

UAMS MEDICAL CENTER
TRAUMA SERVICES MANUAL

SUBJECT: CAUTI Prevention Guidelines

REVIEWED: 11/18/2021

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RECOMMENDATION(S): Dr. Joseph Margolick, Dr. Lindsey Mohney

APPROVAL: 12/2/2021

CONCURRENCE(S): Trauma Surgery Group, SICU nursing leadership

EFFECTIVE: 12/7/2021

PURPOSE:

The objective is to eliminate catheter associated urinary tract infections (CAUTI) in our patients. CAUTIs are a quality control metric and increase patient morbidity, mortality, length of stay and hospital cost.

This guideline is designed to be simple and focus attention to the highest yield practices that will reduce CAUTIs.

For guidelines on routine Foley care and insertion technique see ACS NSQIP Best Practices Guidelines on Prevention of Catheter Associated Urinary Tract Infections

<http://reports.nsqip.facs.org/acspedmain/pedtemp/bestpractices/BP%20Guidelines%20UTI.pdf>

DEFINITION of CAUTI:

See American College of Surgeons, The Committee on Trauma, Data Dictionary

Patient must meet criteria 1, 2 and 3

- 1) UTI and indwelling urinary catheter for more than 2 consecutive days in an inpatient location **OR** the urinary catheter has been removed the day of or the day before.
- 2) At least one of the following symptoms
 - a. Fever > 38 degrees C
 - b. Suprapubic tenderness
 - c. Costovertebral angle pain or tenderness
 - d. Urinary urgency
 - e. Urinary frequency
 - f. Dysuria
- 3) Urine culture with no more than two species of organisms identified, at least of which is bacterium > 10⁵ CFU/ml

BACKGROUND:

These guidelines target elements of care that should drastically reduce CAUTIs. The goal is to remove all Foley catheters within 48 hours (with rare exceptions), avoid catheter re-insertion for incontinence or urinary retention, and avoiding urine analysis and urine cultures.

GUIDELINE:

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1) Remove all Foley catheters within 48 hours of insertion

- a. Monitoring urine output via Foley catheter should be limited to the acute resuscitative period (i.e., 24-36 hours of critical illness or trauma). Remove Foley once resuscitation is complete and markers of end-organ perfusion have improved.
- b. Insertion of catheters for the sole purpose of monitoring urine output should be limited to those with acute critical illness who are at risk of multi-organ failure. For example:
 - i. Trauma patients with severe blood loss
 - ii. Critically ill patient during the acute phase of sepsis
 - iii. Critically ill patients with acute renal failure
 - iv. Rhabdomyolysis
- c. Alternative – albeit less precise - means of urine output monitoring should be employed after 48 hours
 - i. Urinal measurements
 - ii. Bladder scans
 - iii. Purewicks
 - iv. Condom catheters
- d. Standard exceptions to early Foley catheter removal include: Urologic trauma, recent kidney transplant, long-term indwelling catheter, obstructive uropathy awaiting urinary diversion, gross hematuria, comfort care or hospice.

2) INCONTINENCE: Avoid re-inserting Foley catheters for the incontinence

- a. If a patient is incontinent, utilize alternative means to prioritize patient comfort and perineal skin care. For example:
 - i. Purewick
 - ii. Condom catheter
 - iii. Regular voiding attempts ever 1 -2 hours via commode, bathroom or urinal
 - iv. Adult diapers or absorbable pads changed Q2h
- b. Exception to this rule is an incontinence with open perineal or sacral wounds
- c. Consider wound care (WOCN) consultation for “incontinence associated dermatitis skin care protocol”

3) URINARY RETENTION: Avoid re-inserting Foley catheter for urinary retention

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- a. Consider Tamsulosin (Flomax) 0.4 mg daily in adult male and female patients at risk of or experiencing retention
- b. If a patient is retaining, proceed with bladder scans every four hours
 - i. In and out catheter if bladder volume > 350 ml OR
 - ii. Patient has sensation of needing to void but is unable to do so
- c. Continue in and out catheterization indefinitely and *consider Physical Medicine and Rehabilitation (PMR) consultation* if there is a concern that the patient may require in and out catheterization for a prolonged time.

4) DIAGNOSTICS: Avoid routinely ordering urine analysis and/or urine cultures

- a. Avoid sending urine analyses (UA). Foley catheters inherently cause pyuria and therefore Urine Analysis (UA) frequently leads to false positive "UTIs" that in turn often propagate cultures
- b. Data suggests that urine cultures rarely change management in low-medium risk patient with CAUTIs.
- c. Standard exceptions to urine culture avoidance
 - i. Recent urologic surgery
 - ii. Pregnant patients
 - iii. Solid organ transplant patients
 - iv. Severely immunosuppressed individuals
 - v. Urinary obstruction with indwelling stents
 - vi. Spinal injury with new or worsening spasticity, autonomic hyperreflexia, malaise or lethargy
- d. Patients with a Foley catheter from an OSH:
 - i. Draw a urine culture upon arrival at UAMS. Do NOT wait 48 hours to draw culture.
- e. If CAUTI is suspected treat with appropriate antibiotics based on the UAMS antibiogram and the patient's risk profile (long term hospitalization, nursing home resident, prior MRSA bacteriuria etc)
- f. If a patient has clear clinical signs of UTI (suprapubic pain/flank pain, new onset dysuria) the a urine culture may be considered

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5) DOCUMENTATION: When and why a Foley catheter was inserted and when it is removed should be clearly document in progress notes or separate note

*These are meant to provide guidance only. Management of complex trauma and acute care surgery patients is fluid and complex. If an attending provider has the opinion that a urinary catheter is necessary for safe patient care and/or a urine cultures would demonstrably improve patient management then do so. Patient safety is reigning principle. This guideline strongly suggests that all urine analysis should be avoided and urine cultures only drawn after discussion with the attending physician.

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