constraints are barriers to robust AMS programs in some hospitals. Physicians are increasingly encouraged to participate in quality improvement (QI) and are a potential resource to improve AMS. We sought to determine the impact of a prospective, physician-driven stewardship intervention on DOT and clinical outcomes in hospitalized veterans with CAP, with the goal to reduce the median DOT by at least 1 day within 5 months.

**Methods:** This single center, quasi-experimental QI study evaluated two concurrent physician-driven interventions over a 5-month period in an inner-city Veterans Affairs Hospital. Using DMAIC (Define, measure, analyze, improve, and control) methodology, the Chief Resident in Quality and Safety (CROQ) provided monthly education and daily audit and feedback with patient-specific DOT recommendations. Clinical outcomes were followed until 30 days post discharge.

**Results:** A total of 123 patients with CAP were included (57 in the historic control group and 66 in the AMS intervention group). The AMS intervention significantly increased the proportion of CAP patients treated with a 5-day treatment course (56% versus 5.3%, p< 0.0001), and reduced the proportion of patients treated beyond 7 days (12% versus 70.2%, p< 0.0001). Median DOT per patient was reduced significantly (5 versus 8 days, p< 0.0001). Median excess antibiotic days were significantly reduced (0 versus 3, p< 0.0001) and 118 days of unnecessary antibiotics were avoided (62 versus 180). 30-day all-cause mortality, all-cause readmission, and Clostridium difficile infection were similar between groups. Median LOS was similar between groups (p=0.246).

**DOT in the Historic Control Group Versus Stewardship Intervention Group**

**Conclusion:** A physician driven QI stewardship intervention in hospitalized CAP patients significantly reduced the total antibiotic DOT and excess antibiotic days without adversely affecting patient outcomes. Providers can be educated through physician driven interventions resulting in substantial improvements in appropriate antibiotic use.

**Disclosures:** All Authors: No reported disclosures

76. Optimizing Clinical Outcomes in Geriatric Patients through a Multidisciplinary Hospital Antimicrobial Stewardship Program

James Mauro, PharmD1; Sam Kannangara, MD2; Roman A. Tuma, MD3; 1Easton Hospital, Nazareth, Pennsylvania; 2Saint Francis Memorial Hospital/Dignity Health, San Francisco, California; 3Hackensack Meridian Health, Holmdel, New Jersey

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

**Background:** Antimicrobial Stewardship Programs (ASP) aim to ensure the appropriate use of antibiotics. There is limited literature evaluating ASP outcomes in hospitalized geriatric patients who are at higher risk for developing *Clostridium difficile* infection (CDI) or other adverse outcomes. The primary objective of this study was to determine if ASP efforts in this age group decrease the rate of 30-day hospital readmissions due to repeated or development of CDI, hospital length of stay (LOS), and mortality.

**Methods:** A retrospective chart review was performed to compare the rates of 30-day hospital readmissions because of reinfection or development of CDI in patients 65 years and older who received ASP interventions between January and June 2017. A control group of patients 65 years and older who received antibiotics between January and June 2015 (pre-ASP) was analyzed for comparison. We also assessed their mortality rate and LOS. Patients were included if they received antibiotics for pneumonia (PNA), urinary tract infection (UTI), acute bacterial skin and skin structure infection (ABSSI) and complicated intra-abdominal infection (cIAI). The ASP team consisted of an infectious diseases physician and a clinical pharmacist who met daily to review patients on broad spectrum antibiotics. ASP interventions consisted of de-escalation of empiric or definitive therapy, change in duration of therapy or discontinuation of therapy.

**Results:** Overall, 834 patients (540 control; 294 intervention) were included. The 30-day hospital readmission rate for all infection types decreased during the intervention period (19.6% vs 4.8%, p=0.0001). Both the development of CDI during hospital stay and 30-day readmission due to CDI during the intervention period decreased (2.6% vs 0.34%, p=0.019). There was no statistically significant decrease in 30-day hospital readmissions in the PNA (58.5% vs. 35.7%, p=0.11), UTI (18.9% vs. 35.7%, p=0.15), ABSSI (12.3% vs. 21.4%, p=0.34) or cIAI (10.4% vs 7.1%, p=0.14) arms. There was no statistically significant change in LOS (7.50 days vs 7.26 days, p=0.48) or mortality (9.6% vs 6.5%, p=0.12).

**Conclusion:** Multidisciplinary ASP efforts significantly reduced 30-day hospital readmission rates and development of CDI in hospitalized patients 65 years and older.

**Disclosures:** All Authors: No reported disclosures

77. Out of Sight, Out of Mind: Impact of an Antimicrobial Stewardship Bundle on Fluoroquinolone Utilization

Jennifer Black, PharmD1; Stephanie Harding, PharmD2; BCPS AQ-ID3; Kathy Beadle, MT(ASCP) BHCL1; 1Wesley Medical Center, Bel Aire, Kansas

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

**Background:** Fluoroquinolones are broad spectrum antimicrobials associated with a growing list of adverse effects, such as *Clostridium difficile* infection, arrhythmias, central nervous system effects, tendon rupture and aortic aneurysm. Due to increasing concerns regarding adverse events and growing resistance, the antimicrobial stewardship team at Wesley Healthcare implemented a bundle aimed at reducing fluoroquinolone usage beginning in June 2017. The components of this bundle included suppression of fluoroquinolone susceptibility in *Enterobacteriaceae* isolates, removal of fluoroquinolones as first line options on order sets, and introduction of a respiratory specific antibioticogram.

**Methods:** The objective was to evaluate the impact of the stewardship bundle on fluoroquinolone utilization. The primary outcome was ciprofloxacin and levofloxacin usage in days of therapy per 1000 inpatient days (DOT) collected at monthly intervals for 24 months before and after intervention. Overall antimicrobial usage in DOT served as a control variable. The secondary outcomes were *E. coli* and *P. aeruginosa* susceptibility to ciprofloxacin measured at the same time points as the primary outcome. An interrupted time-series analysis using segmented regression was performed for all variables.

**Results:** The mean monthly levofloxacin usage was reduced from 14.1 (95% CI, 12.7 - 15.4) to 8.4 (95% CI, 7.6 - 9.3) DOT. The mean monthly ciprofloxacin usage was reduced from 26.9 (95% CI, 24.6 - 29.4) to 15.8 (95% CI, 14.0 - 17.5) DOT. The trend in levofloxacin usage was reduced (p=0.035), while a pre-existing downward trend in ciprofloxacin usage was unchanged (p>NS). Overall antimicrobial usage increased, likely due to increasing hematologic/oncology populations during the study period. There were no differences in *E. coli* or *P. aeruginosa* susceptibility observed.

**Conclusion:** This antimicrobial stewardship bundle may be a useful intervention to reduce fluoroquinolone usage. The bundle may be of particular utility in reducing levofloxacin usage, as our results demonstrated a change in both its usage and trend in usage.

**Disclosures:** All Authors: No reported disclosures

78. Outcomes and adherence to institutional empiric therapy guidelines for the treatment of cystitis in ambulatory male veterans

Selena N. Pham, PharmD1; Chester Ashong, PharmD2; AADHIVP3; Maria C. Rodriguez-Barradas, MD1; Andrew Hunter, PharmD, BCPS (AQ-ID)2; 1Michael E. DeBakey VA Medical Center, Houston, Texas; 2Michael E. DeBakey VA Medical Center and Baylor College of Medicine, Houston, TX

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

**Background:** Guidelines provide primary literature demonstrating efficacy and safety of cystitis treatment in female patients, but not males. Increased antimicrobial resistance of urinary tract infection (UTI) pathogens to first line antibiotics are well-documented. In 2017, a change in institutional guidelines was made to recommend nitrofurantoin (NF) or cefpodoxime (CPD) as first line antibiotics for cystitis in ambulatory male veterans with a growing list of adverse effects, such as *Clostridium difficile* infection, arrhythmias, central nervous system effects, tendon rupture and aortic aneurysm. Due to increasing concerns regarding adverse events and growing resistance, the antimicrobial stewardship team at Wesley Healthcare implemented a bundle aimed at reducing fluoroquinolone usage beginning in June 2017. The components of this bundle included suppression of fluoroquinolone susceptibility in *Enterobacteriaceae* isolates, removal of fluoroquinolones as first line options on order sets, and introduction of a respiratory specific antibioticogram.

**Methods:** The objective was to evaluate the impact of the stewardship bundle on fluoroquinolone utilization. The primary outcome was ciprofloxacin and levofloxacin usage in days of therapy per 1000 inpatient days (DOT) collected at monthly intervals for 24 months before and after intervention. Overall antimicrobial usage in DOT served as a control variable. The secondary outcomes were *E. coli* and *P. aeruginosa* susceptibility to ciprofloxacin measured at the same time points as the primary outcome. An interrupted time-series analysis using segmented regression was performed for all variables.

**Results:** The mean monthly levofloxacin usage was reduced from 14.1 (95% CI, 12.7 - 15.4) to 8.4 (95% CI, 7.6 - 9.3) DOT. The mean monthly ciprofloxacin usage was reduced from 26.9 (95% CI, 24.6 - 29.4) to 15.8 (95% CI, 14.0 - 17.5) DOT. The trend in levofloxacin usage was reduced (p=0.035), while a pre-existing downward trend in ciprofloxacin usage was unchanged (p>NS). Overall antimicrobial usage increased, likely due to increasing hematologic/oncology populations during the study period. There were no differences in *E. coli* or *P. aeruginosa* susceptibility observed.

**Conclusion:** This antimicrobial stewardship bundle may be a useful intervention to reduce fluoroquinolone usage. The bundle may be of particular utility in reducing levofloxacin usage, as our results demonstrated a change in both its usage and trend in usage.

**Disclosures:** All Authors: No reported disclosures
distributed between the two groups although the CPD group had higher serum creatinine compared to the NF group (p = 0.05). Nine patients (12%) in the NF group versus 13 patients (17.3%) in the CPD group returned to ED or PACT within 30 days (p=0.36). Inappropriate dosing was seen in 13 patients (17.3%) in the NF group vs. 2 patients (2.7%) in the CPD group (p = 0.005) and 44 patients (58.7%) in the NF group vs. 37 patients (49.3%) in the CPD group who received an inappropriate duration of treatment (p = 0.25). None of the patients reported AE associated with antibiotic use.

**Conclusion:** Treatment success rate of NF and CPD (88% and 82.7%, respectively) suggests that these agents might be effective first line antibiotics for cystitis in males. High rate of inappropriate long duration of treatment indicates the need for staff education and prospective audit and feedback for outpatient stewardship interventions.

**Disclosures:** All Authors: No reported disclosures

79. Outcomes Associated with the Utilization of the Methicillin-Resistant Staphylococcus aureus (MRSA) Nasal Polymerase Chain Reaction (PCR) Assay to De-escalate Vancomycin Therapy in Patients with Suspected Pneumonia at a Rural Community Hospital

Raghavendra Tirupathi, MD, FACP, Mackenzie Kyner, PharmD, Jaret Logsdon, PharmD, BCIDP, WellSpan Health, Chambersburg, Pennsylvania

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

**Background:** Vancomycin is often added to standard inpatient community acquired pneumonia therapy, but the incidence of MRSA pneumonia is relatively low. The MRSA nasal PCR assay is used to detect if a patient’s nares are colonized with MRSA. Studies have found that this test has an excellent negative predictive value at ruling out MRSA pneumonia. In practice, there is reluctance to utilize this data to de-escalate vancomycin, possibly because little data exists investigating clinical outcomes associated with this intervention. The purpose of this study was to evaluate how this assay, in combination with antimicrobial stewardship, impacts de-escalation of vancomycin and consequently, length of stay, days of therapy, readmission, and mortality.

**Methods:** We performed a cohort study of patients who received vancomycin for pneumonia during the period 2017–2019. In July 2018, we implemented a pharmacy-led process to de-escalate vancomycin in pneumonia patients based on the results of the nasal MRSA PCR. Patient were excluded if they had concomitant skin/skin structure infection, osteomyelitis, were transferred to another facility, signed out against medical advice, or required mechanical ventilation. Data on patient characteristics, disease severity, length of stay, days of therapy, readmission, and mortality were compared between the groups.

**Results:** 101 and 107 patients were included in the before and after group, respectively. The average length of stay was 5.31 (before group) vs 4.33 days (after group), resulting in a 0.98 day decrease (p=0.0095). Days of therapy was 3.16 (before group) vs 1.96 days (after group), resulting in a 1.2 day reduction (p<0.0001). 30-day mortality was significantly higher in the before group (19.8%) than the after group (9.3%) (RR 0.47, 95% CI 0.23–0.96). 30-day readmission rate was similar between the two groups (21.8% vs 19.6%) (p=0.7). Days of therapy and consequently, length of stay, days of therapy, readmission, and mortality were compared.

**Figure 1:** Patient disposition with reasons for exclusion from study

**Figure 2:** Length of Stay and Duration of therapy reductions between the pre- and post-intervention groups.

**Conclusion:** Use of the MRSA nasal PCR to deescalate vancomycin therapy appears to significantly reduce length of stay and days of vancomycin therapy. Use of this assay did not negatively impact readmission but, may have a positive impact on mortality. Further research is needed to determine the impact of this intervention on length of stay and mortality.

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80. Pharmacoeconomic Analysis Comparing the Empiric Utilization of Cefepime Versus Piperacillin/tazobactam

Kelsey Olmack, PharmD, D. Collins, PharmD, MS, BCIDP, FASHP; Mackenzie Kyner, PharmD, BCIDP, FASHP; Raghavendra Tirupathi, MD, FACP, WellSpan Health, Chambersburg, Pennsylvania

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

**Background:** In the hospital setting, cefepime (CFP) and piperacillin/tazobactam (PTZ) are among the most commonly utilized antipseudomonal agents in the empiric treatment of nosocomial and healthcare-associated infections. Institutional preference of CFP or PTZ as the preferred antipseudomonal antibiotic varies. Recent literature suggests each may be associated with increased rates of harmful adverse effects including *Clostridiodes difficile* infection (CDI) and acute kidney injury (AKI). The objective of this study is to perform a pharmacoeconomic analysis comparing CFP versus PTZ for empiric antibiotic treatment in patients where *Pseudomonas aeruginosa* is a concern.

**Methods:** We performed a cost-utility analysis comparing CFP and PTZ for empiric utilization in the hospital setting by creating a decision analytic model from the available literature.