Table 1.

Characteristic	Received CAS N=452 (80.6%)	Did Not Receive CAS N=109 (19.4%)	Total (N=561)	P-value
Age at debridement (mean and std dev)	66.4 (11.3)	68.4 (11.8)	66.8 (11.4)	0.1072
Joint of infection				
Hip	104 (23%)	33 (7.3%)	137 (24.4%)	0.0987
Knee	310 (68.6%)	63 (13.9%)	373 (66.5%)	
Shoulder	38 (8.4%)	13 (2.9%)	51 (9.1%)	
Organism causing the PJI				
Enterococcus spp.	60 (13.3%)	18 (4%)	78 (13.9%)	0.3803
Pseudomonas aeruginosa	33 (7.3%)	7 (1.5%)	40 (7.1%)	0.7489
Cutibacterium acnes	33 (7.3%)	12 (2.7%)	45 (8%)	0.2008
Streptococcus spp.	174 (38.5%)	41 (9.1%)	215 (38.3%)	0.8652
Gram Negatives	125 (27.7%)	30 (6.6%)	155 (27.6%)	0.9779
Polymicrobial	28 (6.2%)	9 (2%)	37 (6.6%)	0.4362
Missing	51 (11.3%)	9 (2%)	60 (10.7%)	0.3588
Comorbidities				
Diabetes Mellitus	173 (38.3%)	40 (8.8%)	213 (38%)	0.7607
Rheumatoid Arthritis	19 (4.2%)	3 (0.7%)	22 (3.9%)	0.4835
Renal Failure	57 (12.6%)	11 (2.4%)	68 (12.1%)	0.4695
Dialysis	9 (2%)	5 (1.1%)	14 (2.5%)	0.1189
Moderate Liver Disease	45 (10%)	7 (1.5%)	52 (9.3%)	0.2535
Severe Liver Disease	7 (1.5%)	2 (0.4%)	9 (1.6%)	0.831
Endocarditis	2 (0.4%)	1 (0.2%)	3 (0.5%)	0.5417
BMI				
Underweight	4 (0.9%)	0 (0%)	4 (0.7%)	0.5203
Normal	75 (16.6%)	18 (4%)	93 (16.6%)	
Overweight	135 (29.9%)	32 (7.1%)	167 (29.8%)	
Obese	226 (50%)	53 (11.7%)	279 (49.7%)	
Missing	12 (2.7%)	6 (1.3%)	18 (3.2%)	
Sex				
Male	433 (95.8%)	106 (23.5%)	539 (96.1%)	0.4835
Female	19 (4.2%)	3 (0.7%)	22 (3.9%)	
Immunosuppressing conditions	3 (0.7%)	0 (0%)	3 (0.5%)	0.3937
Immunosuppressing medications	14 (3.1%)	7 (1.5%)	21 (3.7%)	0.1007
APACHE score (mean and stdev)	38.4 (14.0)	42.0 (14.2)	39.1 (14.1)	0.0473
ESR (mean and stdev)	68.3 (34.4)	66.6 (30.7)	68.0 (33.7)	0.6068
CRP (mean and stdev)	12.3 (10.4)	11.3 (8.6)	12.1 (10.1)	0.3569

hospitals from 2003 to 2017 who had a PJI caused by nonstaphylococcal bacteria, underwent DAIR, and received 4–6 weeks of antimicrobial treatment. PJI was defined by Musculoskeletal Infection Society (MSIS) 2011 criteria. CAS was defined as at least 6 months of oral antibiotics following initial treatment of the PJI. Patients were followed for 5 years after debridement. We used χ^2 tests and *t* tests were used to compare patients who received CAS with those who did not receive CAS. **Results:** Overall, 561 patients had a nonstaphylococcal PJI treated with DAIR, and 80.6% of patients received CAS. The most common organisms causing PJI were streptococci. We detected no significant differences between patients who received CAS and those who did not receive CAS, except that modified Acute Physiology and Chronic Health Evaluation (mAPACHE) scores were higher among patients who did not receive CAS (Table 1). **Conclusion:** Patients not on CAS were more severely ill (by mAPACHE) than those on CAS. Otherwise, the 2 groups were not different. This finding was contrary to our hypothesis that patients with multiple comorbidities or higher mAPACHE scores would be more likely to get CAS. A future analysis will be conducted to assess treatment failure in both groups. We hope to find a specific cohort who may benefit from CAS and hope to deimplement CAS in others who may not benefit from it.

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Subject Category: Antibiotic Stewardship

Reductions in Postdischarge *Clostridioides difficile* Infection after an Inpatient Health System Fluoroquinolone Stewardship

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Background: Effective inpatient stewardship initiatives can improve antibiotic prescribing, but impact on outcomes like *Clostridioides difficile* infections (CDIs) is less apparent. However, the effect of inpatient stewardship efforts may extend to the postdischarge setting. We evaluated whether an intervention targeting inpatient fluoroquinolone (FQ) use in a large healthcare system reduced incidence of postdischarge CDI. **Methods:** In August 2019, 4 acute-care hospitals in a large healthcare system replaced standalone FQ orders with order sets containing decision support. Order sets redirected prescribers to syndrome order sets that prioritize alternative antibiotics. Monthly patient days (PDs) and antibiotic days of therapy (DOT) administered for FQs and NHSN-defined broad-spectrum hospital-onset (BS-HO) antibiotics were calculated using patient encounter data for the 23 months before and 13 months after the intervention (COVID-19 admissions in the previous 7 months). We evaluated hospital-onset CDI (HO-CDI) per 1,000 PD (defined as any positive test after hospital day 3) and 12-week postdischarge (PDC- CDI) per 100 discharges (any positive test within healthcare system <12 weeks after discharge). Interrupted time-series analysis using generalized estimating equation models with negative binomial link function was conducted; a sensitivity analysis with Medicare case-mix index (CMI) adjustment was also performed to control for differences after start of the COVID-19 pandemic. **Results:** Among 163,117 admissions, there were 683 HO-CDIs and 1,009 PDC-CDIs. Overall, FQ DOT per 1,000 PD decreased by 21% immediately after the intervention (level change; $P < .05$) and decreased at a consistent rate throughout the entire study period (−2% per month; $P < .01$) (Fig. 1). There was a nonsignificant 5% increase in BS-HO antibiotic use immediately after intervention and a continued increase in use after the intervention (0.3% per month; $P = .37$). HO-CDI rates were stable throughout the study period, with a nonsignificant level change decrease of 10% after the intervention. In contrast, there was a reversal in the trend in PDC-CDI rates from a 0.4% per month increase in the preintervention period to a 3% per month decrease in the postintervention period ($P < .01$). Sensitivity analysis with adjustment for facility-specific CMI produced similar results but with wider confidence intervals, as did an analysis with a distinct COVID-19 time point. **Conclusion:** Our systemwide intervention using order sets with decision support reduced inpatient FQ use by 21%. The intervention did not significantly reduce HO-CDI but significantly decreased the incidence of CDI within 12 weeks after discharge. Relying on outcome measures limited to inpatient setting may not reflect the full impact of inpatient stewardship efforts and incorporating postdischarge outcomes, such as CDI, should increasingly be considered.

Figure. Interrupted Time Series Analysis of antimicrobial utilization (Fluoroquinolones, A; NHSN defined broad spectrum hospital-onset agents, B) and *C. difficile* infection rates (hospital-onset, C; 12-week post-discharge)before and after a fluoroquinolone reduction stewardship intervention across four acute care hospitals, Emory Healthcare, September 2017 – September 2020.

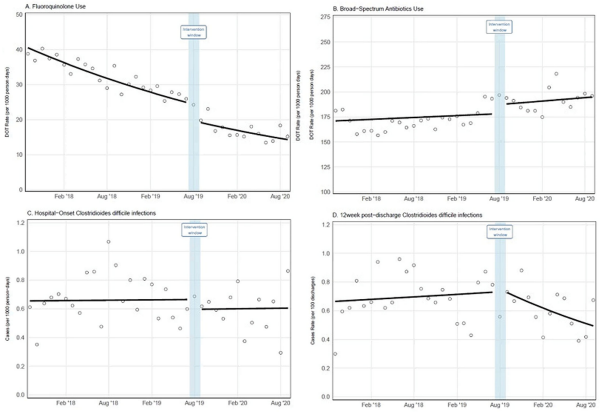

Figure 1.

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