1044. Impact of Interdisciplinary Rounds on Antimicrobial Use at a Community Hospital

Emma Castillo, MD1; Luke Heuts, PharmD, BCPS1; Elizabeth Dodds Ashley, PharmD, MHS2; Rebekah W. Moehring, MD, MPH1; Michael E. Yarrington, MD2; Melissa D. Johnson, PharmD, MHS1; 1Nash UNC Health Care, Rocky Mount, North Carolina; 2Duke Center for Antimicrobial Stewardship and Infection Prevention, Durham, North Carolina,

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Background. Antimicrobial stewardship (AS) implementation is challenging in resource-limited settings such as smaller community hospitals that may lack dedicated personnel resources or have limited access to infectious diseases experts with dedicated time for AS. Few studies have evaluated the impact of interdisciplinary rounds as a strategy to optimize antimicrobial use (AU) in the community hospital setting.

Methods. We evaluated the impact of interdisciplinary rounds in a 280-bed acute care nonteaching, community hospital with an established ASP. The primary outcome was facility-wide antibiotic utilization pre- and post-implementation. Rounds included key healthcare personnel (hospitalists, clinical pharmacists, case managers, nurses) reviewing all patients on inpatient wards Monday through Friday, with a discussion of diagnosis, antibiotic selection, dosing, duration, and anticipated discharge plans. AU was compared for a 7-month post-intervention period (June 1, 2018–December 31, 2018) vs. similar months in 2017 based on days of therapy (DOT)/1,000 patient-days and length of therapy (LOT) per antimicrobial use admission. In addition, trends in AU for the post-intervention period were compared with the previous 17 months (January 1, 2017–May 31, 2018) using segmented binomial regression.

Results. Interdisciplinary rounds incorporating AS principles was associated with a decrease in overall AU in this facility, with a significant decrease of 16.33% (P = 0.03) thereafter (Figure 2). Comparing 2018 intervention months with similar months of 2017, the use of antibacterial agents decreased on average by 0.546 (95% CI −1.28 to −0.254.4) DOT/1,000 patient-days and length of therapy (LOT) per antimicrobial use admission. In addition, trends in AU for the post-intervention period were compared with the previous 17 months (January 1, 2017–May 31, 2018) using segmented binomial regression.

Conclusion. In this community hospital with an existing antimicrobial stewardship program, implementation of interdisciplinary rounds was associated with a substantial decrease in antimicrobial use. This was sustained for at least a 7-month period.

1045. Impact of an Antimicrobial Stewardship Pharmacist on Microbiology Rounds

Anton Gvozdnikov, PharmD1; Angela Huang, PharmD, BCIDP1; Sara Revolinski, PharmD, BCPS2; Nathan A. Ledeoer, PhD1; Blake W. Buchan, PhD2; 1Froedtert & the Medical College of Wisconsin, Buffalo Grove, Illinois; 2Medical College of Wisconsin, Milwaukee, Wisconsin,

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Background. Microbiology rounds is an area for antimicrobial stewardship programs (ASP) to potentially intervene on antimicrobial prescribing in both the inpatient and outpatient settings. The purpose of this study was to describe and evaluate the impact of ASP pharmacist participation in microbiology rounds.

Methods. This was a single-center retrospective descriptive study including inpatient and ambulatory adults (>2 years) during microbiology rounds between October 2018 and 3/2019. During daily microbiology rounds, susceptibility or workup requests were reviewed with the multidisciplinary microbiology team. The ASP pharmacist was called for their clinical expertise in assessing complicated or nonstandard susceptibility requests. Number and types of interventions made by ASP pharmacist were recorded (e.g., approval rate, education, ASP referral, ID consult referral). Additionally, number and types of intervention outcomes (unnecessary susceptibility prevented, optimized susceptibility request, treatment recommendation, improved clinician understanding, etc.) were analyzed.

Results. There were 66 susceptibility requests reviewed by an ASP pharmacist from October 2018 to 3/2019, of which 84.8% were inpatient. An ID provider was the requester for 35% of requests. ASP pharmacists completed chart reviews for 92.4% of requests from October 2018 to 3/2019, of which 84.8% were inpatient. An ID provider was the requester for 35% of requests. ASP pharmacists provided potential recommendations to optimize antimicrobial therapy, and provided education to other healthcare professionals.

Table 1. Intervention Outcomes by Type

| Outcome                                      | N (%) |
|----------------------------------------------|-------|
| Unnecessary Susceptibility Prevented          | 30 (45.5) |
| Improved Clinician Understanding             | 26 (39.4) |
| Optimized Susceptibility Request              | 11 (16.7) |
| Prevented Treatment of Contaminant           | 11 (16.7) |
| Prevented Need for Parenteral Therapy        | 7 (10.7) |
| Treatment Recommendation Provided           | 6 (9.1) |
| Additional Workup Performed                  | 5 (7.6) |

Disclosures. All authors: No reported disclosures.

1046. Evaluating the outcomes of embedding Antimicrobial Stewardship order sets in the General Medicine Admission Electronic Order Set: A Retrospective Study

April Chan, BSc(Pharm), ACPR, PharmD, BCPS1; Ajay Kapur, MD2; Bradley Langford, BScPhm, ACPR, PharmD, BCPS2; Mark Downing, MD, FRCP(C)1; 1Unity Health Toronto- St. Joseph’s Health Centre, Toronto, Ontario, Toronto, ON, Canada; 2Unity Health Toronto, St Joseph’s Health Centre, Toronto, ON, Canada; 3St Joseph’s Health Centre, Toronto, ON, Canada; 4St. Joseph’s Health Centre, Toronto, ON, Canada

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Background. The use of facility-specific guidelines and clinical decision-making tools are recommended by a number of organizations to improve the appropriateness of empiric antimicrobial prescribing; however, how to increase usage is not clear. We evaluated the impact of embedding antimicrobial stewardship (AS) electronic order
sets (EOS) into the general medicine admission EOS in the context of an established AS program.

Methods. The standalone EOS for community-acquired pneumonia (CAP), urinary tract infection (UTI) and cellulitis were reviewed and simplified to only include the antibiotic section prior to embedding. The intervention was introduced on March 30, 2017 with pre-intervention period defined as January 1, 2016 to March 29, 2017 and post-intervention period as of March 30, 2017 to June 30, 2018. The primary outcome was the change in usage of embedded AS EOS compared with the corresponding standalone EOS using counts. In addition, other standalone AS EOS (i.e., *Clostridioides difficile* infection (CDI), etc) were used as a control. The secondary outcomes were the change in antibiotic usage de-emphasized in embedded EOS (i.e., ceftriaxone, ciprofloxacin, clindamycin, moxifloxacin) and predicted prescribing shifts to antibiotics in the embedded EOS (i.e., amoxicillin-clavulinate, azithromycin and sulfamethoxazole-trimethoprim) using Days of Therapy (DOT)/1000 patient-days (PD). Paired t-test was used to compare antibiotic usage pre- and post-intervention.

Results. The usage of standalone EOS remained similar pre- and post-intervention except for a 16-fold increased usage of CDI EOS. There were large increases in uptake of the embedded EOS compared with the standalone EOS: 11-fold increase for CAP, 47-fold increase for UTI and 24-fold increase for cellulitis. In addition, there was a statistically significant decrease in ciprofloxacin (mean 16.6 DOT/1000-PD vs. 13.6 DOT/1000-PD, \( P = 0.026 \)) and moxifloxacin usage (mean 9.3 DOT/1000-PD vs. 5.2 DOT/1000-PD) during the study time period.

Conclusion. Our study showed that simplifying AS EOS and embedding these into a more commonly used EOS is associated with a significant increase in EOS usage and uptake of AS recommended empiric antibiotics with a decrease in fluoroquinolone usage.

Disclosures. All authors: No reported disclosures.

1047. Impact of Indication for Antibiotic Orders on Pharmacist Interventions

Tonya Scardina, PharmD, BCPS, BCIDP1, Shan Sun, PhD2, Lori Kottomia-Chatampeas, PharmD3, Avani Patel, PharmD3, Sameer Patel, MD MPH4; 1Ann & Robert H. Lurie Children’s Hospital of Chicago, Chicago, Illinois; 2Ann & Robert H. Lurie Children’s Hospital of Chicago/Northwestern University Feinberg School of Medicine, Chicago, Illinois

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Background. Joint Commission mandates that prescribers document indication for antibiotics at the time of prescribing. Antibiotic indications may offer opportunities for pharmacists to optimize dosing and frequency or provide alternative therapeutic options. We examined the impact of antibiotic indications during order entry on frequency and type of pharmacist interventions, time to order verification, and time to administration of antibiotics.

Methods. Number of pharmacist interventions documented in EPIC from 4/28/17 through 4/28/18 (pre-intervention) were compared with interventions from 4/29/18 through 2/28/19 (post-intervention). All pharmacist interventions involving antibiotic orders were included. For antibiotic orders involving a pharmacist intervention, data collected included antibiotic prescribed, indication for antibiotic (post-intervention only) and reason for intervention. For administered antibiotics, data collected included order time, time of arrival of order in pharmacist queue, pharmacist verification time, patient administration time. Statistical analysis involved chi-square test (compare the reason for intervention) and t-test (compare difference in time).

Results. There were 790 orders and 658 orders that involved a pharmacist’s interventions, pre-intervention and post-intervention, respectively (Tables 1 and 2). Pre-intervention, there were 200 antibiotic orders that had a documented pharmacist intervention and were administered. Post-intervention, there were 184 orders that had a documented pharmacist intervention and were administered. Abdominal/pelvic (29 orders, 16%), sepsis (19 orders, 10%), and surgical prophylaxis (18 orders, 9.7%) were the most frequent indications selected during order entry. Average time to order verification was 119 minutes pre-intervention and 123 minutes post-intervention (\( P = 0.97 \)). Average time to administration of antibiotics was 313 minutes and 360 minutes pre-intervention and post-intervention, respectively (\( P = 0.43 \)).

Conclusion. Inclusion of the selection of antibiotic indications during order entry did not significantly impact the number of pharmacist interventions, time to order verification nor time to administration.

Disclosures. All authors: No reported disclosures.

1048. A Randomized Controlled Trial of an Electronic Tool for Empiric Antibiotic Prescription: Results from the ANiti-infective Stewardship using the WISCA tool in the Electronic Medical Record (AnSWER) Study

Jessica Ridgway, MD, MS1; Nirav Shah, MD, MPH2; Mary Ellen Acre, MD3; Jeffrey Semel, MD3; Avisek Datta, MS2; Kamaljit Singh, MD2; Lance Peterson, MD, MPH4; 1University of Chicago, Chicago, Illinois; 2NorthShore University HealthSystem, Evanston, Illinois

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Background. The Weighted-Incidence Syndromic Combination Antibiogram (WISCA) is a computer-based, clinical tool for improving initial antibiotic selection in the management of pneumonia, cellulitis, urinary tract infection (UTI) and intrabdominal infection (IAB). WISCA predicts the likelihood that an antibiotic regimen will be active against the expected organisms causing the infection for each of these syndromes.

Methods. We performed a crossover randomized controlled trial of the WISCA tool between July 1, 2015 and June 30, 2018 at 4 hospitals. WISCA suggests an empiric