Table 1: Fluoroquinolone (FQ) Prescribing Practices by Prescriber Specialties in Washington State
Medicare Part D 2021 Data

Prescriber Specialty	FQ Prescribers, n (% of Total Providers in Each Specialty)	ABX Prescribers, n (% of Total Providers in Each Specialty)	Proportion of FQ Claims by Specialty (n claims)
Urology	160 (72.4)	203 (91.86)	18.38% (8299)
Ophthalmology	68 (17.71)	115 (29.95)	18.19% (8216)
Family Practice	326 (9.26)	2620 (74.39)	15.37% (6942)
Internal Medicine	248 (12.8)	1452 (74.96)	13.71% (6192)
Nurse Practitioner	190 (4.92)	1976 (51.2)	9.19% (4149)
Physician Assistant	155 (5.49)	1814 (64.26)	7.52% (3398)
Otolaryngology	85 (35.27)	189 (78.42)	4.85% (2191)
Emergency Medicine	38 (4.2)	849 (93.81)	1.73% (782)
Infectious Disease	31 (29.25)	95 (89.62)	1.71% (770)
Optometry	16 (2.4)	66 (9.88)	1.66% (749)

Note: IV Formulations of FQs were Excluded

as the highest prescribers of FQs to Medicare Part D beneficiaries, closely followed by ophthalmologists and family practitioners (Table 1). Notably, 72.4% of urologists prescribed FQs, while only 12.4% of family practitioners did so in 2021. Trend analysis indicated that the average FQ claims per 1,000 beneficiaries for urologists decreased from 251 claims per 1,000 beneficiaries (SD = 177.98) in 2013 to 130 claims per 1,000 beneficiaries (SD = 122.50) in 2021 (Figure 1A). In contrast, the only specialty types that had positive trends in average FQ claims per 1,000 beneficiaries from 2013 to 2021 included ophthalmologists, optometrists, and otolaryngologists (Figure 1A). **Conclusion:** Throughout the years leading up to 2021, most prescriber specialties contributing high volumes of FQ claims experienced a decline in FQ prescriptions. The positive trend noted amongst ophthalmologists, optometrists, and otolaryngologists could be due to the limited ability to differentiate between oral & topical FQ formulations within the dataset. These findings underscore the importance of understanding specialist prescribing behaviors and partnering with them to formulate tailored antibiotic stewardship guidance. By doing so, we can further promote patient safety and well-being in the context of FQ usage. Public health departments can promote more holistic antibiotic stewardship interventions and better patient safety outcomes with FQs.

Ambulatory Fluoroquinolone Use in the United States 2015–2019 Outpatient Fluoroquinolone Prescription Fills.
Disclosure: Erica Stohs: Contracted research - Merck; Contracted research – bioMerieux

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s34–s35
doi:10.1017/ash.2024.144

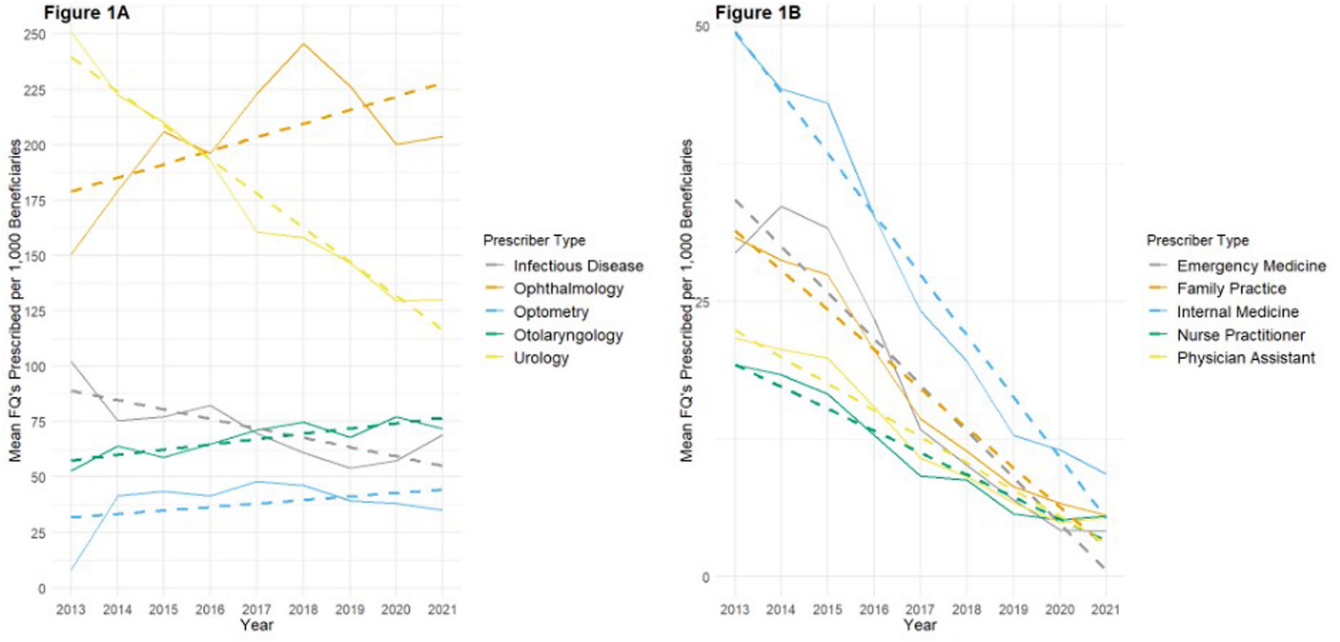
Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Antibiotic Stewardship

Opportunity for Early De-escalation in Enterobacterales Bacteremia with Rapid Blood Culture Identification Technology

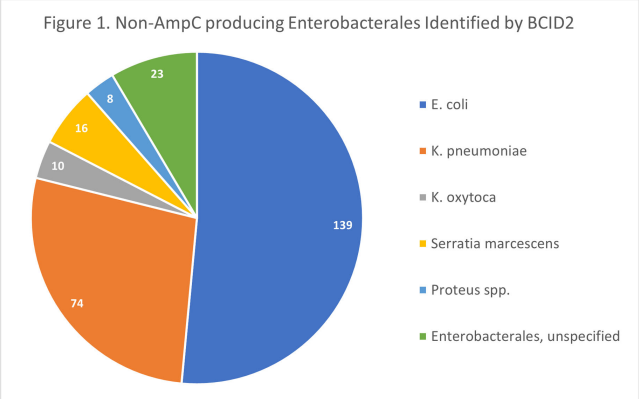
Erin Deja, VCU Health; Jihye Kim, VCU Health; Adam Greenfield, VCU Medical Center; Kimberly Lee, VCU Medical Center; Melissa Godwin, Vcuhs; Alexandra Bryson, Virginia Commonwealth University; Sangeeta Sastry, Virginia Commonwealth University and Christopher Doern, Virginia Commonwealth University

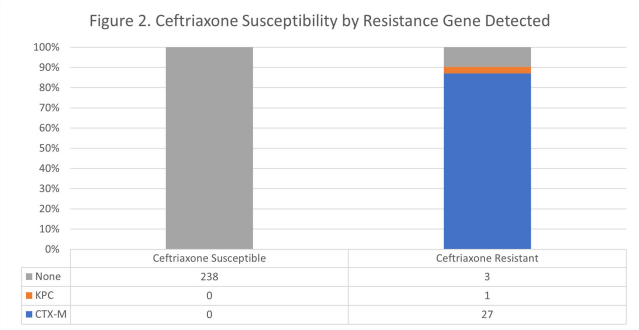
Background: The BioFire FilmArray Blood Culture Identification 2 (BCID2) Panel is used to identify organisms present in positive blood cultures within hours of detection at Virginia Commonwealth University Health System (VCUHS). BCID2 is also able to detect common resistance mechanisms including CTX-M, the most common extended-spectrum beta-lactamase (ESBL) in the United States, and several carbapenemases. The Antimicrobial Stewardship Program (ASP) at VCUHS established optimal treatment recommendations for each organism identified by BCID2 based on the detection of a resistance mechanism and local resistance patterns. The recommendation for the majority of Enterobacterales without a detected resistance mechanism is ceftriaxone. However, providers are often reluctant to de-escalate antibiotics without confirmed susceptibility testing, as there may be other mechanisms of antibiotic resistance in Gram-negative organisms. The objective of this evaluation was to measure the degree of congruence between BCID2 resistance mechanism detection and susceptibility testing by disk diffusion, and to validate the adequacy of

Figure 1: Mean Fluoroquinolone (FQ) Prescribing Rates of Specialties in Washington State (2013-2021)



Notes: Dashed Lines Represent General Linear Trends; Figure 1A and 1B Have Different Scaling





the VCUHS ASP BCID2 treatment recommendations for Enterobacterales bacteremia. **Methods:** Patients with positive Enterobacterales BCID2 results from March 12 to June 19, 2023 were retrospectively identified. Organisms identified by BCID2 that were considered high-risk for clinically significant AmpC production due to an inducible AmpC gene (i.e., K. aerogenes, E. cloacae complex) were excluded. **Results:** A total of 270 results were included. The most commonly identified organism was E. coli (n = 139, 51.5%), followed by K. pneumoniae (n = 74, 27.4%). There were 27 (10%) isolates positive for CTX-M and 1 (0.4%) isolate positive for KPC. All CTX-M isolates were ceftriaxone resistant, and the KPC isolate was meropenem resistant. The remaining 242 isolates were negative for all resistance markers detected by BCID2. Of these, only 3 (1.2%) were resistant to ceftriaxone and notably, 8 (3.3%) were resistant to piperacillin/tazobactam. Overall, BCID2 CTX-M detection was 90% sensitive and 100% specific for predicting ceftriaxone resistance in Enterobacterales. **Conclusion:** CTX-M detection by BCID2 is highly sensitive and specific for predicting ceftriaxone resistance in Enterobacterales. CTX-M negative isolates were more often susceptible to ceftriaxone than to piperacillin/tazobactam, which is commonly used as empiric therapy for Gram-negative organisms at our institution. This highlights an excellent opportunity for safe and effective early de-escalation of antibiotics for treatment of Enterobacterales bacteremia.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s35–s36
doi:10.1017/ash.2024.145

Presentation Type:
Poster Presentation - Poster Presentation
Subject Category: Antibiotic Stewardship

Antibiotic Prescribing Practices on Hospital Discharge for Management of Urinary Tract Infections: A Single Center Study

Thomas Erwes, UConn Health Department of Infectious Diseases; Melissa Colaluca, The University of Connecticut; Ajshe Zulfi, University of Connecticut School of Medicine; Dora Wiskirchen, Saint Francis Hospital and Medical Center and Jessica Abrantes-Figueiredo, Saint Francis Hospital and Medical Center

Background: Appropriate antibiotic use has been described as one of the key strategies in tackling antibiotic resistance. Although the majority of antimicrobial therapy is completed following discharge, there lacks clear guidance in addressing antibiotic stewardship in the outpatient setting. Particularly, broader coverage as well as longer durations of therapy are often encountered following hospitalization. In our study we examine the various antibiotic prescribing practices on hospital discharge for management of urinary tract infections (UTI). **Methods:** We conducted a single-center, retrospective observational chart review of patients discharged from St. Francis Hospital and Medical Center in Hartford between May and July 2022. Medical records were reviewed for patients who were prescribed antibiotic therapy for management of UTI and met inclusion criteria. Variables of interest included type of UTI treated, antibiotic used, duration of antibiotics during and following hospitalization, fluoroquinolone use, as well reported adverse events. Total duration of therapy was defined as days on susceptible antimicrobials with appropriate source control. **Results:** A total of 84 patients met inclusion criteria. 44 received treatment for simple UTI (sUTI) and 40 for complicated UTI (cUTI). Figure 1 shows the various organisms identified on culture. The most common antimicrobials prescribed on discharge were cefpodoxime and ciprofloxacin [figure 2]. Quinolones were prescribed in 11.4% of sUTIs and 39.1% of cUTIs on hospital discharge. Of those, only one patient had no alternative to quinolone use due to drug allergies. The mean duration of therapy for treatment of sUTI was 6.4 days total (SD 2.40) with 3.9 days outpatient (SD 1.78). The mean duration of therapy for treatment of cUTI was 10.9 days total (SD 3.62) with 6.7 days outpatient (SD 2.99). Comparison of mean durations is shown in figure 3. In 49% of all cases (including both sUTI and cUTI) patients received greater than 7 days of antimicrobial therapy.