



Western Maryland Health System

A Cost-Effective Implementation Reducing The Number Of Urine Cultures In An Acute Care Community Hospital

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ABSTRACT

Urinary Tract Infection:

- Localized genitourinary symptoms
- Urinary tract inflammation (pyuria)
- + Urine culture

Asymptomatic bacteriuria

- Bacteruria $\geq 10^5$ without signs/symptoms

Problem:

- A urinalysis and urine culture get processed simultaneously to avoid delay in care and identify resistant patterns
- Leads to unnecessary waste/lab utilization

Purpose of study:

- Implement a change in the electronic health record with provider education and identify cost and testing reduction

Findings:

- Reduction in about 40% in both cost/testing

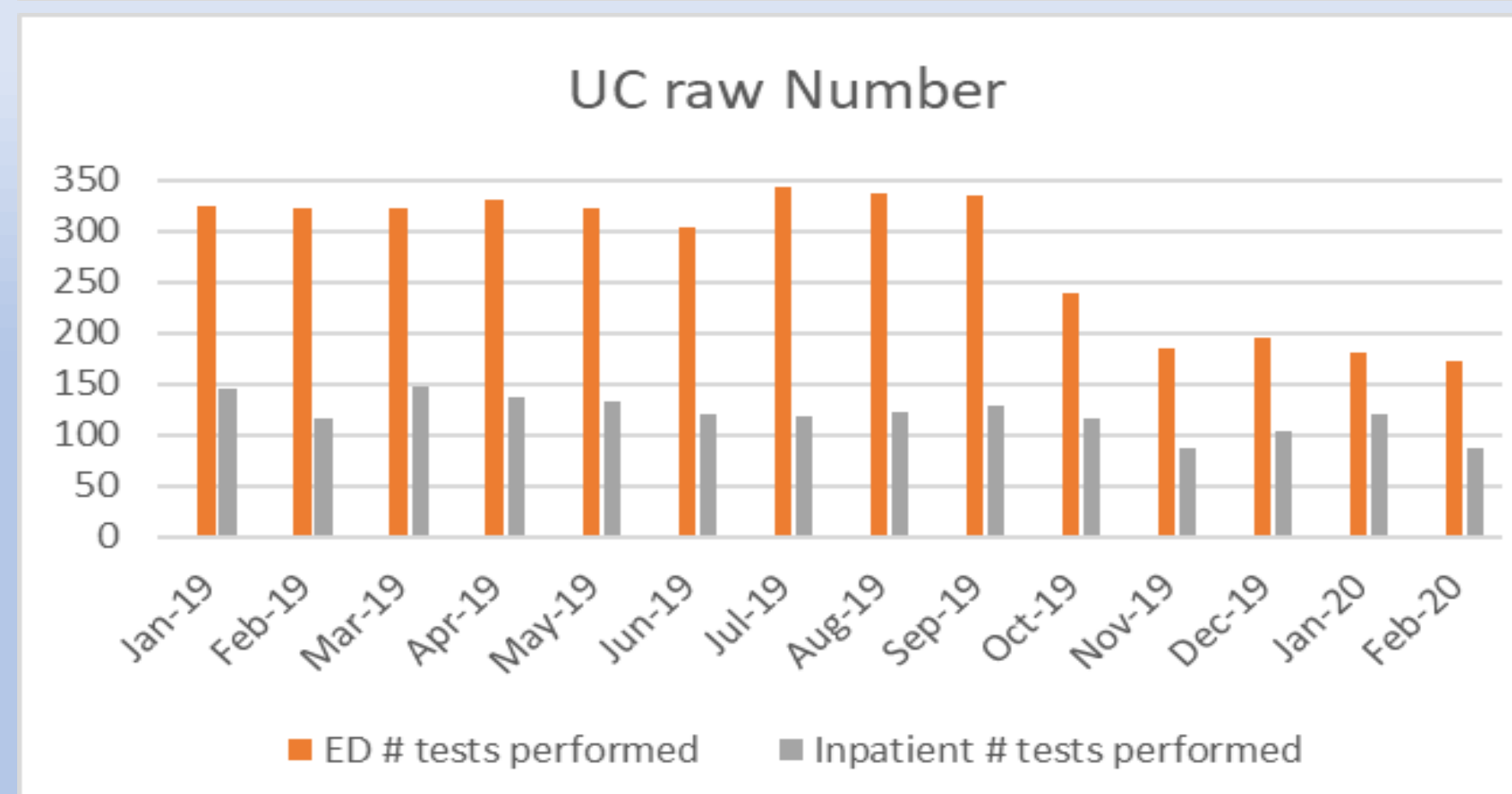
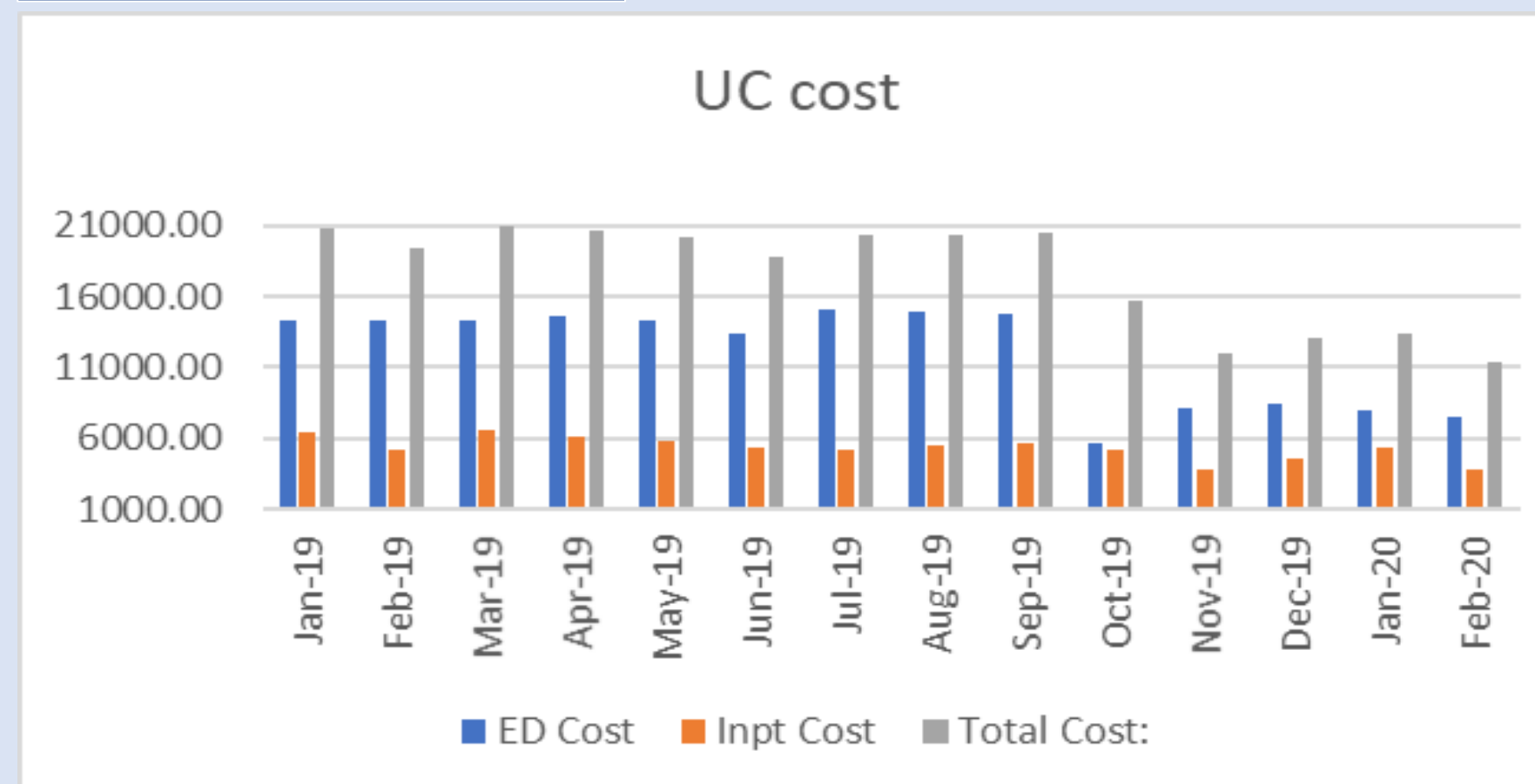
BACKGROUND

For expedited care, often a urinalysis and culture are ordered together even when a patient is asymptomatic. Although the urinalysis is insignificant, it still gets processed for a culture causing waste within the healthcare system and utilizing lab personnel that may already be scarce.

METHODS

The electronic health medical record order set was changed in October 2019 to have only two options; "Urine analysis with reflex culture" and "urine analysis with microscopy" after provider education on indications for ordering a culture. An automatic setting to discontinue cultures if ordered would occur if the urinalysis showed $<10^5$ cfu

RESULTS



Total cost reduction of approximately \$10,237.92 and \$4,210.40 for the ED and inpatient, respectively

The total number of cultures also reduced from an average of 303/month in the ED to 111/month. The inpatient number of cultures dropped from an average of 160/month to 53/month

CONCLUSION

Modifying the process of urine culture ordering has significantly cut down cost for both the hospital and patient. With clear education and modification of the electronic medical record, such interventions can dramatically improve the unnecessary testing for UTI's.

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