68. Impact of a Pharmacy-Driven Antimicrobial Time-out on Duration of Therapy in Community-Acquired Pneumonia

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Session: P-3. Antimicrobial Stewardship: Outcomes Assessment (clinical and economic)

Background: Community-Acquired Pneumonia (CAP) is associated with substantial antibiotic use and potential for oversuppression. Previous studies have demonstrated a reduction in antimicrobial exposure following implementation of provider-driven antimicrobial time-outs (ATOs). ATOs prompt assessment of appropriateness of therapy, clinical response, and duration of therapy. In September 2018, OSF Healthcare System implemented a 48-hour pharmacy-driven ATO in the electronic health record. The purpose of this study was to determine if the implementation of the ATO decreased the duration of antibiotic therapy for CAP at a community hospital.

Methods: This was a retrospective chart review of adults hospitalized with CAP at OSF Saint Anthony Medical Center between May 2016 - October 2017 (pre-implementation; PRE) and April 2018 - September 2019 (post-implementation; POST). The primary outcome was total duration of antibiotic therapy between hospitalization and discharge prescriptions. Secondary outcomes included hospital length of stay (LOS) of 90 days, n (%) 5.6 3.2 0.471

Conclusion: Increased compliance with evidence-based SAB recommendations decreased SAB duration, time to targeted antibiotics, and infection-related hospital length of stay after implementation of a pharmacist-driven collaborative initiative for SAB.

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69. Impact of antimicrobial stewardship interventions on post-elective caesarean antibiotic prophylaxis and surgical site infections

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Session: P-3. Antimicrobial Stewardship: Outcomes Assessment (clinical and economic)

Background: Antimicrobial stewardship programs (ASP) aim to improve appropriate antimicrobial use. This study aims to evaluate the impact of ASP interventions on post-elective caesarean section (eLSCS) oral antibiotic prophylaxis use. In a subgroup of those without surgical site infection (SSI) risk factors, 30-day SSI rates were compared in those who received post-eLSCS oral antibiotics vs. those without.

Methods: This pre-post quasi-experimental study was conducted over 9 months (2 months pre- and 7 months post-intervention) in all women admitted for eLSCS in our institution. Interventions included eLSCS surgical prophylaxis guideline dissemination, where a single antibiotic dose was within 24 hours of incision and was continued. Post-eLSCS oral antibiotics was discouraged in those without SSI risk factors (e.g. obesity). This was followed by ASP intervention notes (phase 1) for 3 months, and an additional phone call to the ward team for the next 4 months (phase 2).

Results: A total of 894 women were reviewed. There were 244 women in the pre-intervention phase, 274 in post-intervention phase 1 and 376 in phase 2. Pre-intervention post-eLSCS antibiotic prescribing rates was 82% (200), compared to 54% (148) in phase 1 and 49% (180) in phase 2 (p<.001). There were 560 women without SSI risk factors. Of these, only 4 of 301 (1.3%) who received oral antibiotics, and 3 of 129 (2.3%) without oral antibiotics developed post-op SSI (p<.001).

Conclusion: ASP can reduce post-eLSCS antibiotic prophylaxis. In those without SSI risk factors, use of post-eLSCS oral antibiotics did not impact SSI rates.

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70. Impact of Fluoroquinolone Susceptibility Suppression on Discharge Prescribing for Acute Uncomplicated Cystitis

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Session: P-3. Antimicrobial Stewardship: Outcomes Assessment (clinical and economic)

Background: Fluoroquinolones (FQ) are associated with multiple adverse effects and increasing resistance. Acute uncomplicated cystitis (AUC) treatment remains a frequent reason for FQ use. Previous data suggests that suppression of FQ susceptibility results can decrease inpatient use, but may not reduce prescribing at discharge. The purpose of this study was to investigate the impact of FQ susceptibility suppression on discharge prescribing for AUC.

Methods: This was a retrospective, quasi-experimental study in adult patients at a 350-bed academic medical center. The effect of suppression of FQ susceptibilities on pan-susceptible urine isolates for Klebsiella sp. and E. coli on FQ prescribing and appropriateness at discharge was compared one year before and after the intervention, starting in March 2018. Risk factors for FQ use were also examined. Exclusion criteria included pyelonephritis, urinary hardware, pregnancy, concomitant infections treated with FQ, and organisms not susceptible to FQ. Risk ratios of FQ use were calculated for pre- and post-intervention in all women admitted for eLSCS, stratified by discharge team for adjusted rates (aRR) using a Cochran-Mantel-Haenszel approach. For secondary outcomes, Chi-Square statistics were used to assess odds of FQ use among variables.

Results: Overall discharge FQ prescribing decreased from 41.1% to 21.1% after the intervention, corresponding to a 53% lower adjusted risk (aRR 0.47 (95% CI 0.28-0.81)). One-hundred percent of FQ use was inappropriate, largely due to organism susceptibility to a guideline-preferred agent (n = 33/38). After adjusting for the intervention and clustering of discharge team, the odds of outpatient FQ use was 3.46 times higher for uninsured vs. insured patients, and 13.4 times higher among those who received FQ while inpatient.

FQ Use at Discharge