

non-central nervous system infections were excluded. Cases comprised patients who had an FA/ME panel performed, while controls included patients without the panel. Outcomes were defined as the empiric duration of antimicrobial therapy (days) and total days of antibiotic therapy (DOT). Wilcoxon Rank Sum test and multiple linear regression models were applied to assess the relationship between the use of the FA/ME panel and study outcomes. Independent variables comprised demographics, institution type, acuity, clinical presentation, CSF values, and FA/ME panel use. Imputation was performed using multiple imputation by chained equations. **Results:** A total of 193 patients were included in our study. Seventy-one patients received the FA/ME panel (along with the CSF culture), while 122 patients received the CSF culture alone (controls). The median empiric duration of antibiotic therapy in the cases and controls were 1.71 days and 1.18 days, respectively ($p = .160$). The median DOT in the cases and controls were eight days and six days, respectively ($p = .045$). After adjusting for confounders, the FA/ME panel was not significantly associated with changes in the empiric duration of antibiotic therapy ($B = 0.18, p = .669$, Figure 1) or DOT ($B = 1.28, p = .170$, Figure 2). **Conclusion:** Providing FA/ME panel testing without active antimicrobial stewardship interventions did not result in a change in antimicrobial prescribing patterns. The difference from prior literature could be explained by the smaller sample size, limiting the power of the study. Further prospective antimicrobial stewardship efforts should focus on training providers on interpreting FA/ME panel results and providing prospective audits and feedback.

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Cefadroxil is an option for Gram-positive bone and joint infections in adults

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Background: Oral antimicrobial therapy for osteoarticular infections in adults is increasingly adopted; however, the preponderance of published data and experience with oral antibiotics involves agents such as fluoroquinolones, trimethoprim-sulfamethoxazole, and clindamycin. Data supporting the use of narrower-spectrum, stewardship-friendly oral antibiotics with favorable toxicities profiles (e.g. cefadroxil) are needed. **Methods:** We report a case series of adults who underwent surgery for monomicrobial Gram-positive osteomyelitis, native joint septic arthritis (NJS), prosthetic joint infection (PJI), or other orthopedic hardware infection at our institution from January 2019 through January 2022 and who subsequently received at least two weeks of oral cefadroxil. We excluded patients who had polymicrobial infection or curative amputation, or who received cefadroxil only as suppressive antibiotic therapy (SAT). Our primary outcome of interest was treatment success during followup, defined as freedom from death, unplanned surgery for infection, or readmission for worsening infection. **Results:** We identified 22 patients who received cefadroxil for primary treatment of osteoarticular infection. The mean age was 57.6 years, mean weight 98.6 kg, 68% were male, and none had peripheral vascular disease. Infections included PJI in 12, NJS in 8, osteomyelitis in 7, and other hardware infections in 5; some patients had multiple infectious syndromes. Methicillin-susceptible *Staphylococcus aureus* (MSSA) was the most common pathogen (73%), followed by streptococci (18%), other methicillin-susceptible staphylococci (14%), and *Cutibacterium acnes* (5%). Half of patients received 120kg who had device infections with MSSA, two of which were managed with implant retention, suggesting pharmacokinetic/pharmacodynamic factors and biofilm burden could influence treatment outcome. Limitations of this study include its small sample size, noncomparative nature, lengthy initial intravenous antibiotic

Demographics	
Age in years, mean (SD)	57.6 (16.8)
Male gender, no. (%)	15 (68)
Weight in kg, mean (SD)	98.6 (24.4)
Creatinine clearance (mL/min), mean (SD)	151.3 (55.2)
Comorbidities	
Peripheral vascular disease, no. (%)	0 (0)
Diabetes, no. (%)	0 (0)
Infection characteristics	
Anatomic location, no. (%)	
	Knee 8 (36)
	Hip 3 (14)
	Foot/Hand 5 (23)
	Other 6 (27)
Infectious syndrome, no. (%)*	
	Osteomyelitis 7 (32)
	Native joint septic arthritis 8 (36)
	Prosthetic joint infection 12 (55)
	Other orthopedic hardware infection 5 (23)
Patients with hardware infection managed with hardware retention, no. (%)	7 (32)
Causative pathogen, no. (%)*	
	Methicillin-susceptible <i>Staphylococcus aureus</i> (MSSA) 16 (73)
	Other methicillin-susceptible staphylococci 3 (14)
	Streptococci 4 (18)
	<i>Cutibacterium acnes</i> 1 (5)
Treatment characteristics	
Days of preceding antimicrobial therapy, mean (SD)	19.5 (17.5)
Patients who received <2wk antibiotics preceding switch to cefadroxil, no. (%)	11 (50)
Days of cefadroxil treatment in patients not given suppressive antibiotic therapy, mean (SD)	36 (11)
Patients who received suppressive antibiotic therapy, no. (%)	4 (18)
Outcomes	
Days of recorded followup after index surgery, mean (SD)	220 (158.4)
Patients who had followup >6mo, no. (%)	10 (45)
Deaths during followup, no. (%)	1 (5)
Unplanned surgery for infection during followup, no. (%)	3 (14)
Readmission for relapsed infection during followup, no. (%)	1 (5)
Discontinuation of cefadroxil due to adverse events, no. (%)	1 (5)

*Total is >100% as some patients had multiple concurrent diagnoses

durations, and limited durations of followup. These data suggest cefadroxil merits investigation for adult osteoarticular infection in larger comparative (and ideally, prospective randomized) studies.

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Fluoroquinolones in Focus: Unraveling Prescription Trends among Clinician Specialties in Washington State

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Background: An overall decrease of prescriptions for outpatient fluoroquinolones (FQs) following the FDA’s release of boxed warnings in 2016 was shown in a previous analysis¹. An additional study found that this decline held true when further broken down by specialty². We sought to determine which different clinician specialties in Washington State (WA) continue to prescribe FQs and if these rates are congruent with previously conducted national analyses. **Methods:** We conducted a comprehensive analysis of Medicare Part D data from 2021. We identified specialty types contributing the highest proportions of FQ claims from the total volume of claims in 2021. Subsequently, we calculated the average FQ claims per 1,000 Medicare Part D beneficiaries for each specialty. The analysis excluded providers with missing beneficiary data. All dosage formulations were included (i.e. topical & oral). We repeated this process for each year from 2021 to 2013 to assess changes in the average FQ prescription rate for each specialty over time. **Results:** Our analysis encompassed 99,250 FQ prescriptions involving 976,209 Medicare Part D beneficiaries from January 1 to December 30, 2021. Among the specialties, urologists emerged

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

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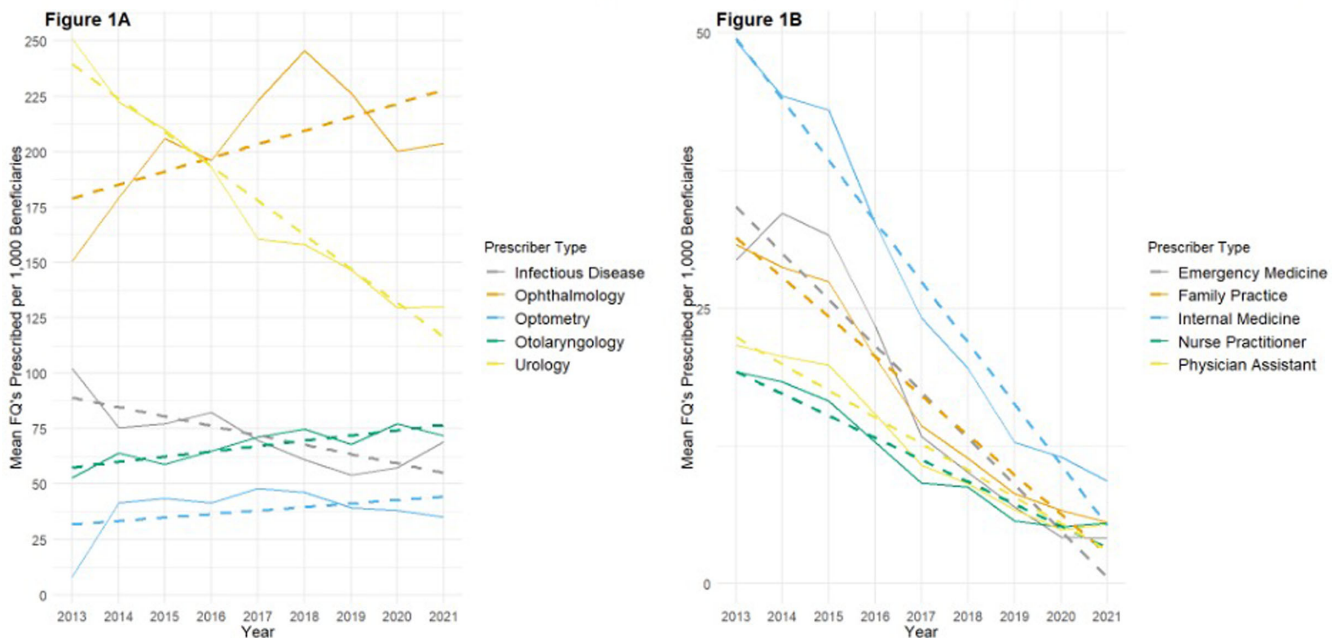
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Opportunity for Early De-escalation in Enterobacterales Bacteremia with Rapid Blood Culture Identification Technology

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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