



Urine Culture Best Practice Advisory Decreases Inpatient Urine Culture Orders

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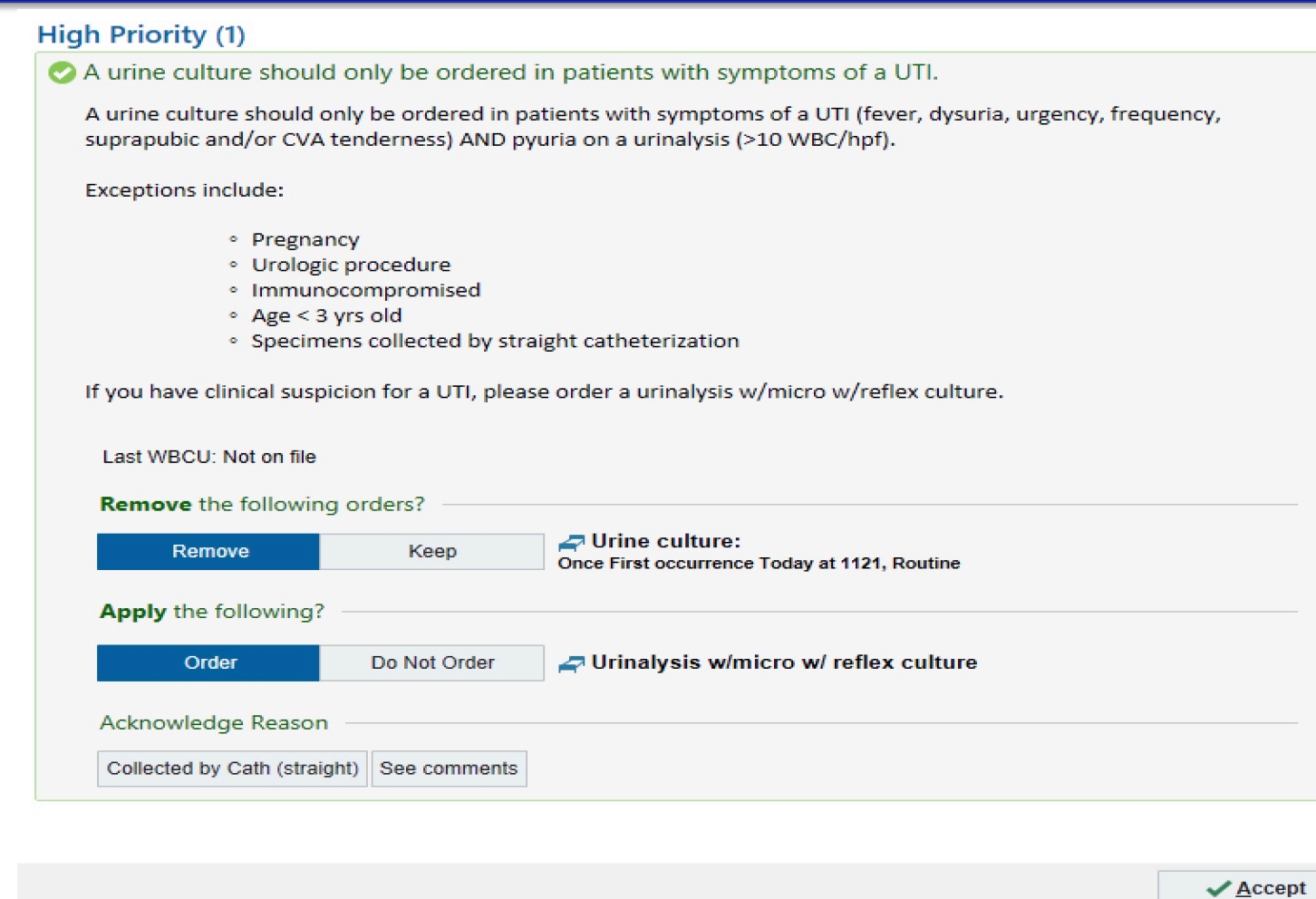
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Introduction

- Studies have revealed that antibiotic prescriptions for urinary tract infections correlate with positive urinalysis (UA) or urine culture (Ucx), rather than signs or symptoms consistent with a urinary tract infection
- Unnecessary Ucx testing increases costs and increases the chances of inappropriately prescribing antibiotics in patients without symptoms
- In attempts to decrease unnecessary Ucx orders, we developed a best practice advisory (BPA) within our computerized order entry system to reduce Ucx orders in the setting of a negative UA and encourage the use of a urinalysis with reflex to culture rather than a standalone Ucx in patients with signs and symptoms of a urinary tract infection.

Methods

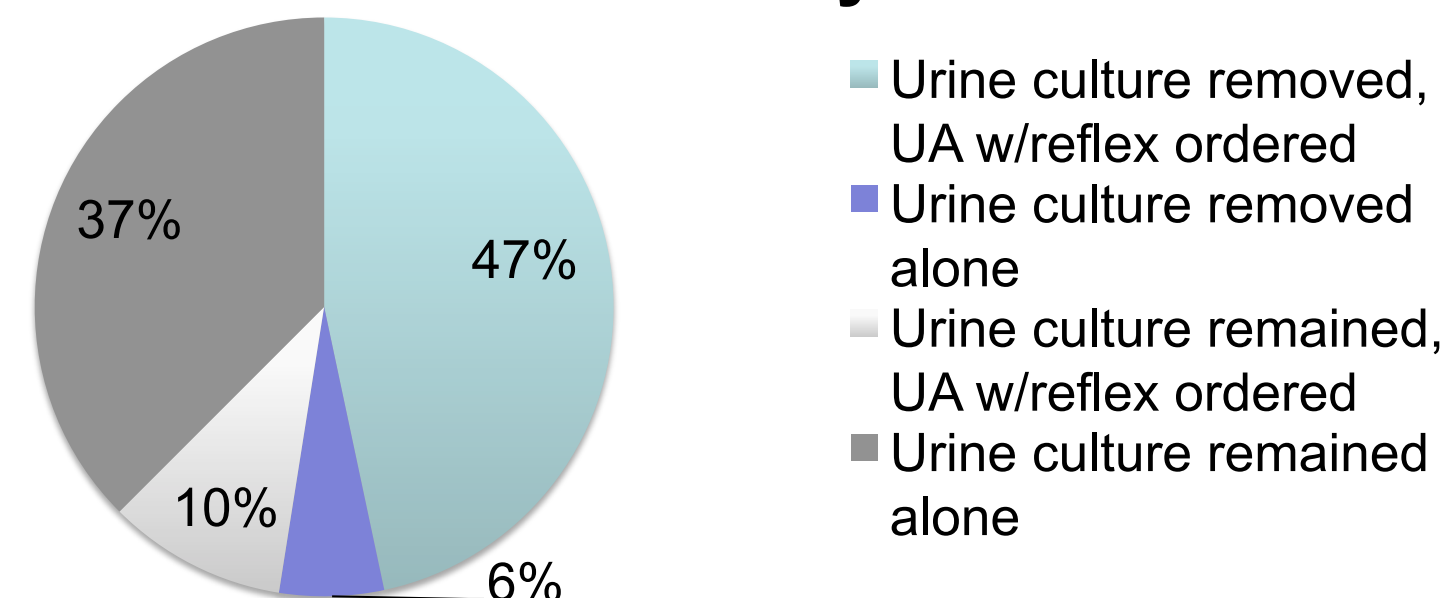
- Setting:** Level I trauma urban public safety-net hospital
- Timeline:** Data was collected 18 months pre and 4 months post implementation of the BPA
- Method:**
 - A BPA was developed within the electronic medical record (EPIC)
 - The BPA fired if a Ucx was ordered 1) without a recent UA or 2) with a negative UA within the past 24 hours (positive UA was defined as a urine leukocytes ≥ 10 WBC/HPF)
 - Excluded patients included: pregnancy, immunocompromised, recent or planned urologic procedures, age <3 or sample obtained by a straight catheterization



Results

- Provider responses to the best practice advisory:**
 - 53% of the responses to the BPA included removing the urine culture order
 - Common reasons for keeping the ordered urine culture included: Obtained by a straight catheterization, urine culture was added onto ordered UA, critically ill patient with encephalopathy, unable to report symptoms
- Urine culture orders:**
 - Post-implementation of the BPA there was a statistically significant decrease in the total urine cultures performed from 58.7/1000 patient days compared to 53.0/1000 patient days ($p= 0.02$)

Provider Responses To Best Practice Advisory

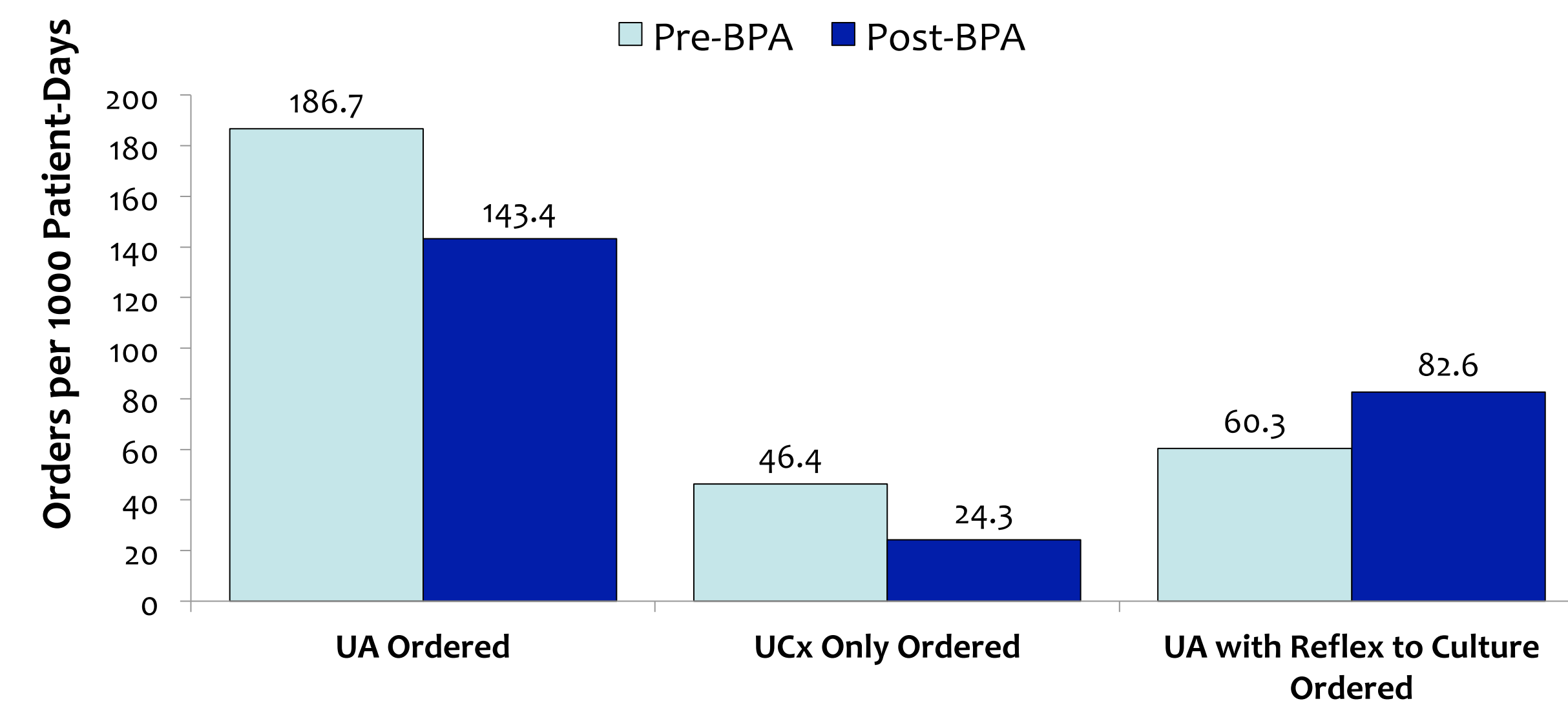


Conclusions

- Implementation of a BPA to prevent the use of standalone Ucx in favor of a UA with reflex culture reduced the total number of Ucx performed

Data

UA, UCx Orders and UA with Reflex Culture Orders



Percent Positive Urine Cultures / Performed

