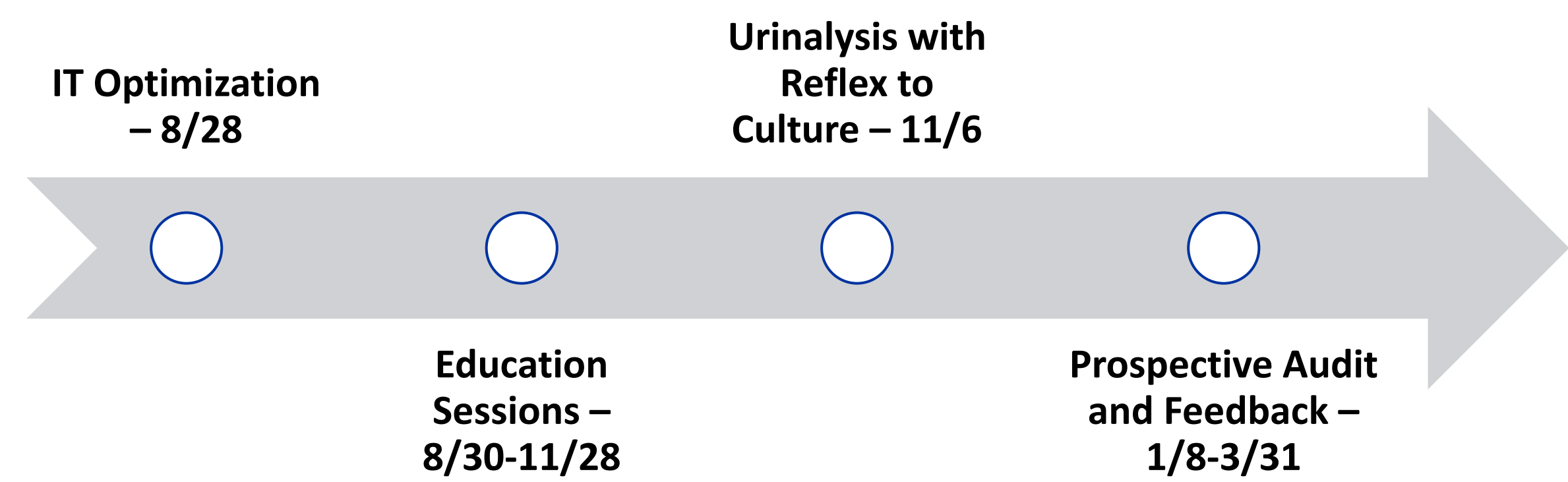


Impact of a Multistep Urinary Tract Infection-Focused Disease State Stewardship Initiative on the Treatment of Asymptomatic Urinary Presentations

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Background

- In 2023 the University of Kentucky Antimicrobial Stewardship team implemented a multistep UTI stewardship initiative:



Objective

- To evaluate the impact of multistep urinary tract infection-focused stewardship intervention on unnecessary antibiotic utilization in patients with asymptomatic urinary presentations (AUPs).

Methods

- Design:** Retrospective, single-center matched cohort study conducted at an academic health system.
- Inclusion:** Patients ≥ 18 years of age who received antimicrobial therapy with a UA and/or UCx collected for a presumed UTI between January 2023 to March 2023 and January 2024 to March 2024.
- Exclusion:** Patients who were pregnant, underwent a urologic procedure during admission, were transferred from an outside hospital on therapy for a UTI indication or did not complete UTI treatment due to death or transfer to hospice.
- Statistical Analysis:** Patients were matched based on age, Charlson comorbidity index (CCI), gender, race, and hospital. An interrupted time series analysis was performed to evaluate the trend of the primary outcome over the entire implementation timeline (Figure 1).
- Patients were classified as having an AUP if they received at least one dose of an antimicrobial and presented without institutional guideline-approved urinary symptoms.

Results

- Patients were more commonly classified as having complicated UTIs in the post group (Table 2).
- Treatment of AUPs decreased by 12% after UTI initiative implementation (Figure 2).
- While multiple guideline adherence outcomes improved post-initiative, improvement in decreasing the treatment of AUP and increasing guideline adherence is still needed (Figure 3).



A multistep UTI antimicrobial stewardship initiative improves UTI management and decreases unnecessary antimicrobial use.

Questions?



Take a picture for PI information

Figure 1: Treatment of Asymptomatic Urinary Presentations Over Time

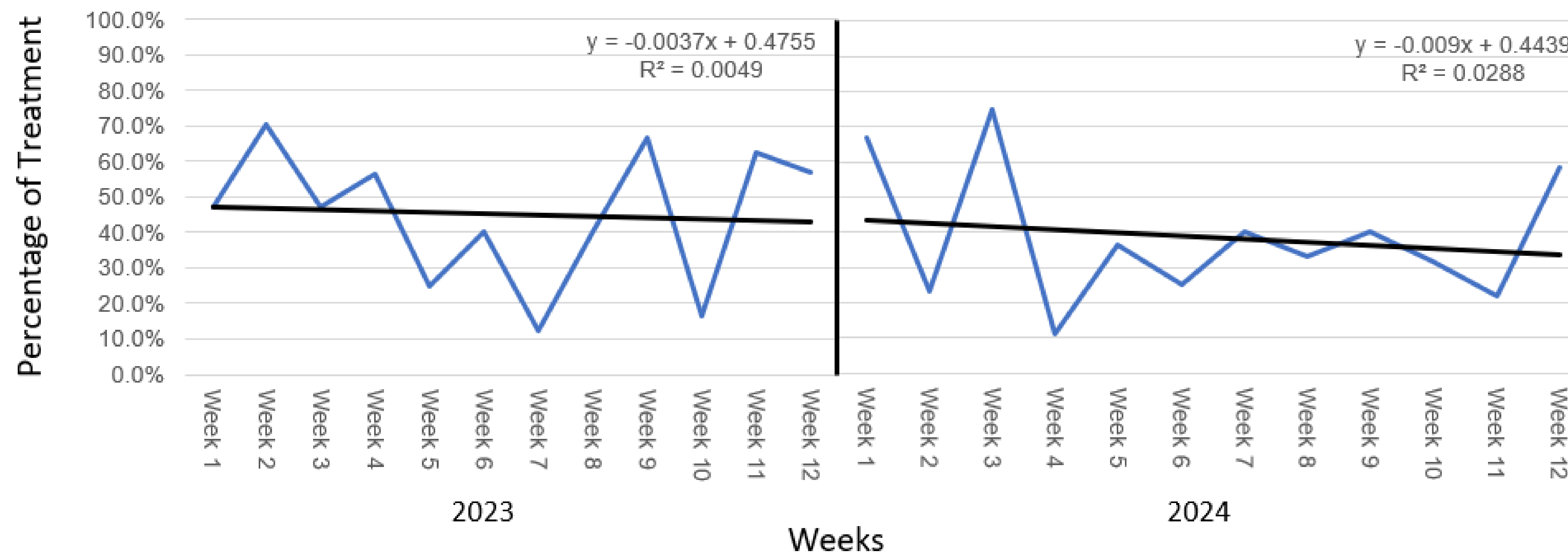


Figure 2: Outcomes

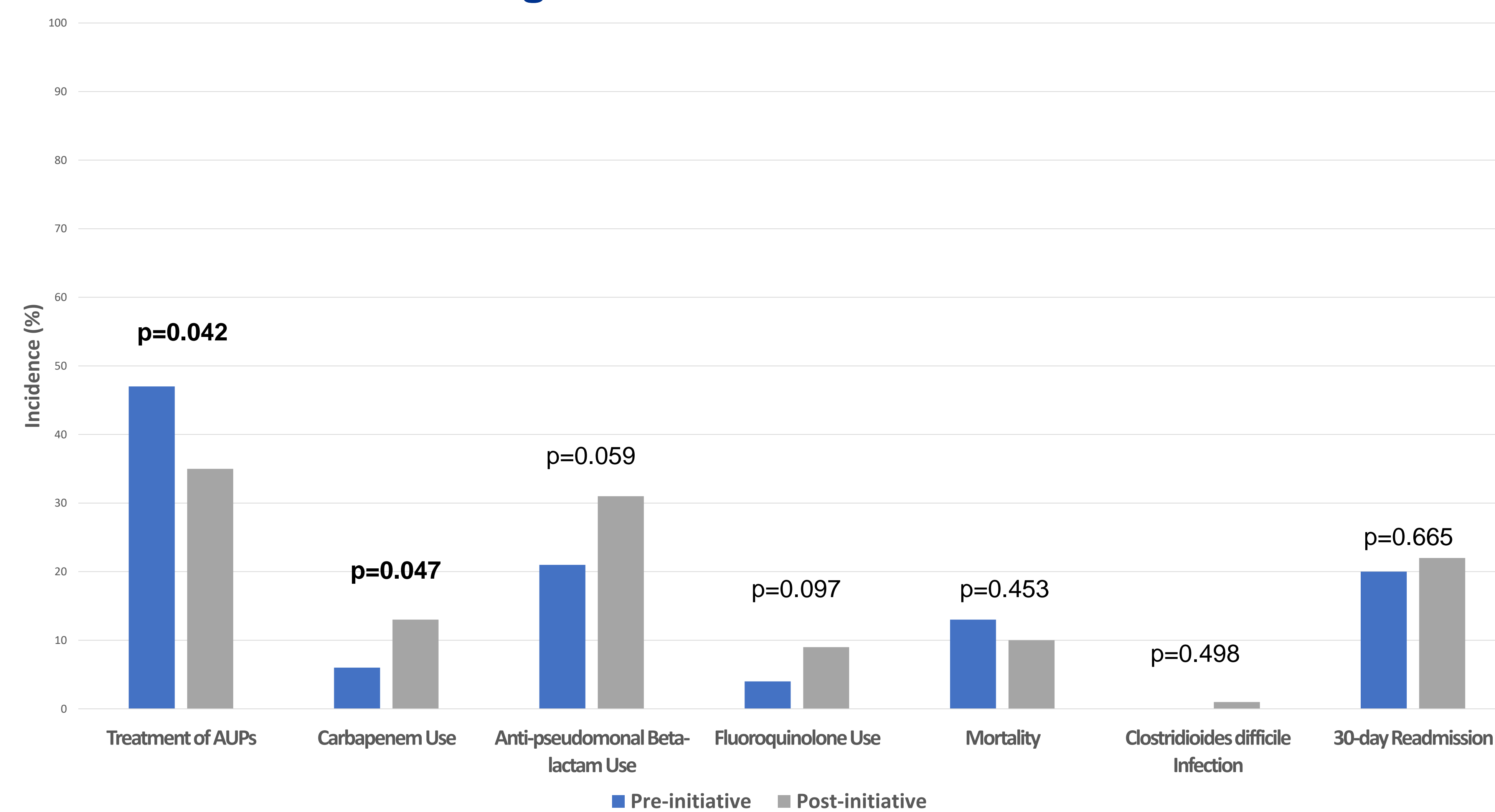


Figure 3: Guideline-Adherent Management Outcomes

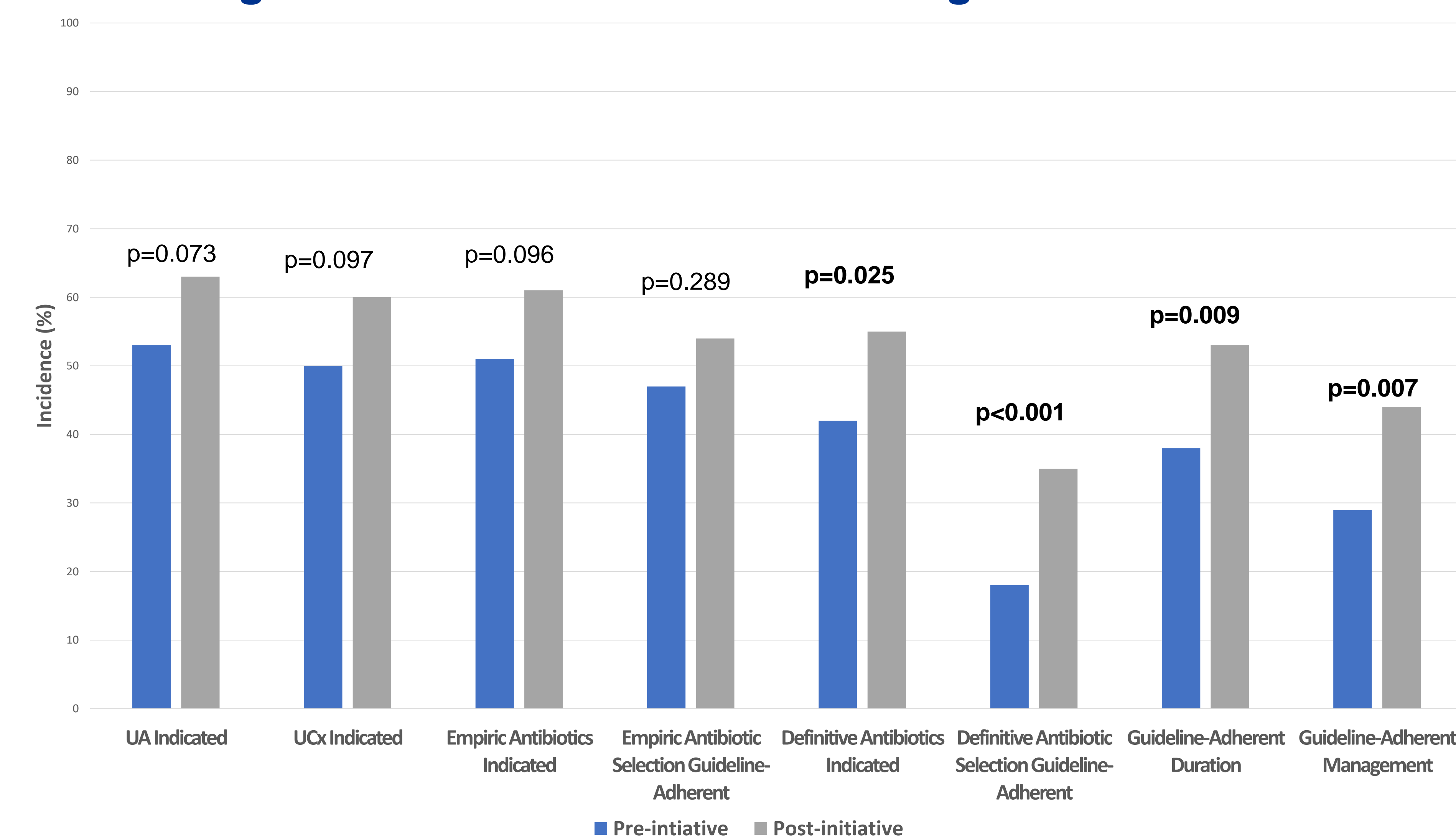


Table 1: Patient Demographics

	Pre-initiative N=144	Post-initiative N=144	p-value
Age, median (IQR)	69 (57-77)	69 (57-76)	0.853
Male gender, n (%)	48 (33.3)	48 (33.3)	1.000
Caucasian, n (%)	128 (88.9)	128 (88.9)	1.000
BMI (kg/m ²), median (IQR)	26.5 (22.3-32.4)	26.7 (22.5-33.4)	0.453
Charlson Co-Morbidity Index, mean ± SD	7.2 ± 3.9	6.6 ± 3.5	0.220

Table 2: UTI Classification

	Pre-initiative N=144	Post-initiative N=144	p-value
Uncomplicated cystitis, %	17	16	0.008
Complicated cystitis, %	13	26	
Pyelonephritis, %	15	13	
CAUTI, %	3	6	
ASB, %	16	19	
Other AUPs, %	31	16	
Other, %	6	4	