

## 2020 CAUTI Medical Record Abstraction Tool (MRAT) Instructions

Fill in the demographic section and then complete Question 2, screening questions (S1, S2, and S3). Fill in Tables 1-Positive Urine Cultures, 2a-Locations, 2b-Urinary Catheters, 2c-Positive Blood Cultures, and 3-Symptoms to document information needed to answer questions 4-8. Complete the Outcome section for each targeted UTI.

1. **IDENTIFIERS AND ABSTRACTED DATA:** Complete the section using patient identifier information from the medical record and admission, discharge, transfer (ADT) data.

2. **SCREENING QUESTIONS:**

S1: **Screening for Present on Admission:** If all cultures were collected on or before facility day two (2), record as **Outcome (a)**, Not a candidate Validation Location (VL) CAUTI on page 4 of the MRAT.

S2: **Screening for appropriate discharge surveillance:** If answered no culture taken, record as **Outcome (a)**, Not a candidate VL CAUTI on page 4 of the MRAT.

S3: **Screening for catheter use:** If a catheter was not in place greater than two (2) days for any VL, record as **Outcome (a)**, Not a candidate VL CAUTI on page 4 of the MRAT. If catheter was placed prior to admission, the day of physical admission to an inpatient location is urinary catheter Day 1.

*The complete list of 2021 NHSN UTI pathogens and common commensals is located on the NHSN Data Validation webpage under 2021 Resources:*  
<https://www.cdc.gov/nhsn/validation/index.html>.

**Positive urine culture has no more than two species of organisms identified, at least one of which is a bacterium of  $\geq 10^5$  CFU/ml. DO NOT LIST cultures with more than 2 species or those classified as “mixed” flora, as these cannot be used to meet UTI criteria. Exclude urine cultures that are positive only for yeast, mold, dimorphic fungi, or parasites. Note:  $10^5 = 100,000$ .**

**Table 1:** Document ALL positive urine cultures (see above note) sequentially in Table 1. Using information from Table 2a Locations, indicate which were “VL urine cultures”, defined as those collected during VL stays, the day of departure from the VL, or the following three (3) calendar days. Note: These VL urine cultures should be evaluated for possible VL CAUTI. Non-VL urine cultures may also be important to establish prior onset of UTI Repeat Infection Timeframe (RIT) and another location of attribution (LOA). Using information from Table 2b Urinary Catheters, indicate if a urinary catheter was in place on the date or day before the date of urine culture collection. Using information from Table 2c Positive Blood Cultures, indicate if matching organism(s) were isolated from blood; if patient had UTI symptoms during the UTI Infection Window Period (IWP), circle NA.

**Table 2a:** Document all facility locations and dates for this episode of care chronologically, and indicate locations being validated for CAUTI by circling Yes or No for VL.

**Table 2b:** Document time periods with ANY urinary catheter in place for at least part of each day below (do NOT document individual catheters removed and replaced on the same/consecutive days).

**Table 2c:** IF urine culture in Table 1 contains  $\geq 10^5$  CFU/ml of a bacterium and patient is ASYMPTOMATIC, document any positive blood culture(s). This information is needed to document ABUTI, which requires a blood specimen with at least one matching bacterium to the bacterium identified in the urine specimen or meets LCBI Criterion 2 (without fever) with matching common commensal(s) in the urine. At least one of the blood organisms must have been collected within the UTI IWP. Indicate no positive blood cultures by checking the box.

**3. SYMPTOMS:**\* Check one or more as required, noting date. \*Symptoms are required to occur within the IWP for UTI classification.

<b>4. URINARY TRACT INFECTION (UTI) CRITERIA</b>				
<i>Starting with Candidate UTI #1, determine which type of UTI criteria [ABUTI, SUTI1a, SUTI1b, and SUTI2] was met (if any). All elements listed in a column are required within the IWP.</i>				
<i>UTI type:</i>	<i>SUTI 1a (CAUTI) (Symptomatic, any age)</i>	<i>SUTI 1b (non-CAUTI) (Symptomatic, any age)</i>	<i>SUTI 2 (Symptomatic, <math>\leq 1</math> year of age only)</i>	<i>ABUTI (Asymptomatic, any age)</i>
<i>Urine culture element</i>	<input type="checkbox"/> $\geq 10^5$ CFU/ml urine with no more than 2 species of organisms, at least one of which is a bacterium of $\geq 10^5$ CFU/ml.	<input type="checkbox"/> $\geq 10^5$ CFU/ml urine with no more than 2 species of organisms, at least one of which is a bacterium of $\geq 10^5$ CFU/ml.	<input type="checkbox"/> $\geq 10^5$ CFU/ml urine with no more than 2 species of organisms, at least one of which is a bacterium of $\geq 10^5$ CFU/ml.	<input type="checkbox"/> $\geq 10^5$ CFU/ml urine with no more than 2 species of organisms, at least one of which is a bacterium of $\geq 10^5$ CFU/ml.
<i>Blood culture(s) element</i>	↓	↓	↓	<input type="checkbox"/> Organism identified from blood specimen with at least one matching bacterium to a bacterium of $\geq 10^5$ CFU/ml in urine.  <i>If common commensal organism, must meet all LCBI 2 criteria including chills and/or hypotension; excluding fever.</i>

<p>Age, Appropriate symptoms (*= no other recognized cause) and urinary catheter status elements</p>	<p>(Any age, urinary catheter present)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> At least ONE of the following:             <ul style="list-style-type: none"> <li>o Fever &gt;38.0°C</li> <li>o Suprapubic tenderness*</li> <li>o Costovertebral angle pain or tenderness*</li> <li>o Urinary urgency+</li> <li>o Urinary frequency+</li> <li>o Dysuria+</li> </ul> </li> <li><b>AND</b></li> <li><input type="checkbox"/> Urinary catheter in place for &gt;2 days and <u>in place</u> on the date of event, present for any portion of the calendar day on the date of event, or removed the day before the date of event.</li> </ul>	<p>(Any age)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> At least ONE of the following:             <ul style="list-style-type: none"> <li>o Fever (&gt;38°C) Suprapubic tenderness*</li> <li>o Costovertebral angle pain or tenderness*</li> <li>o Urinary frequency+</li> <li>o Urinary urgency+</li> <li>o Dysuria+</li> </ul> </li> <li><b>AND</b></li> <li><input type="checkbox"/> Patient has/had an indwelling urinary catheter, but it has/had not been in place for &gt;2 calendar days on the date of event.</li> <li><b>OR</b></li> <li><input type="checkbox"/> Patient did not have a urinary catheter in place on the date of event nor the day before the date of event.</li> </ul>	<p>(With or without a urinary catheter)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Patient age ≤1 year</li> <li><b>AND</b></li> <li><input type="checkbox"/> At least ONE of the following:             <ul style="list-style-type: none"> <li>o Fever (&gt;38.0°C)</li> <li>o Hypothermia (&lt;36.0°C)</li> <li>o Apnea*</li> <li>o Bradycardia*</li> <li>o Lethargy*</li> <li>o Vomiting*</li> <li>o Suprapubic tenderness*</li> </ul> </li> </ul>	<p>(Any age, with or without a urinary catheter)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> No listed symptoms allowed within IWP</li> </ul>
<p>*With no other recognized cause.</p>				
<p>+These symptoms cannot be used when a catheter is in place but can be used if symptoms occur after urinary catheter removal, on the day of removal or day after removal.</p>				

**5. Did candidate UTI qualify as a UTI event, using criteria shown on CAUTI Instruction sheet? (Begin loop)**

Note: **UTI RIT** is a 14-day timeframe during which no new UTIs are reported. The UTI RIT applies to both present on admission (POA) and healthcare-associated infection (HAI) determinations. The date of UTI event is Day 1 of the 14-day RIT. If the date of event for UTI occurs within a previous 14-day UTI RIT, no new UTI is identified nor reported. Additional bacteria of ≥ 10<sup>5</sup> CFU/ml from positive urine cultures during the UTI RIT are added to the original event. Assign an RIT number to each occurrence.

Note: **UTI IWP** is defined as the 7-days during which all UTI criteria must be met. It includes the day the positive urine culture was collected, the 3 calendar days before, and the 3 calendar days after.

**6. Was the UTI HAI or POA?**

Note: **Date of Event** is the date the first element used to meet an NHSN UTI criterion occurs for the first time within the 7-day IWP. Acceptable documentation includes patient-reported signs or symptoms documented in the medical records by a healthcare professional (e.g., “patients states measured fever > 38.0° C or > 100.4° F”, “nursing home documents fever prior to arrival to the hospital”, “patient complains of dysuria”).



**7. Was this HAI-UTI a CAUTI?**

*Was a urinary catheter in place for > 2 days in an inpatient location (day of physical admission to an inpatient location is urinary catheter Day 1) on the date of event AND was either present for any portion of the calendar day on the date of event OR removed the day before the date of event?*

**8. Was a VL the LOA?**

*Work through question 8 parts a, b, and c to determine the LOA. Note: If the date of event is on the date of transfer or discharge, or the next day, the infection is attributed to the transferring/discharging location. This is called the Transfer Rule. If the patient was in multiple locations within the transfer rule time frame, attribute the infection to the **first** location in which the patient was housed the **day before** the infection's date of event.*

**9. Document the outcome.** *Select the appropriate outcome of each candidate UTI. Report candidate UTIs outside previous UTI RITs only. There may be multiple UTIs or multiple CAUTIs during a single episode of care. Provide a brief description/reason of any misreported CAUTI.*

**Assign the outcome.** For each candidate UTI select the **Case Determination A, B, or C** (Correctly classified, Over-reported, or Underreported), then the reason for misclassification using I-III.

**Examples of misapplied definition:**

- Incorrect use of Transfer Rule when applied to the LOA.
- Not using the first element of criteria to meet an NHSN site-specific infection to set the date of event. If the date of event is not correctly identified, the LOA and RIT will not be correctly identified.

**Examples of misapplied CAUTI criteria:**

- Not recognizing there were more than 2 organisms listed on the culture results. Urine cultures with more than 2 organisms cannot be used to meet UTI criteria.
- Incorrectly identifying the date of catheter was placement or discontinuation.

**Examples of additional reasons:**

- Physician diagnosis can be accepted as evidence of an infection only when physician diagnosis is an element of the specific infection definition. For example, physician diagnosis of a UTI is not an element of any UTI criteria; therefore, physician diagnosis of a UTI may not be used to satisfy POA status of a UTI.