

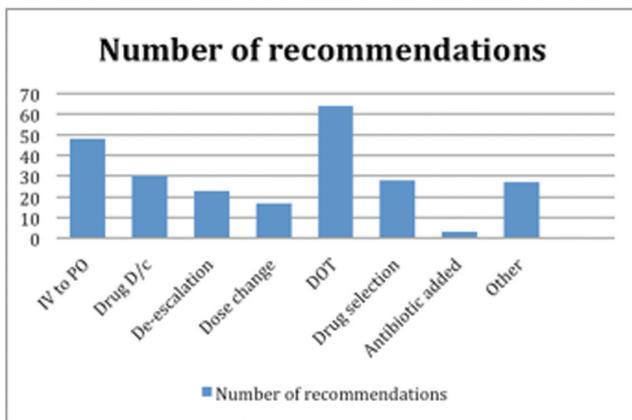
**Background.** There is a need to develop successful antibiotic stewardship interventions that do not require ID physicians. Our hospital implemented a pharmacist-driven intervention to prompt critical assessment of antibiotic regimens during interdisciplinary team rounds. We evaluated the acceptance of this intervention and the effects on concordance with institutional prescribing guidance.

**Methods.** This quality improvement initiative took place between November 2016 and June 2017 on a medical ward in an urban, level 1 trauma, public teaching hospital. During interdisciplinary team rounds, if the medicine team's antimicrobial choice was not concordant with institutional prescribing guidance, the clinical pharmacist made a recommendation. We assessed prescribing for urinary tract infection, skin and soft-tissue infection, and pneumonia pre- and post-intervention. Prescribing was classified as overall guideline-concordant if the antibiotic choices and duration of therapy were consistent with institutional guidance.

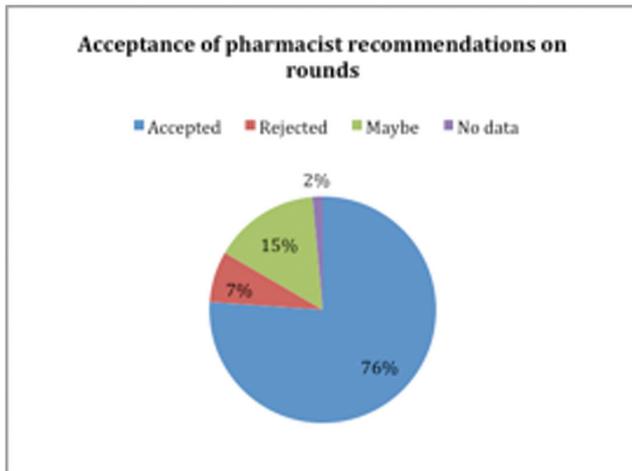
**Results.** Thirty cases from each period were evaluated. Recommendations to the medical team were made on 63% (92/146) of days and on 31% (205/664) of patients on antibiotics. The most common recommendation was regarding days of therapy (Figure 1). The recommendations were accepted in 76% (156/205) of cases. (Figure 2). There were improvements in both the inpatient (70% to 83%,  $P = 0.22$ ) and discharge (64% to 86%,  $P = 0.35$ ) antibiotic choices and overall guideline concordance (53% to 63%,  $P = 0.43$ ); however, these were not statistically significant. Concordance with duration of therapy was similar between the periods (76% vs. 77%,  $P = 0.94$ ) (Figure 3).

**Conclusion.** During interdisciplinary rounds, prompting by pharmacists to critically assess antibiotic regimens is a feasible antibiotic stewardship intervention that does not require ID expertise, is generally accepted by physicians, and may increase guideline-concordant antibiotic selection.

**Figure 1:**



**Figure 2:**



**Figure 3:**

	Baseline (N = 30)	Intervention (N = 30)	P-value
Concordance with guidelines			
Inpatient antibiotic choice	21/30 (70%)	25/30 (83%)	0.22
Discharge antibiotic choice	7/11 (64%)	12/14 (86%)	0.35
Duration of therapy	22/29 (76%)	23/30 (77%)	0.94
Overall concordance	16/30 (53%)	19/30 (63%)	0.43

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

**199. The Urgent Need for Urgent Care Antimicrobial Stewardship: Evaluating Prescribing and Patient Outcomes Associated with a Pharmacist-led Stewardship Program**

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**Background.** Antimicrobial resistance is one of the most serious threats to public health. Antimicrobial stewardship initiatives have begun to expand from acute care to ambulatory care settings. While many programs have demonstrated pharmacist-led stewardship successes in inpatient and emergency department (ED) settings, there is a paucity of literature exploring these initiatives in urgent care (UC) sites. This study aimed to determine the impact of implementing a pharmacist-led antimicrobial stewardship program (ASP) in the UC setting.

**Methods.** A retrospective quasi-experimental study was conducted evaluating patients from two health system-affiliated UC sites with positive urine or wound culture results following discharge. In April 2015, the health system's infectious diseases and ED pharmacists, with support from UC providers, implemented empiric therapy guidelines and a collaborative practice agreement allowing for pharmacist-led culture follow-up via a stewardship-focused protocol. The primary outcome of this study was to compare guideline-concordant antibiotic prescribing (defined as the combination of appropriate agent, dose, and duration of therapy) between the pre-ASP and post-ASP groups. Secondary outcomes included comparing the number of patients who required follow-up, time to follow-up, UC or ED revisits within 72 hours, and hospital admission within 30 days between groups.

**Results.** Three hundred patients were included in the study (pre-ASP  $n = 150$ , post-ASP  $n = 150$ ). Total guideline-concordant prescribing for all diagnoses was significantly improved in the post-ASP group compared with the pre-ASP group (41.3% vs. 53.3%,  $P = 0.037$ ). Guideline-concordant antibiotic selection improved in the post-ASP group (51% vs. 68%,  $P = 0.01$ ) while dose (70% vs. 74%,  $P = 0.287$ ) and duration (61% vs. 65%,  $P = 0.283$ ) were similar between groups. Follow-up was required for 27 (18%) patients in the pre-ASP group vs. 16 (10.7%) in the post-ASP group ( $P = 0.07$ ), however median time to follow-up call was longer in the post-ASP group (71 vs. 38 hours,  $P < 0.001$ ). There were no differences between groups in UC ( $P = 1.0$ ) and ED revisits ( $P = 1.0$ ) within 72 hours or hospital admissions within 30 days ( $P = 0.723$ ).

**Conclusion.** A pharmacist-led urgent care ASP was associated with significantly improved guideline-concordant antimicrobial prescribing.

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

**200. Pharmacist Prescribing and Care for Patients with Uncomplicated Urinary Tract Infections in the Community: Antimicrobial Utilization and Stewardship Results of the R\_OUTMAP Study**

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**Background.** Urinary tract infections (UTI) are common infections that often result in antibacterial use that is suboptimal. There are some Canadian provinces where pharmacists have the authorization to prescribe medications for the treatment of uncomplicated UTI. Pharmacists are accessible primary care professionals who have an important role to play in antimicrobial stewardship. Our objective was to evaluate the appropriateness of antibacterial prescribing by pharmacists for patients with uncomplicated UTI.

**Methods.** We conducted a prospective registry trial in 39 community pharmacies in the Canadian province of New Brunswick. Adult patients were enrolled if they presented to the pharmacy with either symptoms of UTI with no current antibacterial treatment (Pharmacist-Initial Arm) or if they presented with a prescription for an antibacterial to treat UTI from a physician (Physician-Initial Arm). Pharmacists assessed patients and if they had complicating factors or red flags for systemic illness of pyelonephritis, they were excluded from the study. Pharmacists either prescribed antibacterial therapy, modified antibacterial therapy, provided education only, or referred to a physician, as appropriate. Antibacterial therapy prescribed was compared between the study arms.

**Results.** A total of 748 patients were enrolled (87% in the Pharmacist-Initial Arm). The most commonly prescribed agents in the Pharmacist-Initial Arm were nitrofurantoin (88%), sulfamethoxazole-trimethoprim (TMP-SMX) (8%), and fosfomicin (2%) vs. nitrofurantoin (54%), TMP-SMX (26%), and fluoroquinolones (11%) in the Physician-Initial Arm. Nitrofurantoin was prescribed for 5 days in 97% of Pharmacist-Initial orders when compared with Physician-Initial orders where 65% were for greater than 5 days. TMP-SMX was prescribed for 3 days in 88% of Pharmacist-Initial compared with Physician-Initial where 63% were for greater than 3 days. Therapy was guideline concordant in 95% of Pharmacist-Initial compared with 35% of Physician-Initial ( $P < 0.001$ ). For guideline-discordant therapy from physicians, pharmacists prescribed to optimize therapy for 46% of patients.

**Conclusion.** Treatment was more guideline concordant when initiated by pharmacists, with longer treatment durations and more fluoroquinolones prescribed by physicians.

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

**201. Outcomes of an Antibiotic Stewardship Team at an Academic Medical Center: 11 Years of Experience**

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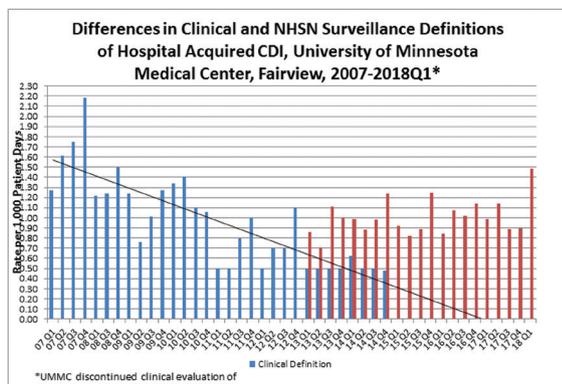
**Background.** The University of Minnesota Medical Center (UMMC) is a tertiary care facility, which has had a comprehensive antimicrobial stewardship program (ASP) for 11 years.

**Methods.** The antimicrobial stewardship team is comprised of a full-time PharmD and ID staff physicians who rotate on the service. Recommendations are placed in the electronic medical record as a progress note. Verbal recommendations may also be made.

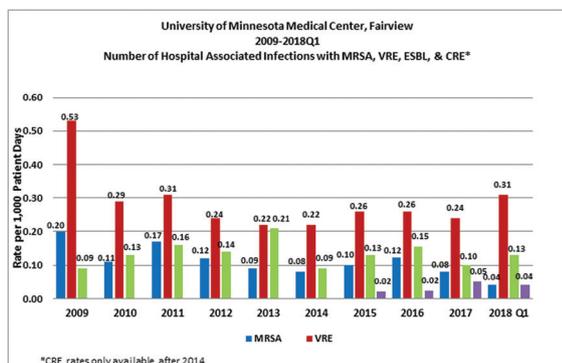
**Results.** There was a downward trend in Hospital Acquired (HA) *C. difficile* diarrhea from 2007 to 2014 from 1.2 to 0.5/1,000 patient-days. Rates appear stable from 2014 to 2017 with adjustment for change to NHSN laboratory-based surveillance (Figure 1). From 2009 to 2017 a decrease was seen in VRE hospital-acquired infections (HAI) from 0.53 to 0.24/1,000 patient-days and in MRSA HAIs from 0.2 to 0.04/1,000 patient-days. Newly acquired ESBL HAIs have remained relatively stable from 2009 to 2017 at 0.09 to 0.10/1,000 patient-days. CRE HAIs are an emerging problem with increasing rates (Figure 2). Cost savings continued from year to year. The greatest cost savings was observed after initial implementation (2006–2008) in which antimicrobial doses/patient day declined by 7%, antibiotics costs declined by \$7.40/patient day. In 2012, we observed our lowest antibiotic cost/pt day at \$37.51. Through August 2017, we have observed a sustained average antibiotic cost per patient day of \$39.45 (Figure 3). After adjusting for inflation annually, our expected costs (\$70.26) compared with actual costs (\$40.39 ytd 2017) demonstrate effective cost management of antimicrobial agents, with saving of ~\$30.00/patient day (Figure 3).

**Conclusion.** We observed a decrease in HAIs VRE and *C. difficile* infections after 3 years of operation, and MRSA after 5 years. ESBL HAIs remain relatively stable and CRE are emerging HAIs of concern. Therefore, we are now focusing efforts of limiting unneeded carbapenem use. Our antibiotic costs/patient day have leveled off in the last 3 years and remained low despite rising antibiotic costs due to market inflation and drug shortages. The ASP outcomes have continued to cost justify ongoing efforts. The effects of the program and the Infection Prevention Department appear to be synergistic.

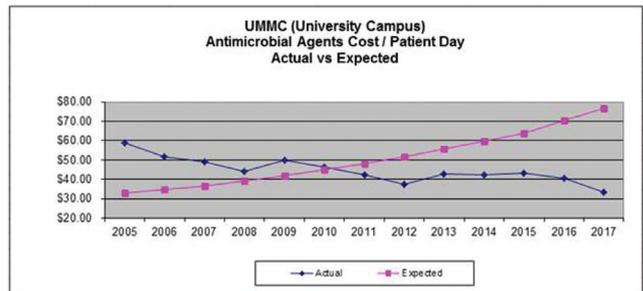
**Figure 1:**



**Figure 2:**



**Figure 3:**



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

**202. Implementation and Three-Year Results of Antimicrobial Stewardship Program in a Three Hospital Community Health System**

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**Background.** Antimicrobial Stewardship Programs (ASPs) have been shown to reduce hospital-onset *Clostridium difficile* infection (HO-CDI) rates and antimicrobial utilization (AU). The purpose of this study was to evaluate the implementation of multi-disciplinary ASP targeted toward finding a direct correlation between AU and HO-CDI.

**Methods.** This is a 3-year review of implementation of ASP in late 2014 Q4 in three hospital health system. Multidisciplinary ASP committee was established with representation from infectious diseases, clinical pharmacy, infection control, nursing, microbiology, and informatics. Each of the three hospital implemented targeted stewardship efforts with an initial focus on monthly advanced education, daily audit and feedback for targeted antibiotics, and infectious diseases approved restricted antibiotics. We created a monthly checklist of CDC Core Elements for committee review. The primary objective of this initiative was to evaluate changes in total and targeted AU and HO-CDI within a program over a 3-year period. Subgroup analysis evaluated annual antimicrobial cost/patient day. The secondary objective was Spearman's rank correlation analysis between AU and HO-CDI.

**Results.** Baseline overall AU analysis was based on 2014 and the intervention period included 2015, 2016, and 2017. Baseline overall AU in 2014 was 850 DOT/1,000PD. We observed a consistent decline in overall AU in 2015, 2016, and 2017 (740, 572, and 550 DOT/1,000PD, respectively). Targeted analysis revealed consistent decline from 2014 to 2017 in fluoroquinolones (FQ) (140 vs. 35 DOT/1,000PD) and ceftriaxone (CTX) (85 vs. 65 DOT/1,000PD). Overall decline was also noted in rates of HO-CDI from 2014 to 2017 (5.75 vs. 3.38 per 10,000PD). Consistent decline in overall antimicrobial cost/patient day was noted from 2014 to 2017 (\$13.76 vs. \$13.41/patient day). Spearman's rank correlation analysis showed positive correlation between decline in AU and HO-CDI in overall antibiotics ( $r = 0.58, P = 0.022$ ), CTX ( $r = 0.61, P = 0.016$ ), and FQ ( $r = 0.54, P = 0.038$ ).

**Conclusion.** We present implementation of an effective health system-wide multi-disciplinary ASP. With ASP efforts over 3 years, we were able to show decline and positive correlation in overall as well as targeted AU and HO-CDI. We also noticed a consistent decline in cost/patient day in this timeframe.

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

**203. Impact of an Infectious Diseases Fellow-Led Antimicrobial Stewardship Initiative in a Medical/Surgical ICU**

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**Background.** Intensive care units carry the heaviest antibiotic burden within hospitals. Providing active and ongoing stewardship oversight in these areas is challenging for institutions with limited stewardship resources. The purpose of this study was to assess the impact of leveraging trainees, namely an infectious disease fellow, in implementing a stewardship initiative in an intensive care unit.

**Methods.** A single-center retrospective, quasi-experimental study assessed the impact of an infectious diseases fellow participating in daily medical rounds in a mixed medical and surgical ICU over a consecutive 4-month period. The ID fellow conducted physical examinations, reviewed antimicrobial therapy, and de-escalated or discontinued antimicrobials when appropriate. Monthly days of therapy (DOT) per 1,000 days at risk (DAR) for individual agents and total antimicrobial use were measured and compared for 4 months in the pre-, during-, and postintervention phases.