Background. Performing urinalyses and urine cultures in asymptomatic patients is one of the most common reasons for inappropriate antibiotic use. However, implementing this practice has been difficult, especially for clinical scenarios deemed to be high risk for infectious complications, such as among patients with delirium or those undergoing orthopedic implant surgery.

Methods. Using the dual-process theory framework “Developing De-Implementation Strategies Based on Un-Learning and Substitution,” an educational intervention citing new IDSA guidelines and providing a pneumonic “ABCDs of ASP” was created and delivered didactically to providers. The goal was to increase performance of evidence-based prevention actions in place of low-value urine screening and treating of asymptomatic patients. Clinical providers and staff (MD, RN, APRN, trainees) in 3 different levels of care (acute inpatient, long-term, and outpatient) were included. A web-based anonymous and confidential pre- and post-question format was delivered to assess influence on provider behavior.

Results. Responses from a range of 250–279 unique providers were collected. For scenario #1 (patient with delirium and a positive urine culture and no other infectious symptoms), the option to give antibiotics was reduced by 45% pre to 4% post, Chi-square $P < 0.01$. For scenario #2 (patient having a knee replacement and preoperative urine culture, no other symptoms) the option to give antibiotics was reduced by the same magnitude (~50%) but a lower absolute number (67% pre and 33% post, chi-square $P < 0.01$). Changes in predicted behavior were similar across levels of care.

Conclusion. Substituting evidence-based practices in place of low-value practices is an appealing framework for influencing provider behavior. Our work demonstrates that education can successfully reduce the intention to use antibiotics for asymptomatic patients with positive urine cultures.

Disclosures. All authors: No reported disclosures.

1054. Impact of Prospective Review and Feedback with Peer Comparison on Carbapenem Utilization by Physicians Practicing at a Community Teaching Hospital Rossana M. Rosa, MD; Amanda Bushman, PharmD, UnityPoint Health, Urbandale, Iowa

Session: 131. Antibiotic Stewardship: Interventions
Friday, October 4, 2019: 12:15 PM

Background. Behavioral interventions such as peer comparison have shown to reduce inappropriate antibiotic utilization in outpatient settings. We aimed to estimate the impact of prospective review and feedback with periodic peer comparison on carbapenem use by physicians in an inpatient setting.

Methods. Interrupted time series study conducted at a 400-bed community teaching hospital with an Antimicrobial Stewardship Program (ASP) in place since 2012. Prospective review and feedback is the ASP’s main strategy. Carbapenem use is not restricted. The intervention was limited to internal medicine residents, system-employed hospitalists, critical care specialists, surgery residents and surgery attendings directly supervising residents. Each carbapenem day of therapy (DOT) was reviewed by an inpatient hospitalist, system-employed hospitalist, critical care specialist, surgery resident, and surgery attending directly supervising the resident. The intervention was limited to internal medicine residents, system-employed hospitalists, critical care specialists, surgery residents, and surgery attendings directly supervising residents. Each carbapenem day of therapy (DOT) was reviewed by an inpatient hospitalist, system-employed hospitalist, critical care specialist, surgery resident, and surgery attending directly supervising the resident. Each carbapenem DOT was reviewed by the inpatient hospitalist, system-employed hospitalist, critical care specialist, surgery resident, and surgery attending directly supervising the resident. Each carbapenem DOT was reviewed by the inpatient hospitalist, system-employed hospitalist, critical care specialist, surgery resident, and surgery attending directly responsible for patient care on the day that a carbapenem was administered. Among patients admitted to teaching services, both the resident and their supervising attending were deemed responsible. Individual physicians’ proportions of adequate use were calculated and compared with the aggregate proportion of adequate use by service, i.e., hospitalists were compared with other hospitalists. An email summarizing utilization metrics and comparing to their peers was sent on a monthly basis. The main outcome of interest was hospital-wide carbapenem use measured in DOT per thousand patient-days. Carbapenem DOT use by service was a secondary outcome. Changes in post-intervention trends were calculated as incidence rate ratios (IRR). Changes in post-intervention trends were calculated as incidence rate ratios (IRR).

Results. Following the onset of the intervention there were no changes in hospital-wide trends of carbapenem use (IRRs 1.04; 95% CI 0.98–1.10; $P = 0.21$) (Figure 1). Analysis of carbapenem use by service showed prescribing trends remained stable within services, with IRRs in medical service of 1.05 (95% CI 0.99–1.13; $P = 0.11$) (Figure 2) and in surgical service of 0.98 (95% CI 0.92–1.05; $P = 0.21$) (Figure 3). No changes were seen in proportions of adequate use.

Conclusion. Addition of peer comparison to an ASP utilizing prospective review and feedback did not decrease carbapenem use.

Disclosures. All authors: No reported disclosures.

1055. Addition of Antimicrobial Stewardship Program Weekend Coverage Increases Interventions while Reducing Antimicrobial Duration and Cost Natasha N. Pettit, PharmD; Jennifer Pisano, MD; Cynthia T. Nguyen, PharmD; University of Chicago Medicine, Chicago, Illinois

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Background. Expansion of Antimicrobial Stewardship Program (ASP) activities to include coverage of weekends has been shown to facilitate further optimization of antimicrobial usage. Beginning July 2018, we implemented full ASP coverage on weekends from 0700–1530 by infectious diseases (ID) clinical pharmacists and pharmacist residents. We sought to evaluate the impact of the addition of weekend ASP coverage on the number of interventions, antimicrobial duration and cost of target broad-spectrum antimicrobials.

Methods. Antimicrobials reviewed by ASP on a weekend day between July 14, 2018 and December 16, 2018 were included in the analysis. The primary outcome was the number and type of documented interventions associated with the antimicrobials reviewed. Secondary outcomes included the total duration of meropenem, daptomycin, and micafungin initiated on a weekend, estimated expenditures on these target broad-spectrum antimicrobials, and comparison of the average number of interventions performed per day by ID clinical pharmacists vs. pharmacy residents. For comparison, we also evaluated these secondary outcomes prior to ASP weekend coverage, between July 16, 2017 and December 9, 2017.

Results. A total of 688 antimicrobials were reviewed on weekend days during the included time-frame with 753 interventions (average number of interventions/day: 37). Table 1 summarizes the type of interventions. The acceptance rate for interventions was 99%. The average number of interventions per day for ID clinical pharmacists vs. pharmacy residents was 57.9 and 26.2, respectively. Table 2 shows the total duration of therapy (DOT) and total expenditures on target antimicrobials before and after ASP weekend coverage. The total DOT of target antimicrobials agents decreased from 21 days to 7 days, with an estimated 3,165 dollar decrease in expenditures during the included time-frame.

Conclusion. Expansion of ASP coverage to include weekends allowed us to provide 753 interventions over 4 months that would not otherwise have been made when no ASP coverage was available. This was associated with a reduction in broad-spectrum antimicrobial duration of therapy and expenditures when compared with weekends where ASP weekend coverage was not available.