric Intensive Care Unit (PICU) attending provider. The software used was Business Objects that interfaces with the Electronic Medical Record. The provider is attached to daily antimicrobial use based on the attending to write a note that day. The provider was attached to patient days based on the number of days per patient they wrote notes.

**Results:** One week including 96 patients was chart reviewed and compared to the automated report prospectively. The automatic report days of therapy and patient days per PICU provider were within 10% of the chart review. Two months of the previous manual chart review was compared to the same two months with the automated report, which was also within 10%. Average quarterly hospital PICU antimicrobial days of therapy per 1000 patient days during the calendar year of 2019 in the Pediatric Health Information System (PHIS) were compared quarterly to the automated report, which was also within 10%.

**Conclusion:** An automated report that connects the attending to antimicrobial orders by attaching it to the note writer was found to be comparable to manual chart review as well as an average of use for the PICU compared to the national database PHIS. This automation can help decrease workload and optimize efforts for specific interventions and education that can be distributed with the PICU attending antimicrobial use report.

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### 164. Avoiding Complacency: Assessing the Perceived Impact and Value of Antimicrobial Stewardship at a Academic Medical Center

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**Session:** P-6. Antimicrobial Stewardship: Program Development and Implementation

**Background:** Multi-disciplinary engagement and education remain key measures for Antimicrobial Stewardship Programs (ASPs). Over 3 years, our ASP has undergone key changes to pre-authorization review, post-prescriptive activities, and core team members, coinciding with a 30% increase in stewardship interventions.

The objectives of this study were to evaluate the familiarity of Nursing, Pharmacy and Prescribers at our academic medical center regarding ASP activities and services, as well as perceived impact on patient care and value. Secondary objectives were to determine what resources are currently utilized and areas for improvement.