1562. Impact of Education on Fluoroquinolone Use in Uncomplicated Cystitis
Ryan Ferren, PharmD; Helen Lee, PharmD, BCPS; Steven Park, MD, FMD; Laura Thripp, MD, FIDSA, FSHEA; and Lanny Hsieh, MD; 1Pharmacy, University of California Irvine Health, Orange, California; 2University of California Irvine Health, Orange, California; 3North Carolina, Education Center, Charlotte, North Carolina; 4Dickson Advanced Analytics, Charlotte, North Carolina; 5Pharmacy, Carolinas Healthcare System, Charlotte, North Carolina; 6Pharmacy, Carolinas Healthcare System, Charlotte, North Carolina; 7Dickson Advanced Analytics, Charlotte, North Carolina; 8University of Wisconsin Health, Madison, Wisconsin; 9Pharmacy, University of Wisconsin Health, Madison, Wisconsin; 10Dickson Advanced Analytics, Charlotte, North Carolina; 11Pharmacy, Carolinas Healthcare System, Charlotte, North Carolina; 12Pharmacy, Carolinas Healthcare System, Charlotte, North Carolina
Session: 168. Stewardship: Improving Outcomes
Friday, October 6, 2017: 12:30 PM
Background. The Food and Drug Administration released a safety alert in May 2016 against the use of fluoroquinolones (FQ) in uncomplicated cystitis due to an increased risk of disabling and potentially permanent adverse drug effects (ADEs). The aim of the study is to compare the rates of FQ prescriptions for uncomplicated cystitis before and after prescriber education to assess if prescriber education decreases the use of FQs.
Methods. This is a single-center, two-phase retrospective chart review comparing a five-year pre-intervention and a four-month post-intervention periods that evaluated patients seen at UC Irvine’s emergency department (ED) or outpatient clinics for uncomplicated cystitis. Adult female, non-pregnant patients 18 years of age or older with the diagnosis of uncomplicated cystitis were included. The treatment guideline for uncomplicated cystitis was developed by the antibiotic stewardship subcommittee with the recommendation to use nitrofurantoin as the first-line agent. The infectious diseases pharmacy resident provided educational sessions from December 2016 to January 2017. The primary objective is to evaluate the impact of prescriber education on FQ prescribing rates for uncomplicated cystitis in the ED and outpatient clinics. Secondary objectives include the resistance rates of FQ and trimethoprim/sulfamethoxazole (TMP/SMX) against uropathogens to determine the local resistance rates and ADEs due to FQs.
Results. A total of 1056 patients were included in the analysis: 974 in the pre-intervention and 82 in the post-intervention groups. The rate of FQ prescriptions decreased from 32.3% in the pre-intervention group to 13.1% in the post-intervention group (P = 0.0002). The overall resistance rates of uropathogens were 19.3% to FQ and to 33.4% to TMP/SMX. There were 5 (0.5%) ADEs in the pre-intervention and 2 (2.5%) in the post-intervention groups.
Conclusion. Prescriber education regarding the appropriate treatment of uncomplicated cystitis and proper use of FQs was effective in reducing the rate of FQ prescriptions in management of uncomplicated cystitis. After prescriber education, the rate of FQ prescriptions decreased by 59%.
Disclosures. All authors: No reported disclosures.

1563. Effect of a Multifaceted Stewardship Intervention on Antibiotic Prescribing and Outcomes for Acute Bacterial Skin and Skin Structure Infections
Danya Rosdhy, PharmD; Rupal Jaffe, PharmD; Kelly E. Pillinger, PharmD; Josh Curley, PharmD; Nigel Rosario, MS; Lisa E. Davidson, MD and Lewis Accurday, MD; 1Pharmacy, Carolinas Healthcare System, Charlotte, North Carolina; 2Pharmacy, Carolinas Healthcare System, Charlotte, North Carolina; 3Dickson Advanced Analytics, Charlotte, North Carolina; 4Dickson Advanced Analytics, Charlotte, North Carolina; 5Division of Infectious Diseases, Carolinas HealthCare System, Charlotte, North Carolina; 6Pharmacy, Carolinas Healthcare System, Charlotte, North Carolina
Session: 168. Stewardship: Improving Outcomes
Friday, October 6, 2017: 12:30 PM
Background. Acute bacterial skin and skin structure infections (ABSSSI) are a leading cause of hospitalization; however, ABSSSI are often treated inappropriately in the inpatient setting. A multifaceted stewardship intervention was implemented at a large health care system to encourage guideline-concordant (GC) antibiotic prescribing. Components included development of a clinical pathway, computerized order set, and provider education. The objective of this study was to examine the impact of this initiative on antimicrobial prescribing practices and patient outcomes.
Methods. This was a single-center, retrospective cohort study of adult inpatients admitted to a medical service over a 9-month period with a primary or secondary diagnosis of ABSSSI. Patients were excluded if they had necrotizing fasciitis, code sepsis, diabetic foot infection, decubitus ulcers, perineal cellulitis, or if immunocompromised. ABSSSI was classified by type (purulent or non-purulent) and severity (mild, moderate, or severe) based on signs of systemic infection. Patients treated during the pre-intervention period (pre-IP) were then compared with patients treated during the post-intervention period (post-IP). The primary endpoint was receipt of GC therapy. Secondary endpoints included receipt of anti-anerobic (AA) or broad-spectrum agents (BSA), and clinical outcomes such as hospital readmission.
Results. 125 patients met eligibility criteria, 64 in the pre-IP and 61 in the post-IP. There was a statistically significant increase in prescribing of GC therapy during the post-IP compared with the pre-IP (14% vs. 56%, P = 0.0001). There was also a significant decrease in use of AA therapy (56% vs. 34%, P = 0.01). No difference was observed with the use of BSA, as overall use was low (16% vs. 15%, P = 0.89). The use of the computerized order set during the post-IP was low (18%). There was a numerical, but non-significant reduction in 30-day readmission (14% vs. 6.6%, P = 0.17).
Conclusion. The multifaceted intervention was effective for improving prescription of GC therapy for ABSSSI. Given low use of the computerized order set, this seemed to be driven by provider education. Strategies around ongoing education may be key to sustain positive results of stewardship interventions.
Disclosures. All authors: No reported disclosures.

1564. High- vs. Low-Intensity Prospective Audit and Feedback on Internal Medicine Wards and Impact on Antimicrobial Use at a Community Hospital
Braxton Langford, BScPhm, ACPR PharmD BCPS; April Jane Chan, BScPhm ACPR PharmD BCPS; Kevin Brown, PhD; and Mark Downing, MD
1St. Joseph’s Health Centre, Toronto, ON, Canada; 2Dalla Lana School of Public Health, University of Toronto, Toronto, ON, Canada; 3Infection Prevention and Control, Public Health Ontario, Toronto, ON, Canada
Session: 168. Stewardship: Improving Outcomes
Friday, October 6, 2017: 12:30 PM
Background. Antimicrobial stewardship program (ASP) interventions, such as prospective audit and feedback (PAF), have been shown to reduce antimicrobial use and improve patient outcomes. However, there is a lack of data comparing different PAF approaches. We examined the impact of a high-intensity interdisciplinary rounds-based PAF compared with low-intensity PAF on antimicrobial use on internal medicine wards in a 400-bed community hospital.
Methods. Prior to the intervention, low-intensity PAF was performed by ASP pharmacists with a focus on targeted antibiotics (fluoroquinolones, anti-pseudomonal penicillins, carbapenems, vancomycin, clindamycin, third-generation cephalosporins). Recommendations were made directly to the internist for each patient. High-intensity rounds-based PAF was introduced to 5 internal medicine wards sequentially. Rounds occurred twice weekly, reviewed internal medicine patients receiving any antimicrobials, and were interdisciplinary (ASP PharmD, internist, ward pharmacist, ASP MD). The primary outcome was antimicrobial use on internal medicine wards measured in defined daily doses (DDD) per 1000 patient-days (PD) 1–24 months prior compared with 1–24 months after the intervention. We performed interrupted time series analysis using linear regression to compare prescribing rates while accounting for auto-correlation within wards. Adjusted models included covariates to account for secular and seasonal trends.
Results. Following the intervention, there was a non-statistically significant drop in antimicrobial use from 469 to 435 DDD/1000 PD. See Table 1 and Figure 1 for analyses of antibiotic use.
Conclusion. Although high-intensity PAF did not result in lower antibiotic use compared with low-intensity PAF overall, a delayed reduction (>12 months) in usage was seen. Prospective studies are needed to determine the optimal approach to PAF.
Table 1. Change in Antimicrobial Use After High-Intensity PAF (DDD/1000 PD)
| Time Period | Unadjusted (95% CI) | Adjusted (95% CI) |
|-------------|--------------------|-------------------|
| All         |                    |                   |
| 1–24 months | -34.2 (-75.0 to 6.6) | -20.5 (-67.8 to 26.8) |
| 1–12 months | -14.0 (-56.9 to 28.8) | -20.3 (-68.1 to 27.5) |
| 13–24 months | -73.0 (-115.7 to -30.3) | -82.7 (-141.6 to -23.7) |
| Targeted    |                    |                   |
| 1–24 months | -8.0 (-28.0 to 12.0) | -14.7 (-28.8 to -0.6) |
| Non-Targeted|                    |                   |
| 1–24 months | -26.2 (-50.0 to -2.3) | -9.6 (-59.5 to 40.3) |

Disclosures. All authors: No reported disclosures.
1567. Antimicrobial Stewardship Challenges: Could Generic Antimicrobial Use Policies Improve Economic Outcomes in Acute Care Hospitals?

Cristhian Hernández-Gómez, MD, MSc; Max Feinstein, BA; Karen Ordóñez, MD; Sergio Reyes, MD; Christian Pallares, MD, MSc; Sergio Gutiérrez, BSc; Lorena Diaz, PhD; Obed Suárez, PharmD and Maria Virginia Villegas, MD, MSc; FIDSA; Bacterial Resistance and Hospital Epidemiology, International Center for Medical Research and Training CIDEMIN, Cali, Colombia, 1Antimicrobial Resistance and Hospital Epidemiology, Universidad El Bosque, Bogotá, Colombia, 2School of Medicine, Case Western Reserve University, Cleveland, Ohio, 3Hospital Universitario San Jorge, Pereira, Colombia, 3Molecular Genetics and Antimicrobial Resistance Unit, International Center for Microbial Genomics, Universidad El Bosque, Bogotá, Colombia

Session: 168. Stewardship: Improving Outcomes
Friday, October 6, 2017: 12:30 PM

Background. The main goal of an Antimicrobial Stewardship Program (ASP) is to optimize clinical outcomes while minimizing unintended consequences of antimicrobial use. However, the healthcare resource manager's primary goal for ASP is to reduce the cost of patient care without adversely affecting quality. Globally, generic drugs have access to medicines, especially in resource-limited settings, provided that they prove as effective as the brand molecule. Economical evaluation (EE) studies aim to find the most cost effective alternatives. This study was designed to determine the incremental cost-effectiveness ratio (ICER) of generic meropenem (GM) use vs. brand-name meropenem (BNM) to treat Gram-negative infections.

Methods. We conducted a double cohort EE study of adult patients who received GM vs. patients who received BNM. All patients with meropenem-susceptible infections were treated in the intensive care unit (ICU) of a Colombian acute care hospital. End points were defined as either changing or stopping therapy on day 3 of V and/or Z therapy from 27% pre-ATO to 70% for post-ATO. For overall V therapy, we found an overall increase in de-escalation (defined as either changing or stopping therapy) on day 3 of V and/or Z therapy pre- and post-intervention periods was 164 and 112, respectively.

Conclusion. This study shows that the use of GM, which is less clinically effective than BNM, is not a cost effectiveness option. Our findings evidence that the use of GM instead of BNM increases the consumption of healthcare resources, increases spending and may reduces the economic sustainability of the national healthcare system. To prove labor and imaging exam costs were lower in the GM cohort ($961 vs. $1,360). Total infection cost did not show a significant difference between groups ($BNM $56) and $11,345 P = 0.91. The ICER, which represents the cost of obtaining one additional effectiveness unit (patient survival), is $2,724 USD when changing BNM to GM.

Disclosures. All authors: No reported disclosures.