**Background.** Antimicrobial stewardship programs (ASPs) can reduce the incidence of hospital-onset *Clostridioides difficile* infection (HO-CDI) by limiting unnecessary exposure to high-risk antibiotics, including fluoroquinolones (FQ). However, restriction policies are challenging to implement and sustain. In a mixed methods study, we explored the barriers, facilitators and efficacy of an FQ restriction policy to reduce HO-CDIs among high-risk patients.

**Methods.** Our ASP instituted a pilot FQ restriction policy in our ICU and solid-organ transplant wards. We evaluated 24 months of pre- and post-intervention data, including: FQ and alternative agent use, length of stay (LOS), readmission rate, mortality and HO-CDI. We conducted 12 semi-structured interviews with front-line providers, applying the Systems Engineering Initiative for Patient Safety framework to examine perceptions of FQ use, prescribing indications, perceived relationships between FQ use and HO-CDI, and barriers imposed by FQ restrictions. Time-series analysis was performed to evaluate FQ and HO-CDI data.

**Results.** FQ use decreased from an average of 111.6 days of therapy (DOT) per 1,000 patient-days pre-intervention to 19.8 DOT/1,000 patient-days (P < 0.0001). Average readmission rate, LOS on pilot units, total antibiotic use, and use of cefepime decreased after FQ restriction. Conversely, use of ceftriaxone, aminoglycosides and piperacillin–tazobactam all increased. The average HO-CDI rate was significantly lower post-intervention, although time series analysis showed a post-intervention increase in the trend in infection rate compared with the pre-intervention trend. Qualitative analysis of interviews revealed β-lactam allergy and pending discharge were barriers to FQ restriction; a patient’s history of CDI and pharmacist involvement in antimicrobial decision-making facilitated FQ restriction.

**Conclusion.** An FQ restriction policy significantly decreased FQ use without adversely affecting readmission rate, LOS or mortality. Knowledge of barriers and facilitators to FQ use optimization among front-line staff can inform future successful ASP interventions. Further investigation into the effect of FQ restriction on HO-CDI is needed.

**Disclosures.** Alexander Lepak, MD, Paratek Pharmaceuticals: Research Grant; Tetraphase Pharmaceuticals: Research Grant.

| Physician: Internal Medicine – Smith, John | Cooperative Physician’s Average Rate of Antibiotic Prescribing for URI OVs ’17 ’18 | Your Average Rate of Antibiotic Prescribing for URI OVs | Total # of OV associated with URIs | Total # of OV associated with URI with ABX RX |
|------------------------------------------|-----------------------------------------------|-----------------------------------------------|---------------------------------|-----------------------------------------------|
| Smith, John                             | 41.03%                                         | 25.00%                                         | 100                             | 25%                                           |

**Physician Rate of URI Antibiotic Prescribing Score Card: 2017-2018**

**Pre vs. Post-Intervention: Percent of Office Visits Resulting in an Antibiotic**

| Pre-Intervention 2017-2018 | Post-Intervention 2018-2019 | % Change | P-value |
|----------------------------|-----------------------------|----------|---------|
| All URI-Associated Diagnosis Codes | 41.03% | 35.85% | -5.18% | <0.001 |
| Bronchitis | 40.44% | 36.54% | -3.90% | <0.001 |
| Inflammation | 14.45% | 8.98% | -5.47% | 0.0414 |
| Pharyngitis | 40.30% | 33.62% | -6.68% | 0.006 |

*Includes bronchitis, sore throat and tonsils/aden given P values

**Disclosures.** All authors: No reported disclosures.

2066. Development and Implementation of Prescribing Algorithms for Antibiotics on Discharge from the Emergency Department

Kristin Stoll, PharmD; Erik Feltz, PharmD, BCPS; Steven C. Ebert, PharmD, FCCP; FIDSA; UnityPoint Health – Meriter Hospital, Madison, Wisconsin

**Session:** 238. Antibiotic stewardship: Non-Inpatient Settings

**Saturday, October 5, 2019: 12:15 PM**

**Background.** In the emergency department (ED), rapid decision-making and frequent distractions are often challenging to implementing effective antimicrobial stewardship. The purpose of this project is to improve guideline adherence and promote optimal use of outpatient antibiotic therapy for community-acquired infections.

**Methods.** Prescribing algorithms were developed to integrate clinical practice guideline recommendations with emergency department-specific antibiogram data. Algorithms for treating community-acquired pneumonia (CAP), skin and soft-tissue infections (SSTI), and urinary tract infections (UTI) were made available throughout the ED. Outcomes were evaluated through a chart review of patients prescribed empirical outpatient antibiotics for CAP, SSTI, or UTI by ED providers. Patients were excluded if they were <18 years old, pregnant, or taking antibiotics prior to arrival. The primary outcome was rate of adherence to clinical practice guidelines, defined as the selection of an appropriate antibiotic agent, dose, and duration of therapy for each patient discharged. Secondary outcomes included the rate of fluoroquinolone use, as well as all-cause 30-day returns to the ED or urgent care.

**Results.** When compared with patients discharged from the ED prior to algorithm implementation (N = 325), the post-implementation group (N = 172) received more antibiotic prescriptions that were completely guideline adherent (57.0% vs. 11.7%, P < 0.01). Post-implementation discharge orders demonstrated improvement in the selection of an appropriate agent (86.6% vs. 45.5%, P = 0.01), dose (89.0% vs. 77.2%, P < 0.01), and duration of therapy (63.4% vs. 39.1%, P < 0.01). Additionally, fluoroquinolone prescribing rates in this population were reduced (2.9% vs. 12.3%, P < 0.01). In the post-implementation patients who presented at least 30 days prior to analysis (N = 124), a reduction in cause 30-day returns to the ED or urgent care was observed (12.9% vs. 21.5%, P < 0.05).

**Conclusion.** Implementation of antibiotic prescribing algorithms improved guideline adherence in the outpatient treatment of CAP, SSTI, and UTI. By developing prescribing algorithms, pharmacists may reduce the unnecessary use of broad-spectrum antibiotics and prevent patient returns to the ED.

**Disclosures.** All authors: No reported disclosures.

2067. Improving Outpatient Antimicrobial Prescribing for Respiratory Tract Infections

Lauren S. Dutcher, MD; Kathleen Degnan, MD; Ebbing Lautenchbach, MD, MPH, MSCF; David A. Pegaes, MD; Michael Z. David, MD, PhD; Valerie Cluzet, MD; Leigh Cressman, MA; Warren Bliker, PhD; Pam C. Tolomeo, MPH, CCPR; Afza A. Ady-Gyamfi, BS; Keith W. Hamilton, MD, PhD; University of Pennsylvania, Philadelphia, Pennsylvania; 2Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania; 3Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania; 4Health Quest, Poughkeepsie, New York; 5University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania; 6Medical College of Wisconsin, Wauwatosa, Wisconsin

**Session:** 239. Antibiotic stewardship: Non-Inpatient Settings

**Saturday, October 5, 2019: 12:15 PM**

**Background.** In 2015, the CDC established the National Action Plan for Combating Antibiotic-Resistant Bacteria, with the goal of reducing inappropriate outpatient antibiotic use by 50% by 2020. Upper respiratory infections, (URIs) account for 325.6 million outpatient antibiotics for CAP, SSTI, or UTI by ED providers. Patients were excluded if they were <18 years old, pregnant, or taking antibiotics prior to arrival. The primary outcome was rate of adherence to clinical practice guidelines, defined as the selection of an appropriate antibiotic agent, dose, and duration of therapy for each patient discharged. Secondary outcomes included the rate of fluoroquinolone use, as well as all-cause 30-day returns to the ED or urgent care.

**Results.** When compared with patients discharged from the ED prior to algorithm implementation (N = 325), the post-implementation group (N = 172) received more antibiotic prescriptions that were completely guideline adherent (57.0% vs. 11.7%, P < 0.01). Post-implementation discharge orders demonstrated improvement in the selection of an appropriate agent (86.6% vs. 45.5%, P = 0.01), dose (89.0% vs. 77.2%, P < 0.01), and duration of therapy (63.4% vs. 39.1%, P < 0.01). Additionally, fluoroquinolone prescribing rates in this population were reduced (2.9% vs. 12.3%, P < 0.01). In the post-implementation patients who presented at least 30 days prior to analysis (N = 124), a reduction in cause 30-day returns to the ED or urgent care was observed (12.9% vs. 21.5%, P < 0.05).

**Conclusion.** Implementation of antibiotic prescribing algorithms improved guideline adherence in the outpatient treatment of CAP, SSTI, and UTI. By developing prescribing algorithms, pharmacists may reduce the unnecessary use of broad-spectrum antibiotics and prevent patient returns to the ED.

**Disclosures.** All authors: No reported disclosures.

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