Results. A total of 2,170 adult encounters for the treatment of SSTIs were included; 1,588 with cellulitis, 413 with local infection and 169 with cutaneous abscesses. The overall compliance rate for appropriate therapy, including drug selection and duration, was 64.9% (see Figure 1). Unnecessarily long duration of therapy resulted in an extra 1,657 days of antibiotic therapy. Compliance with drug selection occurred more frequently with physicians (40.3%) compared with residents (33.9%) and Advanced Practice Providers (APP) (25.1%).

Conclusion. Compliance with an institutional SSTI guideline for antibiotic selection and duration of therapy is suboptimal in outpatient clinics. Stewardship intervention for SSTI is a target for both drug selection and duration, and APPs as an important provider group in outpatient settings.

Figure 1. Compliance Stratified by Infection Type

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1849. Identification of Antimicrobial Stewardship Targets in the Outpatient Setting
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Background. Outpatient prescriptions consist of 60% of all antibiotic use. Prior studies have shown antibiotic overuse in the outpatient setting which contributes to rising rates of resistance and unnecessary adverse drug events. This study aimed to prospectively identify antibiotic stewardship targets in outpatient settings including drug selection, dose, duration, and if guideline criteria was met to necessitate an antibiotic.

Methods. The patient population consisted of outpatients seen at the Veterans Affairs Western New York Healthcare System and its affiliated community-based outreach clinics. Patients were prospectively identified via a real-time alert received by the infectious disease pharmacist at the time an oral antibiotic was prescribed from June to September 2017. Data were then collected via chart review and all infections were evaluated based on guidelines. Descriptive statistics and a multivariable logistic regression was used to identify stewardship targets.

Results. Of the 1,063 patients included, the most common infections treated included skin and skin structure infection (26.3%), urinary tract infection (18.1%), and sinusitis (11.9%). Azithromycin was the most commonly used antibiotic (27%), followed by cephalaxin (13%) and ciprofloxacin (12%). Overall, 40% of antibiotics prescribed were not indicated for use. The incorrect drug was chosen for indication in 40%, the improper dose was ordered in 22%, and the incorrect duration was used in 30%. ICD-10 codes were unreliable in capturing oral antibiotic use, as only 41% antibiotic use was associated with an ICD-10 code relating to an infection. Per the multivariable logistic regression, when the antibiotic was indicated, patients were 2.9 times more likely to receive the correct drug (95% CI, 1.9–3.8) and two times more likely to receive the correct duration for the antibiotic (95% CI, 1.5–2.7). Emergency room patients were twice as likely to receive an antibiotic when indicated based on guidelines (95% CI, 1.5–2.7) compared with those seen in clinics.

Conclusion. Poor antibiotic prescribing practices was found throughout the outpatient setting. This study provides a guide to focus efforts during implementation an outpatient stewardship program.

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1850. Impact of Targeted Feedback on Ciprofloxacin Prescribing in Outpatient Clinic Areas
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Background. Fluoroquinolones (FQ) have the potential for serious side effects such as tendonitis and tendon rupture, QTc prolongation, severe neuropathies, Clostridium difficile infection, dysglycemia, and AKI in patients on ACE inhibitors or ARBs. Beginning in 2016, the University of Chicago Medicine (UCM) Antimicrobics Stewardship Program began to give targeted feedback and education to outpatient clinic areas regarding their FQ use to reduce the number of prescriptions.

Methods. Outpatient FQ prescribing data from July 2015 to June 2016 (pre-intervention) and December 2016 to December 2017 (post-intervention) was reviewed retrospectively to evaluate indications, durations and alternatives for FQ prescriptions. Education and targeted feedback specific to the clinical area on current FQ usage was given by peer-comparison or aggregate data with recommendations for improved prescribing practices. The number of ciprofloxacin prescriptions/1,000 patient discharges was evaluated in two outpatient clinics and a number of ciprofloxacin prescriptions/1,000 patient discharges was evaluated in the emergency department pre and post intervention. FQ use in the two time periods was compared using the unpaired T-test.

Results. Ciprofloxacin prescriptions in the primary care group (PCG) (12.9%), student care (SC) (7.1%), and emergency department (ED) (8.6%) accounted for 28.6% of overall Ciprofloxacin use in the pre-intervention time period. A significant decrease in ciprofloxacin prescribing was seen in the PCG, 8.78RX/1,000 patient visits (PRE) vs. 5.24RX/1,000 patient visits (POST), P = 0.001; in SC, 16.25RX/1,000 patient visits (PRE) vs. 6.76RX/1,000 patient visits (POST), P < 0.001; and the ED, 13.37RX/1,000 patient discharges (PRE) vs. 9.84RX/1,000 patient discharges (POST) (P = 0.035). Preintervention comparison data were well received by PCG faculty. Decreases have been sustained in each clinical area 4 (ED) to 12 months (PCG and student care) following the intervention.

Conclusion. Feedback on both aggregate clinic and individual use of ciprofloxacin resulted in decrease use in three outpatient clinical areas at UCM and was well received by providers. Further work is needed to assess the most effective methods to optimize antibiotic prescribing in the ambulatory clinics.

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1851. Impact of an Antimicrobial Stewardship Initiative on Fluoroquinolone Utilization in the Outpatient Setting at an Academic Medical Center
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Background. Fluoroquinolone (FQ) use is associated with the development of C. difficile colitis, emergence of multidrug-resistant pathogens and occurrence of multiple adverse effects. In light of these risks, the Food and Drug Administration (FDA) warns against the overuse of systemic FQs for certain infections. Utilization of clinical decision support systems or alert tools integrated within the computerized physician order entry (CPOE) have been implemented in the inpatient setting to reduce antibiotic use. However, there is limited data on the effectiveness of such strategies in the outpatient setting. The purpose of this study was to evaluate the impact of an antimicrobial stewardship initiative on FQ utilization in the outpatient setting.

Methods. This was a retrospective chart review of patients ≥18 years old who received a FQ upon discharge from the inpatient setting, emergency department or outpatient clinics at a large academic medical center. The intervention consisted of an automatic electronic alert that would appear upon prescribing of a FQ, suggesting use of an alternative antibiotic and requiring a diagnosis to be entered. The pre and post intervention periods spanned from November 16, 2016 to April 16, 2017 and from November 16, 2017 to April 16, 2018, respectively. The primary endpoint was the number of FQ prescriptions over the total number of visits in the pre- and post-intervention time periods. A secondary endpoint was the days of therapy (DOT) and the days of therapy (DOT) was calculated as the number of FQ prescriptions over the total number of visits in the pre- and post-intervention time periods.

Results. 1,668 patients received FQs upon discharge in the pre-intervention arm and 1,494 in the post-intervention arm. Compared with the pre-intervention group, fewer FQs were prescribed in the post-intervention group (P = 0.002). Fewer patients were discharged on an FQ from the ED in the post-intervention arm compared with the pre-intervention arm (31% vs. 39%). However, this did not hold true when evaluating the number of FQ prescriptions written from the inpatient setting (52% in the post and 42% in the pre-intervention). DOT was lower in the post-intervention arm (10,751.5) compared with the pre-intervention period (11,986).

Conclusion. Implementation of a mandatory electronic alert tool in CPOE showed a statistically significant reduction in the overall number of FQ prescriptions between the pre and post intervention groups in the outpatient setting.

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1852. Rethinking Empirical Treatment for Urinary Tract Infections in the Outpatient Setting
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Background. Antibiograms can be useful for guiding empirical treatment. The presence of resistant organisms can limit the choice of appropriate antibiotics. However, the fluoroquinolones are emerging as a resistance threat. This study aimed to evaluate the impact of an antimicrobial stewardship intervention on UTI treatment in the outpatient setting.

Methods. This was a retrospective chart review of patients 18 years old who received a UTI prescription in the inpatient setting and outpatient setting. FQ use in the two time periods was compared using the unpaired T-test.

Results. A total of 2,135 adult encounters for the treatment of UTI were included; 1,588 with E. coli, 144 with Enterococci, 141 with Klebsiella and 141 with Proteus. Standard antibiograms arranged by organism are of limited utility for drug selection, dose, duration, and if guideline criteria was met to necessitate an antibiotic. DOT was lower in the post-intervention arm (10,751.5) compared with the pre-intervention period (11,986).