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.

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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.

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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

Figure 2. Inter-Reviewer Agreement *

A. All Cases (n=50)

	fellow 1	fellow 2	fellow 3	attending 1	attending 2	attending 3
fellow 1	*26%*	0.49 (0.20,0.79)	0.23 (-0.08,0.54)	0.27 (-0.02,0.57)	0.48 (0.19,0.77)	0.13 (-0.15,0.40)
fellow 2		*20%*	0.34 (0.02,0.66)	0.39 (0.10,0.67)	0.27 (-0.04,0.58)	0.03 (-0.24,0.30)
fellow 3			*22%*	0.35 (0.06,0.64)	0.23 (-0.08,0.54)	0.17 (-0.14,0.48)
attending 1				*32%*	0.18 (-0.12,0.47)	0.08 (-0.15,0.31)
attending 2					*26%*	0.13 (-0.15,0.40)
attending 3						*8%*

B. Cases not meeting NHSN criteria for CAUTI (n=34)

	fellow 1	fellow 2	fellow 3	attending 1	attending 2	attending 3
fellow 1	*12%*	0.15 (-0.35,0.65)	-0.06 (-0.51,0.39)	0.02 (-0.52,0.55)	0.26 (-0.25,0.77)	-0.03 (-0.36,0.31)
fellow 2		*12%*	0.14 (-0.40,0.68)	0.35 (-0.16,0.87)	0.10 (-0.45,0.64)	-0.23 (-0.53,0.07)
fellow 3			*21%*	0.33 (-0.16,0.82)	0.33 (-0.16,0.82)	-0.20 (-0.43,0.03)
attending 1				*26%*	0.24 (-0.30,0.78)	0.03 (-0.37,0.44)
attending 2					*18%*	0.03 (-0.37,0.44)
attending 3						*6%*

C. Cases meeting NHSN criteria for CAUTI (n=16)

	fellow 1	fellow 2	fellow 3	attending 1	attending 2	attending 3
fellow 1	*56%*	0.72 (0.33,1.00)	0.47 (0.06,0.87)	0.36 (-0.02,0.73)	0.53 (0.12,0.95)	0.28 (-0.25,0.81)
fellow 2		*38%*	0.47 (0.06,0.87)	0.36 (-0.02,0.73)	0.30 (-0.14,0.74)	0.28 (-0.25,0.81)
fellow 3			*25%*	0.35 (-0.03,0.73)	0.15 (-0.25,0.54)	0.39 (-0.02,0.80)
attending 1				*44%*	0.07 (-0.29,0.43)	0.09 (-0.21,0.40)
attending 2					*44%*	0.18 (-0.24,0.59)
attending 3						*13%*

* Responses grouped as "yes" vs "no or unclear"; diagonal squares (bold, italic) = % of responses that were yes; other cells contain Kappa statistic (95% CI) for pairs of reviewers

Figure 3: Inter-reviewer agreement allowing for three responses

A. All Cases (n=50)

	fellow 1	fellow 2	fellow 3	attending 1	attending 2	attending 3
fellow 1	*26%*	0.51 (0.24,0.79)	0.26 (-0.03,0.56)	0.28 (0.01,0.55)	0.26 (0.09,0.43)	0.14 (-0.09,0.37)
fellow 2		*20%*	0.34 (0.05,0.63)	0.36 (0.10,0.61)	0.22 (0.05,0.38)	0.07 (-0.15,0.28)
fellow 3			*22%*	0.41 (0.17,0.65)	0.09 (-0.08,0.26)	0.05 (-0.20,0.29)
attending 1				*32%*	0.06 (-0.13,0.24)	0.01 (-0.18,0.21)
attending 2					*26%*	0.04 (-0.14,0.21)
attending 3						*8%*

B. Cases not meeting NHSN criteria for CAUTI (n=34)

	fellow 1	fellow 2	fellow 3	attending 1	attending 2	attending 3
fellow 1	*12%*	0.19 (-0.27,0.66)	-0.01 (-0.43,0.42)	0.07 (-0.43,0.56)	0.19 (-0.18,0.56)	0.06 (-0.25,0.38)
fellow 2		*12%*	0.15 (-0.29,0.60)	0.32 (-0.12,0.76)	0.22 (-0.17,0.62)	-0.19 (-0.49,0.10)
fellow 3			*21%*	0.42 (0.05,0.80)	0.24 (-0.06,0.54)	-0.26 (-0.45,-0.08)
attending 1				*26%*	0.21 (-0.15,0.58)	0.00 (-0.34,0.34)
attending 2					*18%*	-0.10 (-0.40,0.19)
attending 3						*6%*

C. Cases meeting NHSN criteria for CAUTI (n=16)

	fellow 1	fellow 2	fellow 3	attending 1	attending 2	attending 3
fellow 1	*56%*	0.72 (0.33,1.00)	0.47 (0.06,0.87)	0.32 (-0.03,0.67)	0.22 (0.02,0.42)	0.14 (-0.25,0.53)
fellow 2		*38%*	0.47 (0.06,0.87)	0.32 (-0.03,0.67)	0.17 (-0.01,0.34)	0.27 (-0.10,0.64)
fellow 3			*25%*	0.39 (0.05,0.73)	0.00 (-0.20,0.21)	0.24 (-0.12,0.60)
attending 1				*44%*	-0.06 (-0.27,0.15)	-0.01 (-0.25,0.24)
attending 2					*44%*	0.10 (-0.13,0.34)
attending 3						*13%*

* Responses grouped as "yes", "no", or "unclear" (separately); diagonal squares (bold, italic) = % of responses that were yes; other cells contain Kappa statistic (95% CI) for pairs of reviewers

especially in patients with abnormal genitourinary (GU) anatomy. Our study assessed inter-provider variability in diagnosing CAUTI in 50 such patients, including those meeting NHSN(National healthcare safety network) criteria. **Methods:** We included a random set of 50 adults (18+) with abnormal GU anatomy admitted to the University of Miami hospitals from January 2018 to November 2021 who had a urinary foley catheter and at least one positive urine culture during their hospitalization. Three Infectious disease fellows and three board-certified Infectious disease physicians independently reviewed each patient's chart, classifying them as having or not having a CAUTI. Inter-physician reliability was assessed using kappa statistics. **Results:** Our findings highlight substantial variation in clinician-determined CAUTI incidence among the 50 patients with abnormal GU anatomy, ranging from 8% to 32% (Figures 2,3). Inter-rater agreement on CAUTI diagnosis was generally poor (Kappa Hollenbeak CS, et al. The attributable cost of catheter-associated urinary tract infections in the United States: A systematic review. Am J Infect Control. 2018 Jul;46(7):751-757. Trautner BW, et al. Development and validation of an algorithm to recalibrate mental models and reduce diagnostic errors associated with catheter-associated bacteriuria. BMC Med Inform Decis Mak. 2013 Apr 15;13:48. Gafary M, et al. Catheter Associated Urinary Tract Infections (CAUTI) in Bladder Cancer Patients Post Cystectomy With a Neobladder, Open Forum Infectious Diseases, Volume 2, Issue suppl_1, December 2015, 293.

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The Next Target for Readmission Reporting? Exploring Readmission Rates of Patients with CLABSI

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Background: Multi-drug resistant organisms (MDROs) are a common cause of healthcare-associated infections, particularly central line-associated bloodstream infections (CLABSIs). Prior research has shown that MDROs cause up to 67% of CLABSIs and have up to a 37% increase in 30 day readmission, which is higher than readmission rates for other conditions reported to the Centers for Medicare and Medicaid Services (CMS). The objective of the study was to determine overall 90-day readmission rates, and if there was a difference in readmission rate within 90 days post discharge for patients who had a MDRO as the causative pathogen of their CLABSI compared to patients who did not have an MDRO. **Methods:** A retrospective analysis of patient data from a nine-hospital system was performed on patients who had a CLABSI and were discharged alive between January 1st, 2018, and December 31st, 2019. Basic descriptive statistics were performed, and the potential differences in readmission rates were examined using Chi-square analyses. **Results:** The overall readmission rate for all CLABSIs was 46.9%. The chi-square analysis determined there was not a significant difference in readmission rates in patients who had a MDRO CLABSI compared to patients with a non-MDRO CLABSI (59.1% vs. 44.6%, x2= 1.564 , p= 0.211). **Conclusion:** There was not a significant difference in readmission rates between patients with an MDRO CLABSI compared to a non-MDRO CLABSI. However, the overall readmission rate for this patient population was much higher than seen in previous literature and other publicly reported readmission rates. Additional research is recommended to explore if the increased CLABSI readmission rates seen are a unique finding to this health system.

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The Mechanics, Art, and Value of Central Line Stewardship

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Background: Central venous catheter (CVC) utilization and central-line associated bloodstream infection (CLABSI) have increased nationwide. Busy providers can easily overlook the recommended practice of daily assessment of the ongoing indication for CVC. Prospective audit and