TABLE 1- Patient`s characteristics and outcome during the control and intervention periods.

	Control period (n=78)	Intervention period (n=93)	P-value
Mean age, years	66.53 (13.13)	67.41 (14.97)	1.00
Male	34 (43.50)	41 (44.00)	0.95
Charlson comorbidity index			
0	4 (5.12)	7 (3.90)	2.63e-05
1-2	26 (33.33)	29 (31.18)	0.11
3-4	29 (37.20)	32 (34.40)	0.23
≥5	19 (24.30)	25 (32.05)	0.036
ICU admission	35 (44.87)	34 (36.55)	0.27
Time to organism identification, hours	44.55 (17.51)	4.90 (3.83)	2.2e-16
Time to effective antimicrobial therapy, hours	10.61 (24.35)	3.27 (10.31)	0.0063
Length of hospitalization, days	13.15 (9.40)	10.02 (8.63)	0.0071
Length of intensive care unit stay, days	2.84 (4.69)	1.87 (4.64)	0.071
14-day mortality	4 (5.12)	4 (4.30)	0.80
30-day mortality	5 (6.41)	7 (7.52)	0.78

Categorial data are presented as a number (proportion %). Continuous data are presented as the means (standard deviation).

to be a contaminant, polymicrobial bacteremia, or hospice admission. Verigene was performed at a central laboratory from 6 A.M. to 11 P.M. Pharmacists notified physicians of results and assisted with antibiotic modifications. Patient demographics, time to organism identification, time to effective antimicrobial therapy, and other key clinical parameters were compared. The primary outcomes were in-hospital LOS, 14-day mortality, and 30-day mortality. Secondary outcomes included time to effective antibiotic therapy and intensive care unit (ICU) LOS. **Results:** Organism identification was achieved more quickly (4.9 hours vs 44.5 hours; $P < .001$) and effective antibiotic therapy was started earlier after Verigene implementation. The mean in-hospital LOS decreased from 13.15 days to 10.02 days ($P = .0071$) after the Verigene intervention, despite a higher mean Charlson comorbidity index among the cases. Mortality was similar between groups. **Conclusions:** Rapid identification of gram-positive and gram-negative bacteremia with an antimicrobial stewardship intervention can decrease time to effective antibiotic therapy and total LOS.

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Presentation Type:
Poster Presentation

Outpatient Fluoroquinolone Medication Use Evaluation at an Academic Veterans Affairs Medical Center

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Background: Fluoroquinolones (FQs) are one of the most commonly prescribed antibiotic classes in the United States. In recent years, their widespread use has come under heightened scrutiny due potential adverse drug reactions including risks of mental health side effects, serious blood sugar disturbances, and Food and Drug Administration (FDA) black-box warnings for tendinopathy, aortic aneurysm, and dissection. These warnings prompted the Department of Veterans Affairs Pharmacy Benefits Management Service to perform a nationwide FQ utilization review, which identified our facility for potential overuse of FQs in the outpatient setting: 82.2 prescriptions per 1,000 unique patients compared to an average of 48 prescriptions per 1,000 unique patients across all VHA facilities. We then embarked on a FQ medication use evaluation (MUE). **Objective:** To determine appropriateness of FQ prescribing practices in the outpatient setting. **Methods:** The study setting was a 399-bed tertiary-care Veterans Hospital with >250 affiliated outpatient clinics in Richmond, Virginia. A retrospective chart review was conducted on a convenience sample of consecutive patients prescribed an FQ from each quarter between April 1, 2018, and March 31, 2019. Chart review included patient demographics, location, FQ used, dose, indication, appropriateness, prescriber, and documentation of patient counseling on FDA black box warnings. Appropriate treatment was defined by national and local antimicrobial therapy guidelines. **Results:** In total, 265 patients were included the study. Among them, 233 patients (88%) were men and the mean age was 68 years. Overall, 127 patients (48%) were prescribed FQs inappropriately. Primary care clinics and the emergency department (ED) had the highest frequency of inappropriate

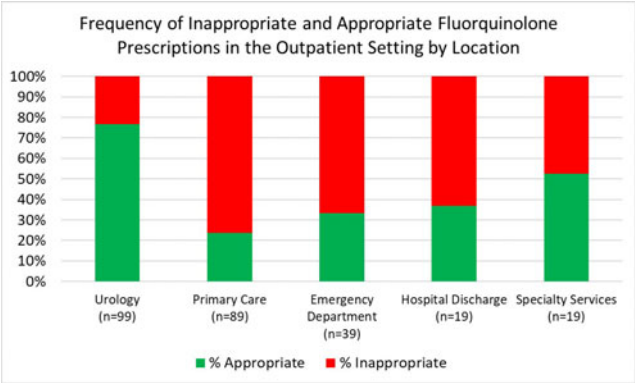

Fig. 1.

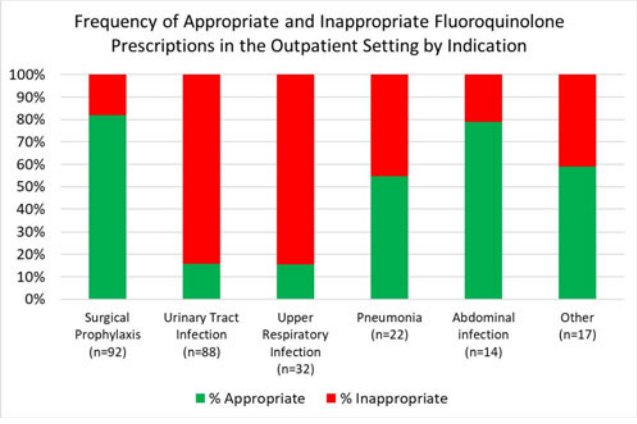

Fig. 2.

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FQ prescriptions (Fig. 1). Moreover, 92 patients (35%) were prescribed FQs for surgical prophylaxis prior to urological procedures. FQs were most commonly inappropriately prescribed for urinary tract infection (UTI, n =74, 84%) and upper respiratory tract infection (URI, n=27, 84%) (Fig. 2). Documented counseling on FDA black box warnings occurred in 82 cases (31%). **Conclusions:** In our MUE, outpatient prescribing of FQs was inappropriate nearly 50% of the time. The most commonly documented indications for FQs determined to be inappropriate included UTI and URI. Inappropriate prescriptions most commonly originated from primary care and the emergency department. Urology had the highest volume of FQ prescriptions, which were mostly appropriate surgical prophylaxis based on indication (though an alternative agent would be preferred based on local resistance rates). Documentation of patient counseling for FDA black-box warnings on FQs was uncommon.

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Parental Knowledge, Attitudes, and Practices Regarding Antibiotic Use: A Cross-Sectional Study in Bangladesh

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Background: Antibiotics play a vital role in reducing the morbidity and mortality associated with common infectious among children aged <5 years. **Objective:** We assessed the parental knowledge, attitudes, and practices regarding antibiotic use among a low-income urban population in Bangladesh. **Methods:** A cross-sectional study was conducted among the parents of 516 low-income urban children aged <5 years in Bangladesh from February 2018 to April 2019. A semi-structured questionnaire was developed and administrated to explore parental knowledge, attitudes, and practice regarding antibiotic use. A logistic regression analysis and Spearman rank-order correlation was used to compare and evaluate possible associations regarding parental KAP on antibiotic use. **Results:** The mean age of the participants was 26.65 years (SD, ±6.38) and average monthly income was US$195.00. Most respondents (437 of 516) were women. One-third of the participants had no formal education, and 64% had only 5 years of education. We categorized the knowledge, attitudes, and practice regarding antibiotic use into 3 categories: poor, moderate, and good. More than half (52%) of these parents had poor knowledge of antibiotic use, and 32% had moderate knowledge of antibiotic use. Overall, 55% of parental attitudes were moderate and 70% of antibiotic practices were moderate. However, only 16% respondents had good knowledge, 14% had good attitudes, and 14% had good practices regarding antibiotic use for their children. The study revealed that 41% of parents thought that their child could be treated with antibiotics without advice from a qualified doctor, and 71% of parents thought that a child with flu-like symptoms got better faster if antibiotics were used. Also, 54% thought that the antibiotics could be stopped as soon as the symptoms disappeared. In this study, only 40% of parents completed the full dose of antibiotics. Monthly family income ($P = .005$), father's profession ($P = .003$), and parents' education were significantly associated with antibiotic use to treat the child. **Conclusions:** Most participants' knowledge, attitude, and practices regarding rational antibiotic usage was very poor. Awareness campaigns and implementation of education on how to purchase, use, and sell antibiotics is crucial to optimum the use of antibiotics in Bangladesh.

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Passive Engineering Controls Result in Sustained 66% Reduction in Blood Culture Contamination

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Background: Blood culture testing is an important diagnostic tool in identifying the presence of microbes in the bloodstream. Tests are frequently contaminated, leading to false-positive results. Blood culture contamination can result in unnecessary antibiotic treatment, extended hospital length of stay, and patient exposure to hospital-acquired conditions. **Methods:** St. Mary's Regional Medical Center (SMRMC) in Russellville, Arkansas, struggled with blood-culture contamination rates, with an average of 6.8% from 2014 to 2018. Ongoing staff education yielded a reduction to an average of 5%. In an effort to reduce the contamination rates, our facility elected to try a novel specimen diversion device. Laboratory and emergency department (ED) staff were educated on the diversion device prior to the initiation of the trial period. Compliance with the diversion device averaged 70%–75% during the trial period. Monitoring of contaminations was added to our daily safety huddle to provide a quick turnaround time for false-positive education to specific clinical staff. **Results:** The results were significant, with a decrease in contamination rates from 4.93% to 1.66%—a 66% reduction. Improved blood culture testing has several advantages: best practice for patient care is first and

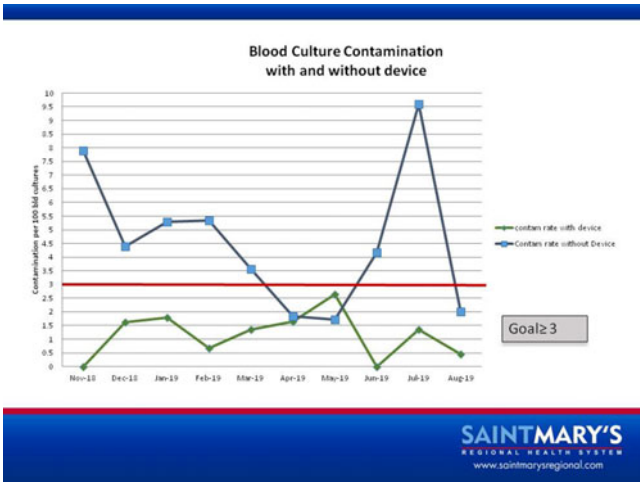

Fig. 1.

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