

a UC may generate a false positive result. Whether and when to replace a UC prior to culture is controversial, with prior studies recommending anywhere from 3 to 14 days as appropriate, but with no conclusive data. We evaluated urine culture results across a large healthcare system where, beginning in 2019, some facilities adopted the practice of changing UC before collection if indwelling for 3 days or more. **Method:** Analysis was from nursing electronic health record documentation of UC changes and urine cultures collected on patients with indwelling UC in 2022. UC changes were defined as a stop followed by a start within 12 hours. Patient exclusion criteria included a UC other than “temporary/indwelling” and surgical procedure during the admission. Statistics applied Pearson’s Chi-squared test with Yates continuity correction using R Core Team (2023) R: A Language and Environment for Statistical Computing. **Result:** Total UC episodes meeting criteria was 88,347 across 152 acute care hospitals. Episodes in days was 0-3 for 65%, 4-9 for 29% and >9 for 6%. Most urine cultures were taken at 3 days (p UC Changed? Culture Negative Culture Positive No 4916 (98.8%) 61 (1.2%) Yes 588 (98.7%) 8 (1.3%) Cultures were positive at the same rate whether a UC change occurred or not at >3 days (p=0.96). No difference was found in NHSN reported CAUTI prevalence among the UC change vs. no change in the >3 day groups. **Conclusion:** Urine culture results do not appear to be impacted by UC change as early as 3 days. UC change without benefit may generate unnecessary costs and complications.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s69–s70

doi:10.1017/ash.2024.195

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: CAUTI

Analysis of CAUTIs and Projected Effect of Increasing Pyuria Threshold in Urinalysis with Reflex to Culture

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Background: Catheter-Associated Urinary Tract Infections (CAUTI) are preventable hospital acquired infections that contributes to patient morbidity, prolonged hospital stays and increased healthcare costs. Complete compliance to the CAUTI bundle is critical for preventing infection—not only reducing catheter days, but also ensuring appropriate indications are present for urine culture collection. **Methods:** This retrospective study included 145 patients diagnosed with CAUTI per NHSN definitions from July 1, 2020 to June 30, 2023. Data collected included laboratory data, catheter duration, catheter indication, urinalysis/culture indication and if foley was appropriately removed/changed prior to specimen collection. A urinary catheter indication order was implemented in February 2021 requiring providers to select specific criteria for catheter placement/maintenance. In July 2023, the threshold for urinalysis to reflex to culture was increased to ≥ 10 WBCs and this criteria was applied to these cases to estimate the effect on diagnosis of CAUTI. **Results:** The most common indications for urinary catheters were input and output monitoring 76 (52%) and urinary retention/obstruction 34 (23%). No indication was entered on 22 (15%) patients. No difference was seen in the number of catheters without an indication before or after the 2021 order update. Mean catheter duration was 11.5 days with a median of 7 days. The most common indications for obtaining a urine specimen were leukocytosis/fever/sepsis 91 (63%), urinary symptoms/abdominal/flank pain 13 (9%), urine appearance 6 (4%), and altered mental status 4 (3%). In 31 (21%) patients, no indication was identified. A urinalysis with reflex to culture was completed in 105 (72%) and the catheter was removed prior to culture collection in 68 (47%). Of the 127 patients with a urinalysis and culture, 11 had 0-5 WBCs, 16 had 6-9 WBCs, 15 had 10-20 WBCs and 85 had >20 WBCs. Using the new pyuria criteria for urinalysis to reflex to culture, 27 (19%) CAUTIs could have been avoided. **Conclusion:** Review of CAUTI cases identified opportunities

for improving documentation and education of appropriate indications for urinary catheters and evaluation of urinary tract infection. The majority of urine cultures were obtained due to non-specific symptoms and less than 10% had specific urinary symptoms indicating need for continued education and diagnostic stewardship. Increasing the pyuria threshold needed to reflex to culture has the potential to significantly reduce CAUTIs but additional education is needed to ensure catheters are changed prior culture collection and specimens are only sent when signs and symptoms of urinary tract infection are present.

Antimicrobial Stewardship & Healthcare Epidemiology 2024;4(Suppl. S1):s70

doi:10.1017/ash.2024.196

Presentation Type:

Poster Presentation - Poster Presentation

Subject Category: CAUTI

Inter-rater agreement of CAUTI (catheter-associated urinary tract infections) diagnosis among Infectious disease physicians

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Background: CAUTIs constitute forty percent of nosocomial infections, yet their direct link with mortality remains debated. In 2009, NHSN estimated the economic burden of CAUTIs in the U.S. to be over \$340 million. Limited data exist on inter-physician concordance in diagnosing CAUTIs,

Figure 1: Demographics

	Full Cohort, N(%)
Age (years), med(IQR)	72 (63,82)
Female	62 (11.3)
race/ethnicity	
NHW	134 (24.5)
NHB	103 (18.8)
HW	260 (47.4)
HB	21 (3.8)
other	21 (3.8)
unknown	9 (1.6)
diabetes	279 (50.9)
# of elixhauser comorbidities, med(IQR)	8.0 (5.0,11.0)
Abnormalities of the Genitourinary anatomy	
urethral/bladder transurethral surgical procedures	15 (2.7)
malignant neoplasm of the prostate	57 (10.4)
neuromuscular dysfunction of bladder	87 (15.9)
bladder neck obstruction	18 (3.3)
BPH without LUTS	220 (40.1)
BPH with LUTS	149 (27.2)
other artificial openings of urinary tract	23 (4.2)
Disposition	
home	296 (54.0)
facility	160 (29.2)
dead	92 (16.8)
# of urine cultures	
1	258 (47.1)
2	159 (29.0)
3	61 (11.1)
4	32 (5.8)
5+	38 (6.9)
# of foleys	
1	368 (67.2)
2	120 (21.9)
3+	60 (10.9)

BPH= benign prostatic hypertrophy
LUTS= lower urinary tract symptoms

NHW= Non-Hispanic white, NHB= Non-Hispanic black, HW=Hispanic white, HB= Hispanic black