NHSN Catheter-Associated Urinary Tract Infection Surveillance 2022

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Objectives

We will discuss CAUTI surveillance. By the end of this lesson, you will be able to:

- Apply UTI Protocol through Case Studies
- Identify Summary
- Use Data Collection Forms & Table of Instructions

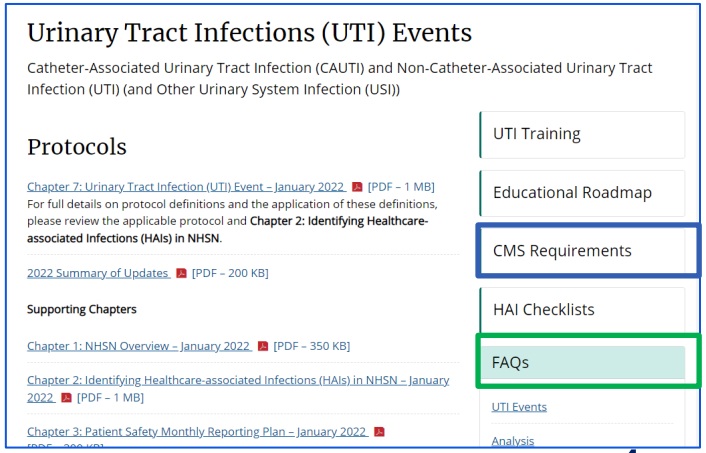
UTI Burden

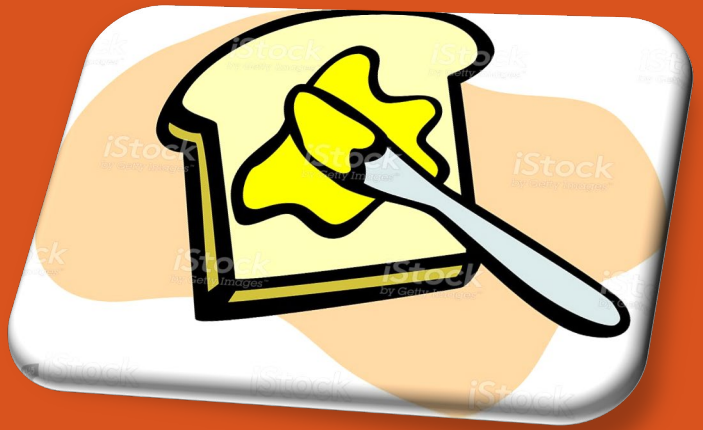
- 2017 - 160,833 CAUTI[1]
  - 5.4 CAUTI/1000 discharges
- 5% Decrease of CAUTI from 2014 – 2017 [1]
- Average cost of a HAI CAUTI: $13,793 [1]
- UTI Ranks 5th HAI in the US[2]

1 AHRQ National Scorecard on Hospital-Acquired Conditions Updated Baseline Rates and Preliminary Results 2014-2017
2 Multistate Point-Prevalence Survey of Health Care–Associated Infections. N Engl J Med 370;13 March 27, 2014

Resources for this discussion

- CAUTI Surveillance https://www.cdc.gov/nhsn/psc/uti/index.html
  - Patient Safety Component Manual
    - Chapter 2-Identifying HAI for NHSN Surveillance
    - Chapter 7-Urinary Tract Infection (UTI) Event
    - Chapter 16-NHSN Key Terms
- UTI Event form
- UTI Table of Instructions
- Denominator Forms
- FAQs



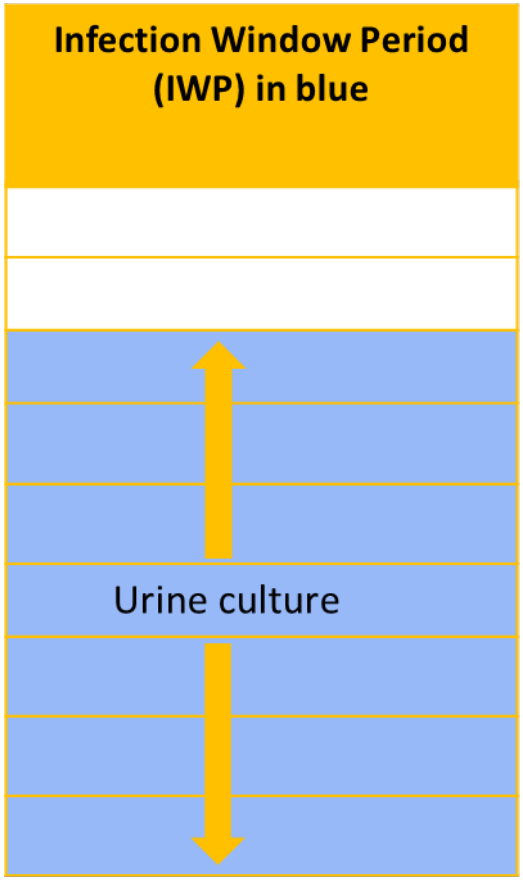


Using the basics for UTI

IWP, DOE, RIT, SBAP . . .

Infection Window Period

The first positive urine that is used to meet the definition **always** sets the IWP

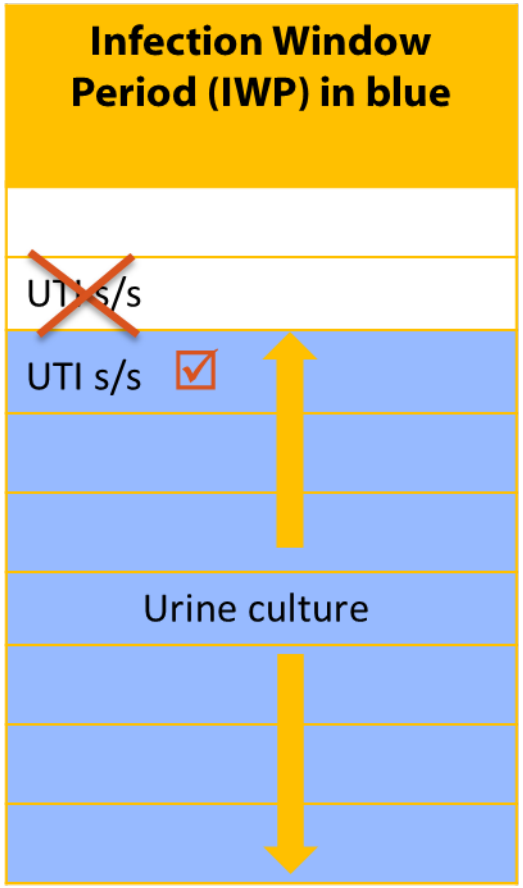


Infection Window Period

Use only eligible UTI elements <u>within</u> the IWP

UTI Elements:

- Urine culture
- UTI signs/symptoms (s/s) **OR** matching blood organism



UTI Date of Event (DOE)

- The DOE is the date the first element used to meet an NHSN site-specific infection criterion occurring for the first time within the seven-day infection window period

- First element may be culture OR sign/symptom

UTI Repeat Infection Timeframe (RIT)

- 14-day timeframe; **Date of event** = Day 1
- No new UTIs are reported (specifically, SUTI, ABUTI)
- Additional eligible pathogens from urine cultures are added to the event
- Note the original date of event is mantained
- Do not change device association during the RIT
- Any UTI criterion sets an RIT and SBAP including POA events and non-catheter-associated events

Secondary Blood Attribution Period (SBAP)

- SBAP is the period in which a blood specimen must be collected for a secondary bloodstream infection to be attributed to a primary site infection.
- Includes the IWP combined with the RIT.
- Is 14-17 days in length depending upon the date of event.

Two Scenarios applied to UTI

- Scenario 1: At least one organism from the blood specimen matches an organism identified from the site-specific infection (UTI) that is used as an element to meet the NHSN site-specific infection criterion (UTI) and the blood specimen is collected in the secondary BSI attribution period. (infection window period + repeat infection timeframe).

OR

- Scenario 2: An organism identified in the blood specimen is an element that is used to meet the NHSN site-specific infection criterion(ABUTI), and therefore is collected during the site-specific infection window period.

Location of Attribution

- Location of attribution: inpatient location where the patient was assigned on the DOE.
  - Non-bedded patient locations, (for example, Operating Room (OR) or Interventional Radiology (IR)) are not eligible for assignment of location of attribution for HAI events.
  - Location of attribution must be assigned to a location where denominator data (for example, patient days, device days) can be collected.

Transfer Rule

- Rule of Transfer: If DOE is on the date of transfer or discharge, or the next day, the infection is attributed to the transferring/discharging location.
- 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.
- Although the transfer rule does not apply to SSI or LabID events, facilities should always share information of potential HAI events that may occur before or following transfers between facilities.

Site Specific Concepts
NHSN Chapter 7

Indwelling Urinary Catheter (IUC)

Key Concept

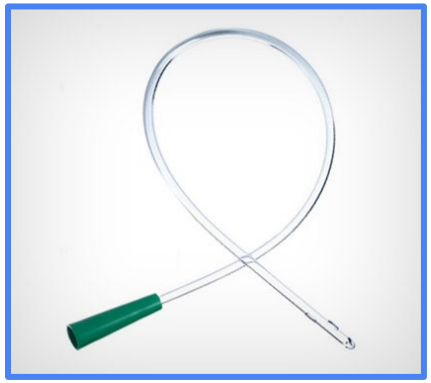
A drainage tube that is **inserted into the urinary bladder** (includes neobladder) **through the urethra, is left in place**, and is connected to a collection system. This includes a collection system that is used for irrigation of any type or duration (e.g., intermittent, continuous).

- Also called a Foley catheter

Neobladder

- Qualifies for CAUTI surveillance if an IUC inserted through urethra
- Made from one's own small intestine
- Colonized with intestinal organisms
- NHSN definitions accounts for contamination of urine specimens
  - Culture is considered contaminated when more than 2 organisms are identified.

Not an Indwelling Urinary Catheter



Straight catheterization

Condom catheter (Texas catheter)

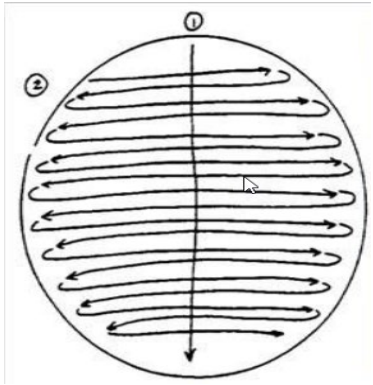
In and Out catheterization

Unless an indwelling urethral catheter is also present, the following do not qualify

- Suprapubic catheter
- Nephrostomy tubes
- Urostomy
- Ileal conduit
- Perineal urethostomy

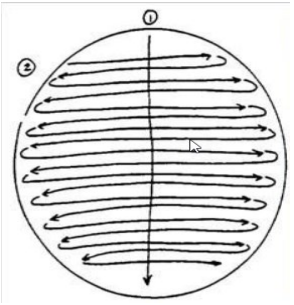
Urine from any of these sites can be used in the determination of a UTI

Urine Culture Clarification



1. Streak across plate through the middle.
2. Perpendicular streaks across the first
3. Observe single colonies

Urine Culture Clarification



Excluded organisms

- *Candida* species or yeast not otherwise specified, mold, dimorphic fungi or parasites are excluded as organisms in the UTI definition therefore blood with these organisms cannot be secondary to UTI
- *Candida auris* is a yeast

Excluded organisms may be present in urine

- Urine cultures with yeast can be used as long as there is one bacterium with $\geq 10^5$ CFU/ml; no more than 2 organisms (for example, $> 10^5$ CFU/ml of *E. coli* and $> 10^5$ CFU/ml of *C. albicans*)

Culture Media used in Microbiology

Urine Culture Clarification

Unusable culture results

- Urine cultures with > 2 organisms are regarded as contaminated cultures and not used for NHSN UTI surveillance
  - for example, > 10^5 CFU/ml *E. coli, S. aureus* and *C. albicans* = 3 organisms
- Urine cultures including “mixed flora*” or equivalent such as “perineal flora”, “vaginal flora”, “normal flora” cannot be used
  - for example, > 10^5 CFU/ml of *E. coli* and perineal flora)

*The bacteria and other microorganisms that normally inhabit a bodily organ or part

Urine Culture Clarification

- Urine culture 75,000 – 100,000 CFU/ml is not eligible
- Organisms of same genus but different species = 2 organisms (for example, *Pseudomonas aeruginosa* and *Pseudomonas fluorescens)*
- The same organism with different antimicrobial susceptibilities = 1 organism (for example, MR*SA* and MS*SA)*
- IWP is set on the urine specimen **collection date** not specimen result date
- Do not add multiple urine cultures together (for example, March 1 urine positive for 2 organisms and March 2 urine positive for 1 organism would not be combined to make this an excluded culture due to > 2 organisms)
- Use urine collected from any body location (for example, nephrostomy, suprapubic catheter)

NHSN Chapter 7
UTI Protocol/Criterion

Urinary Tract Infection Definitions

There are **two specific types** of UTI:

- Symptomatic UTI **(SUTI)**
- Asymptomatic Bacteremic UTI **(ABUTI)**

Both types, if catheter-associated, must be reported as part of any CMS CAUTI reporting requirements!

SUTI 1a: Catheter-associated Urinary Tract Infection (CAUTI) Criteria

(Any Age) Patient must meet 1, 2, and 3 below:

1.	Patient had an indwelling urinary catheter (IUC) that had been in place for more than 2 consecutive days in an inpatient location 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**
2.	Patient has at least ***one*** of the following signs or symptoms:
	• Fever (>38.0°C) • Suprapubic tenderness* • Costovertebral angle pain or tenderness* • Urinary urgency ^ • Urinary frequency^ • Dysuria ^
3.	Patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of $\geq 10^5$ CFU/ml

***No other recognized cause**

^These symptoms cannot be used when catheter is in place

All elements of the UTI criterion must occur during the IWP

SUTI 1b: Non-Catheter-associated Urinary Tract Infection (Non-CAUTI) (Any Age)

Patient must meet 1, 2, and 3 below:

1. One of the following is true:
   - Patient has/had an indwelling urinary catheter, but it has/had not been in place for more than *2* consecutive days in an inpatient location on the **date of event**

   OR

   - Patient did not have a urinary catheter in place on the date of event nor the day before the **date of event**
2. Patient has at least one of the following signs or symptoms:
   - Fever (>38.0C)
   - Suprapubic tenderness*
   - Costovertebral angle pain or tenderness*
   - Urinary urgency ^
   - Urinary frequency^
   - Dysuria ^

***No other recognized cause**

^These symptoms cannot be used when catheter is in place

3. Patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of $\geq 10^5$ CFU/ml

All elements of the UTI criterion must occur during the IWP

Knowledge Check

Date	Details
3/25	Patient admitted to Acute Care hospital for trauma; IUC inserted
3/26	IUC in place
3/27	IUC in place
3/28	IUC discontinued early morning, @ noon complained of urinary frequency
3/29	No fever
3/30	Elevated wbc's
3/31	Positive urine culture with 10^5 CFU/ml *E coli*

The Patient's complaint of urinary frequency on 3/28 is after the IUC was removed, so can be used to meet SUTI.

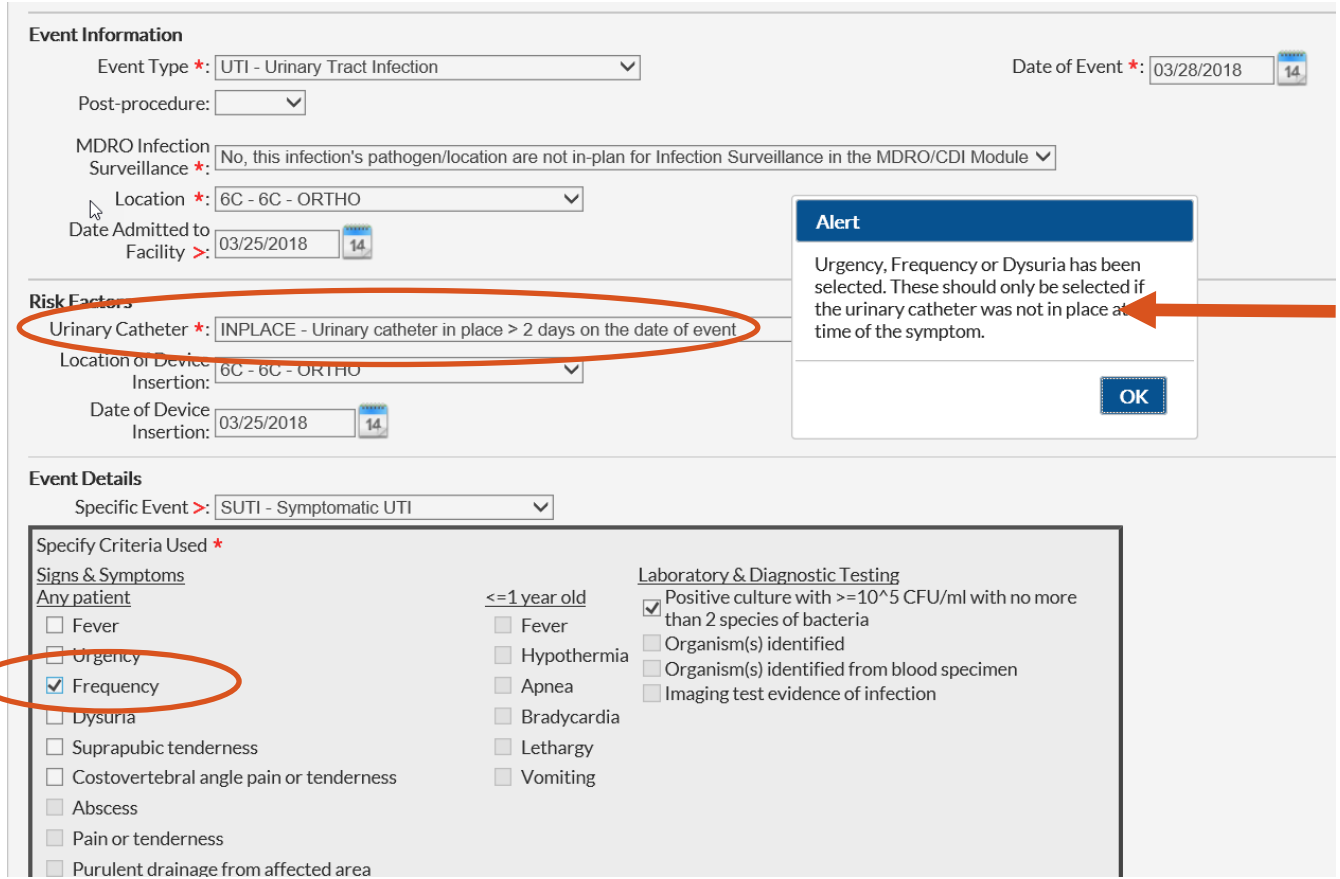
True or **False**

SUTI 1a Example
Patient has an CAUTI

- 3/31 Positive urine culture sets the (IWP): 3/28 – 4/3.
- The 3/28 urinary frequency is <u>first element</u> to occur within the IWP therefore is the **date of event**.
- The IUC was in place > 2 days on the date of event = CAUTI, HAI.

DATE	SUTI Criterion	IUC day
3/25 **Admit**	CVA, IUC inserted	1
3/26	IUC in place	2
3/27	IUC in place	3
3/28 DOE	IUC discontinued urinary frequency	4
3/29	No fever	
3/30	Elevated **wbc's**	
3/31	urine culture >100,000 CFU/ml *E.coli*	
4/1		
4/2		
4/3		

Risk Factor Alert



SUTI 2: CAUTI or Non-CAUTI in patients 1 year of age or less

Patient must meet 1, 2, and 3 below:

1. Patient is ≤1 year of age (with or without an indwelling urinary catheter)
2. Patient has at least one of the following signs or symptoms:
   - Fever (>38°C)
   - **Hypothermia (<36.0°C)**
   - **Apnea***
   - **Bradycardia***
   - **Lethargy***
   - **Vomiting***
   - Suprapubic tenderness*
3. Patient has a urine culture with no more than two species of organisms identified, at least one of which is a bacterium of ≥10^5 CFU/ml

***No other recognized cause**

All elements of the UTI criterion must occur during the IWP

SUTI 2 Example

Date	Details
12/23	2 month-old admitted for diarrhea; IUC inserted
12/27	Patient vomits x 2
12/28	Urine culture is positive for *E. coli* 10^5 CFU/ml

This meets catheter-associated SUTI 2, **date of event** 1/27, pathogen *E. coli*

Asymptomatic Bacteremic Urinary Tract Infection (ABUTI) (Any Age)

Patient must meet 1, 2, and 3 below:

1.	Patient with or without an indwelling urinary catheter has **no signs or symptoms** of SUTI 1 or 2 according to age
2.	Patient has a urine culture with no more than two species of organisms identified, **at least one of which is a bacterium of ≥10^5 CFU/ml**
3.	Patient has organism identified from blood specimen with at least **one matching bacterium** to the bacterium identified in the urine specimen OR meets LCBI criterion 2 (without fever) and matching common commensal(s) in the urine.

All elements of the ABUTI criterion must occur during the IWP

ABUTI

Note: <u>Catheter-associated</u> ABUTI is reportable IF CAUTI is selected in the monthly reporting plan for this location.

Asymptomatic Bacteremic UTI (ABUTI) Example

Date	Details
2/20	Patient admit for MI, IUC inserted
2/21-23	No UTI signs/symptoms (s/s)
2/24	Elevated wbc's, No UTI s/s, Positive blood with *S. aureus* and positive urine culture with > 10^5 CFU/ml *S. aureus*
2/25-27	No UTI s/s
2/28	IUC removed, Discharged to home

ABUTI Example

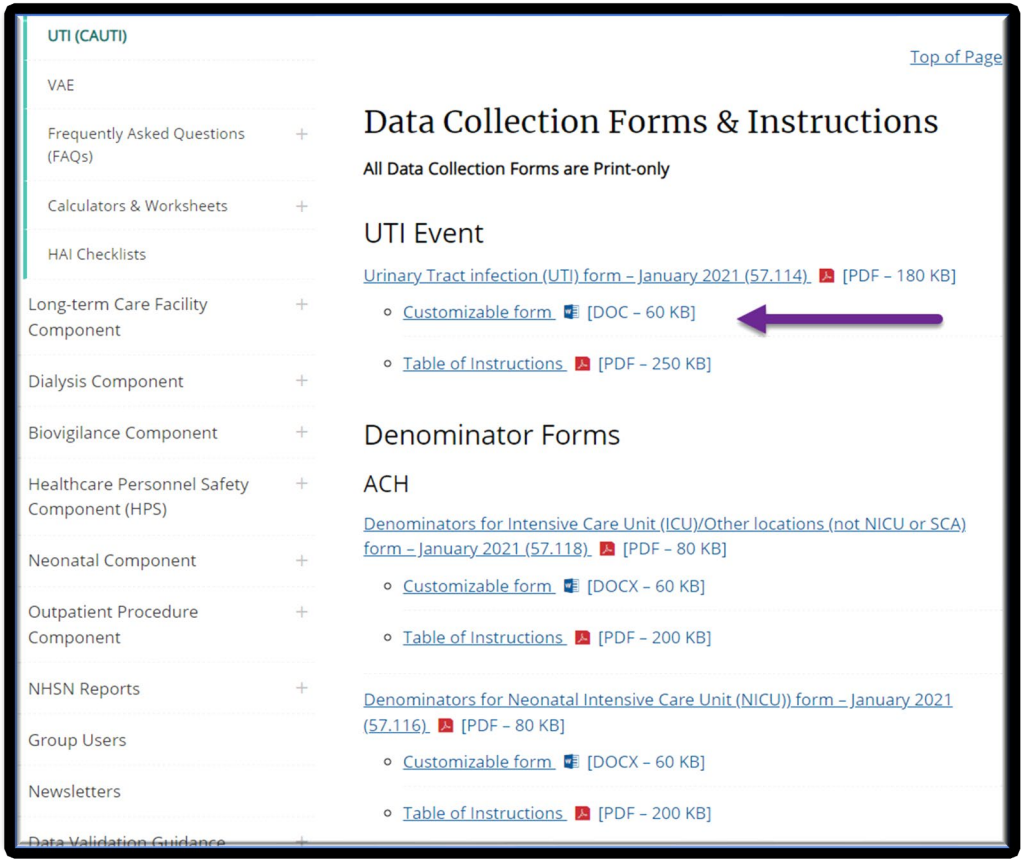
- 2/24 urine culture sets the IWP: 2/21 – 2/27.
- No UTI s/s however matching blood organism within IWP.
- Meets ABUTI, DOE 2/24.
- IUC in place > 2 days on DOE therefore catheter-associated. The matching blood organism is secondary.

Date	SBAP	RIT	Infection Window Period
Feb 20 Admit			IUC inserted
Feb 21			no UTI signs/symptoms
Feb 22			no UTI signs/symptoms
Feb 23			no UTI signs/symptoms
Feb 24 DOE		1	Blood culture: *S.aureus* Urine culture 10^5 CFU/ml *S.aureus* no UTI signs/symptoms IUC removed
Feb 25		2	no UTI signs/symptoms
Feb 26		3	no UTI signs/symptoms
Feb 27		4	no UTI signs/symptoms
Feb 28		5	IUC removed, Discharged to home

Catheter-associated ABUTI is reportable if the location is in the facility reporting plan

Data Collection form and Table of Instructions for UTI Surveillance

https://www.cdc.gov/nhsn/acute-care-hospital/cauti/index.html



Data Collection Form (57.114)

Calculators & Worksheets +

HAI Checklists

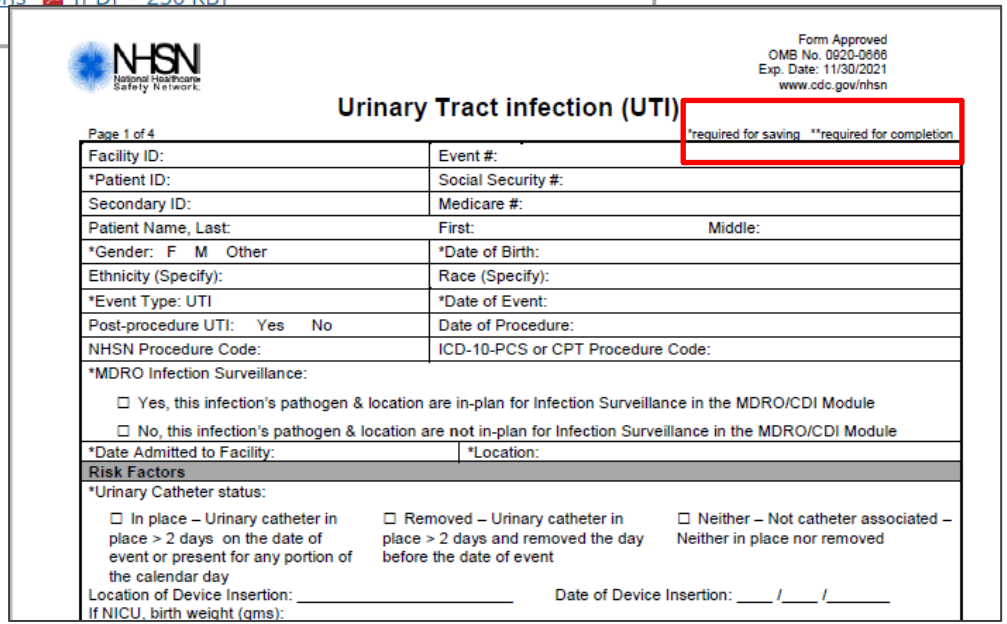
Long-term Care Facility Component +

Dialysis Component +

UTI Event

Urinary Tract infection (UTI) form – January 2021 (57.114) [PDF – 180 KB]

- Customizable form [DOC – 60 KB]
- Table of Instructions [PDF – 250 KB]



NHSN National Healthcare Safety Network

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OMB No. 0920-0666
Exp. Date: 11/30/2021
www.cdc.gov/nhsn

Urinary Tract infection (UTI)

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Page 1 of 4

Facility ID:	Event #:
*Patient ID:	Social Security #:
Secondary ID:	Medicare #:
Patient Name, Last:	First: Middle:
*Gender: F M Other	*Date of Birth:
Ethnicity (Specify):	Race (Specify):
*Event Type: UTI	*Date of Event:
Post-procedure UTI: Yes No	Date of Procedure:
NHSN Procedure Code:	ICD-10-PCS or CPT Procedure Code:

*MDRO Infection Surveillance:

☐ Yes, this infection's pathogen & location are in-plan for Infection Surveillance in the MDRO/CDI Module

☐ No, this infection's pathogen & location are not in-plan for Infection Surveillance in the MDRO/CDI Module

*Date Admitted to Facility:	*Location:

Risk Factors

*Urinary Catheter status:

☐ In place – Urinary catheter in place > 2 days on the date of event or present for any portion of the calendar day

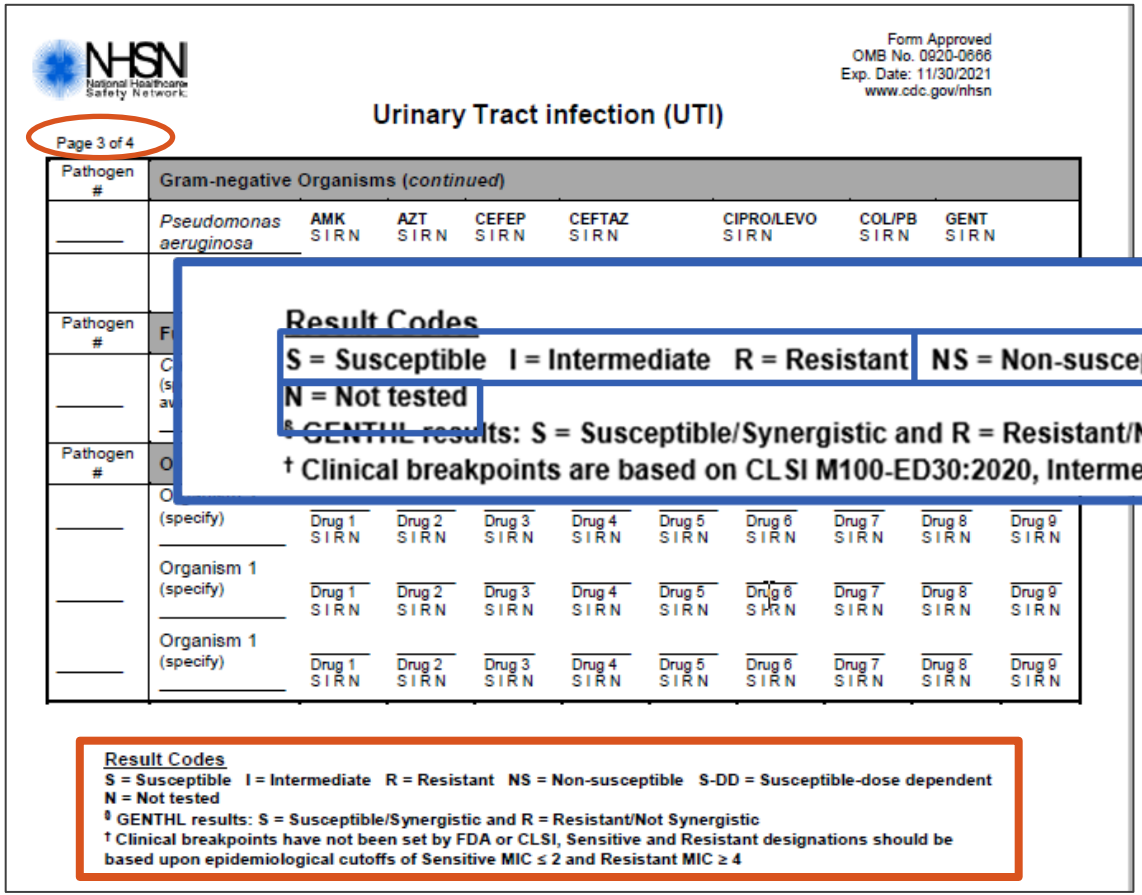
☐ Removed – Urinary catheter in place > 2 days and removed the day before the date of event

☐ Neither – Not catheter associated – Neither in place nor removed

Location of Device Insertion: _____ Date of Device Insertion: ____ /____ /_____

If NICU, birth weight (gms):

Data Collection Form (57.114)



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Urinary Tract infection (UTI)

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Pathogen #	Gram-negative Organisms (*continued*)								
_____	*Pseudomonas aeruginosa*	AMK S I R N	AZT S I R N	CEFEP S I R N	CEFTAZ S I R N	CIPRO/LEVO S I R N	COL/PB S I R N	GENT S I R N	
Pathogen #	F								
_____	C (s av								
Pathogen #	O								
_____	O (specify) _____	Drug 1 S I R N	Drug 2 S I R N	Drug 3 S I R N	Drug 4 S I R N	Drug 5 S I R N	Drug 6 S I R N	Drug 7 S I R N	Drug 8 S I R N	Drug 9 S I R N
_____	Organism 1 (specify) _____	Drug 1 S I R N	Drug 2 S I R N	Drug 3 S I R N	Drug 4 S I R N	Drug 5 S I R N	Drug 6 S I R N	Drug 7 S I R N	Drug 8 S I R N	Drug 9 S I R N
_____	Organism 1 (specify) _____	Drug 1 S I R N	Drug 2 S I R N	Drug 3 S I R N	Drug 4 S I R N	Drug 5 S I R N	Drug 6 S I R N	Drug 7 S I R N	Drug 8 S I R N	Drug 9 S I R N

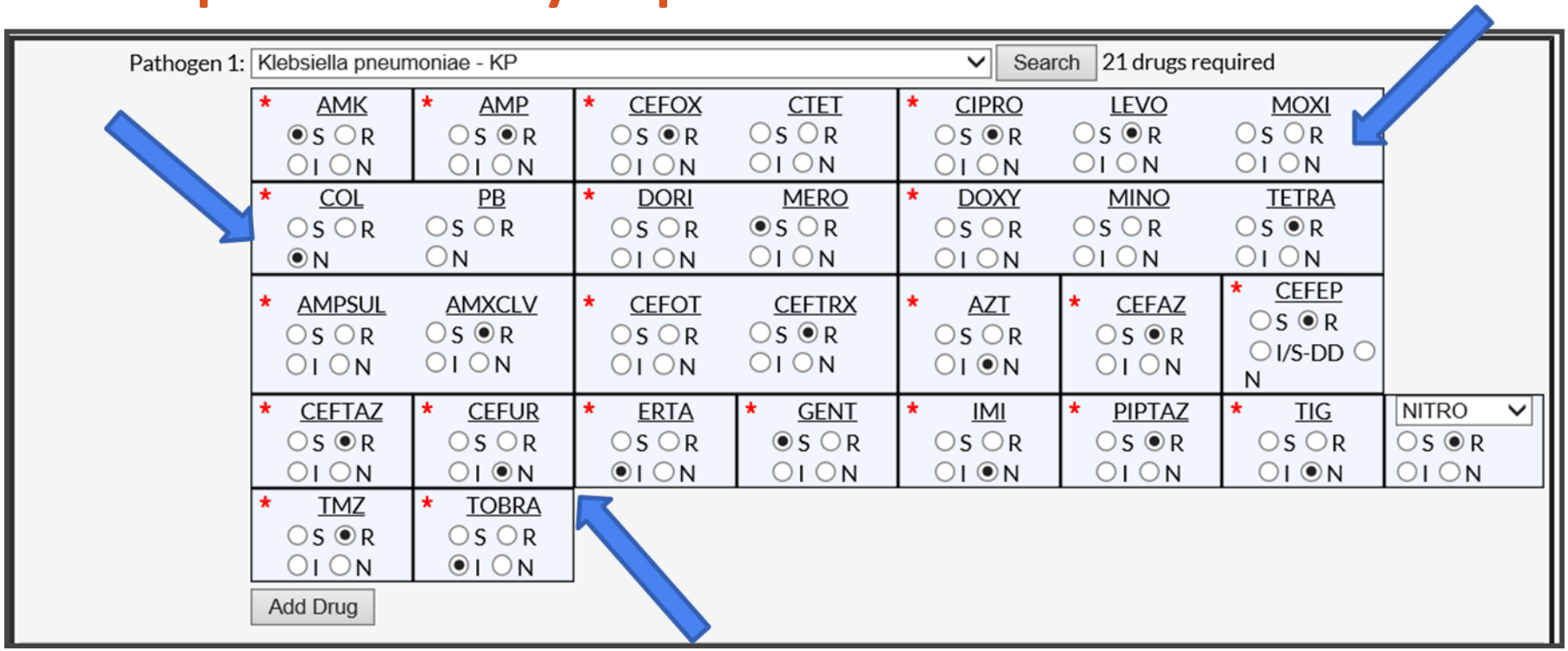
Result Codes

S = Susceptible I = Intermediate R = Resistant NS = Non-susceptible S-DD = Susceptible-dose dependent
N = Not tested
ᵟ GENTHL results: S = Susceptible/Synergistic and R = Resistant/Not Synergistic
† Clinical breakpoints have not been set by FDA or CLSI, Sensitive and Resistant designations should be based upon epidemiological cutoffs of Sensitive MIC ≤ 2 and Resistant MIC ≥ 4

Result Codes

S = Susceptible I = Intermediate R = Resistant NS = Non-susceptible S-DD = Susceptible-dose dependent
N = Not tested
ᵟ GENTHL results: S = Susceptible/Synergistic and R = Resistant/Not Synergistic
† Clinical breakpoints are based on CLSI M100-ED30:2020, Intermediate MIC ≤ 2 and Resistant MIC ≥ 4

Example Sensitivity Report



https://www.cdc.gov/nhsn/pdfs/gen -support/USP-Alert-current.pdf

USP form

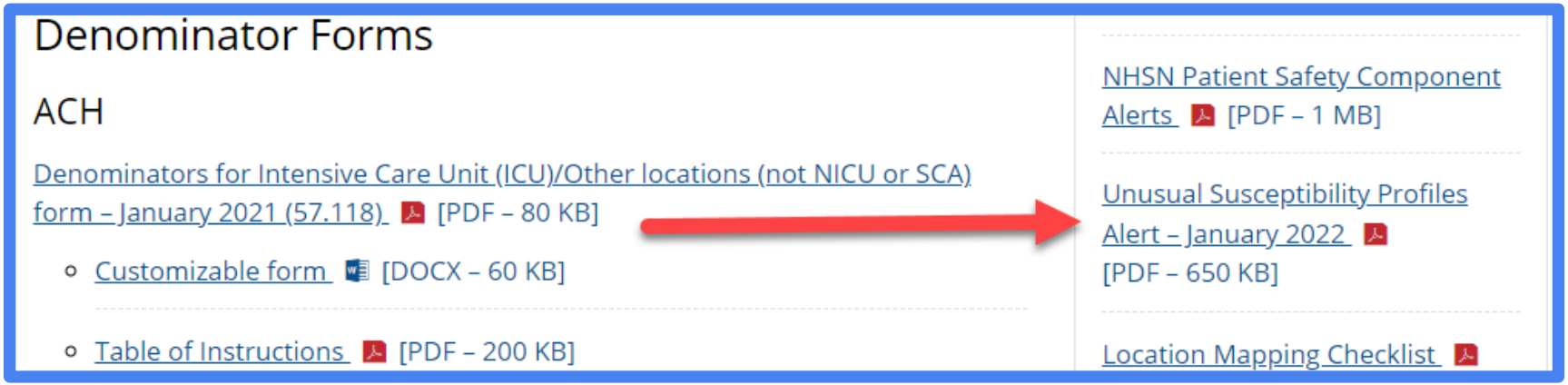
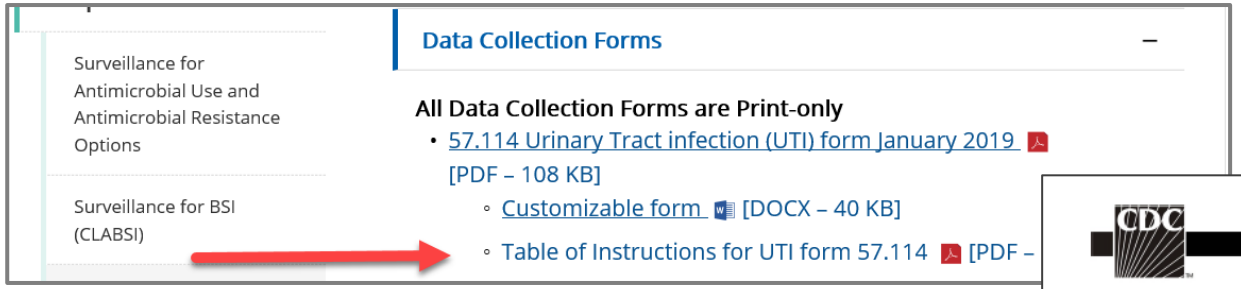
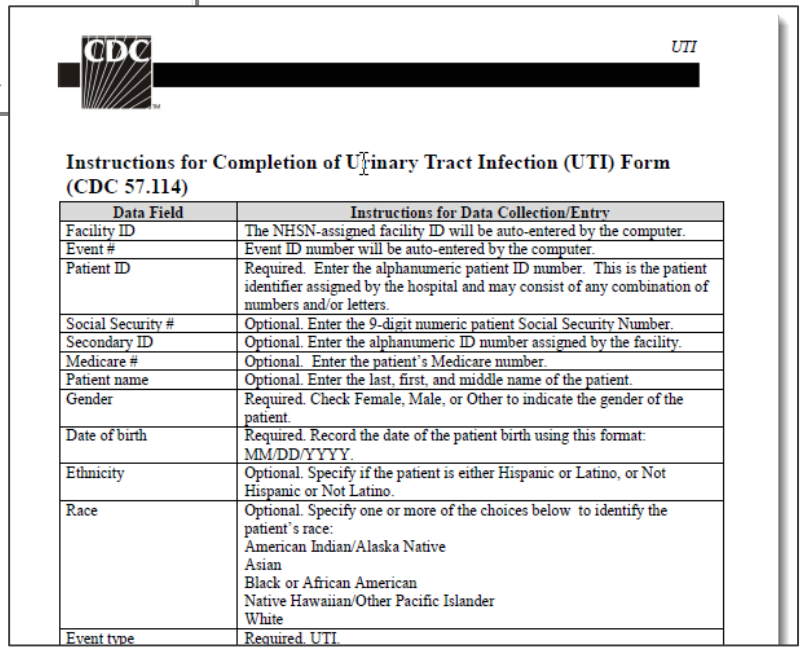

Denominator Forms
ACH
Denominators for Intensive Care Unit (ICU)/Other locations (not NICU or SCA) form – January 2021 (57.118) [PDF – 80 KB]
Customizable form [DOCX – 60 KB]
Table of Instructions [PDF – 200 KB]
NHSN Patient Safety Component Alerts [PDF – 1 MB]
Unusual Susceptibility Profiles Alert – January 2022 [PDF – 650 KB]
Location Mapping Checklist

Table of Instruction Form (57.114)





CDC

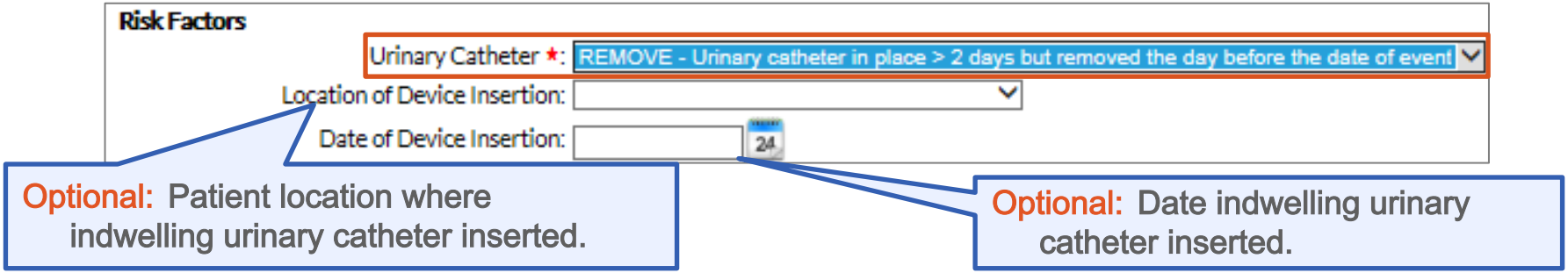
UTI

Instructions for Completion of Urinary Tract Infection (UTI) Form (CDC 57.114)

Data Field	Instructions for Data Collection/Entry
Facility ID	The NHSN-assigned facility ID will be auto-entered by the computer.
Event #	Event ID number will be auto-entered by the computer.
Patient ID	Required. Enter the alphanumeric patient ID number. This is the patient identifier assigned by the hospital and may consist of any combination of numbers and/or letters.
Social Security #	Optional. Enter the 9-digit numeric patient Social Security Number.
Secondary ID	Optional. Enter the alphanumeric ID number assigned by the facility.
Medicare #	Optional. Enter the patient's Medicare number.
Patient name	Optional. Enter the last, first, and middle name of the patient.
Gender	Required. Check Female, Male, or Other to indicate the gender of the patient.
Date of birth	Required. Record the date of the patient birth using this format: MM/DD/YYYY.
Ethnicity	Optional. Specify if the patient is either Hispanic or Latino, or Not Hispanic or Not Latino.
Race	Optional. Specify one or more of the choices below to identify the patient's race: American Indian/Alaska Native Asian Black or African American Native Hawaiian/Other Pacific Islander White
Event type	Required. UTI.

Risk Factors: CAUTI

Required Field: Urinary Catheter



Three options:

INPLACE- Urinary catheter in place for more than2 consecutive days on the date of event

REMOVE – Urinary catheter in place for more than 2 consecutive days but was removed the day before the date of event

NEITHER – If no urinary catheter was in place on the day of or the day before the date of event OR not in place >2 calendar days on the date of event

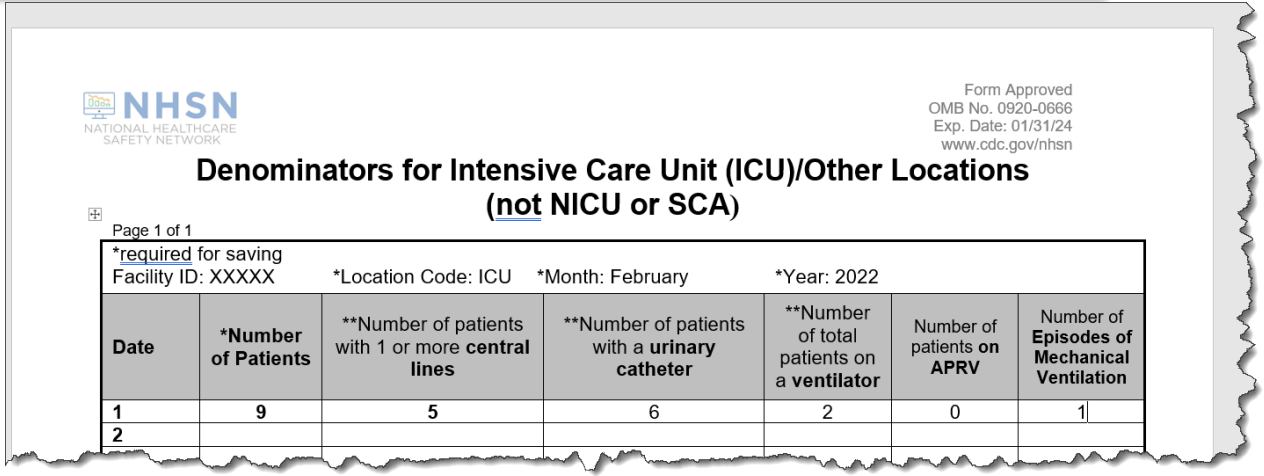
Denominator and Summary Data

Collecting Summary Denominator Data

Manual Collection

For all locations, count **at the same time each day**

- Number of patients on the inpatient unit
- Number of patients with an indwelling urinary catheter



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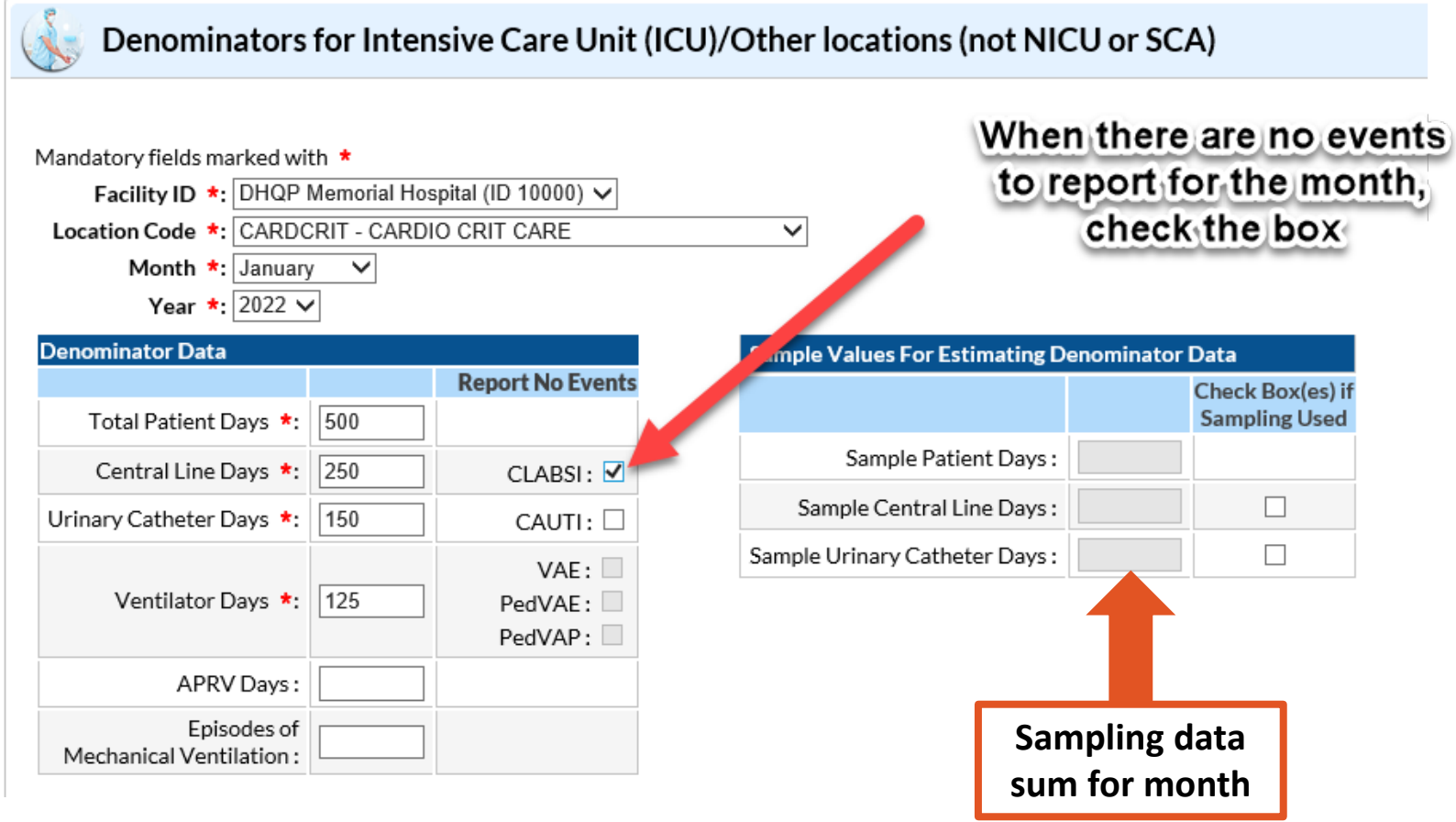
Denominators for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA)

Page 1 of 1

*required for saving
Facility ID: XXXXX *Location Code: ICU *Month: February *Year: 2022

Date	*Number of Patients	**Number of patients with 1 or more **central lines**	**Number of patients with a **urinary catheter**	**Number of total patients on a **ventilator**	Number of patients **on APRV**	Number of **Episodes of Mechanical Ventilation**
1	9	5	6	2	0	1
2						

Denominator data



Collecting Summary Denominator Data

Optional alternatives:

- Electronically collected
  - Validate the electronic method against the manual method
  - Collect 3 months concurrent data using both methods
  - Calculate the data need to be within 5% (+/-) of the manually-collected
- Weekly Sampling
  - Reduce staff time-estimate indwelling urinary catheter days (IUC)
  - ICU and ward locations with average of ≥75 IUC days per month
  - Saturday or Sunday - least accurate estimates of denominator data, therefore, these days should not be selected

Common Mistakes

Common Misapplications of the Protocol

1. UTI as secondary infection

2. Positive culture on admission automatically = Present on Admission (POA)

3. UTI signs or symptoms such as fever on admission automatically = POA

#1:

UTI as secondary infection-Never

NOTE: UTI is a primary site of infection and cannot be considered secondary to another site of infection

When a patient meets CAUTI and the same organism is identified in a burn wound culture these are considered 2 sites of infection

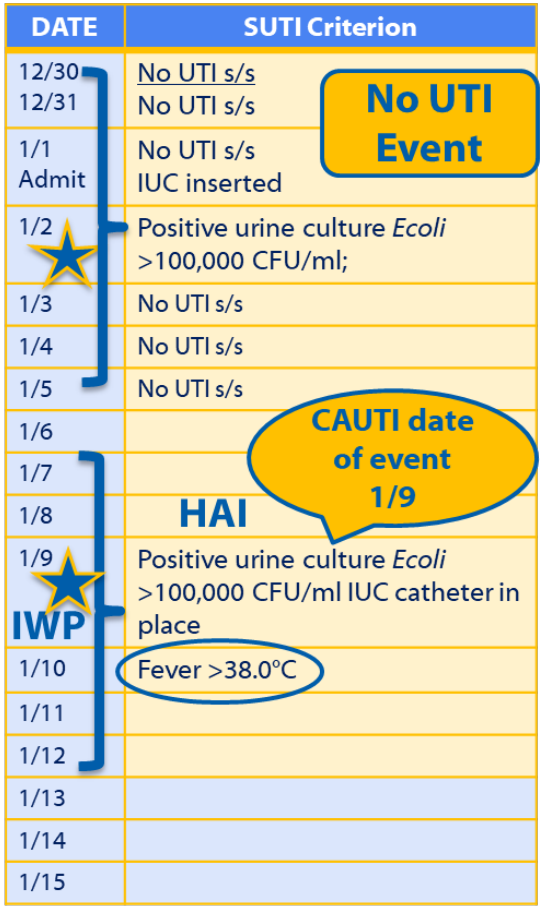
When a patient meets PNEU event, a CAUTI cannot be classified as a secondary infection even though the same organism is identified

A patient can have 2 different sites of infection

#2

Positive urine culture on admit = POA-NO

- 1/2 Positive urine culture during the POA timeframe without UTI signs or symptoms nor matching blood organism in the IWP is not an event**; therefore this does not meet POA**.
- 1/9 Positive urine culture sets the IWP: 1/6– 1/12.
- 1/10 fever occurs in the IWP, and is used to meet SUTI, **DOE 1/9**.
- The IUC was in place > 2 days on the DOE therefore meets SUTI 1a: CAUTI which is HAI.



#3

UTI signs or symptoms on admission = POA-NO

- The 3/11 urine culture sets the IWP: 3/8 – 3/14
- The 3/10 fever > 38^0 C can be used because it occurs in the IWP
- This meets CAUTI, **DOE** 3/10
- Cannot use the 3/1 fever > 38^0 C because it does not occur in the IWP

DATE	SUTI CRITRION	HOSPITAL DAY
3/1 Admit	Admit with IUC in place Fever> 38° C	1
3/2	Fever> 38° C	2
3/3	Fever> 38° C	
3/4	Fever> 38° C	
3/5	Fever> 38° C	
3/6	Fever> 38° C	6
3/7		7
3/8		
3/9		9
3/10	Fever> 38° C HAI	10
3/11 IWP	Positive urine culture > 100,000 CFU/ml E.coli	11
3/12		12
3/13		13
3/14		14

UTI criteria not met; POA requires positive urine culture

CAUTI date of event 3/10

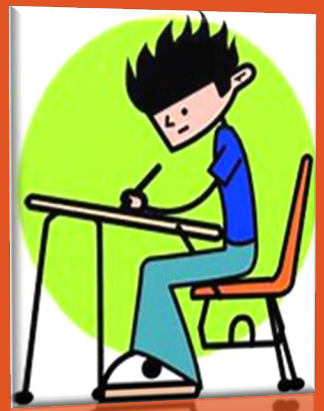
Sending Questions to NHSN

Submit UTI case review questions to nhsn@cdc.gov

Sample of Complete NHSN Case review request:

- Date of Admission
- Date(s) of IUC insertion/removal if applicable
- Age of patient
- Date(s) and results of urine cultures including colony count
- Date(s) and types of UTI signs/symptoms
- Date(s) and results of any positive blood cultures
- Include your determination
- **Do not include confidential Personal Identifiable Information**

Case Studies



Steps in Investigating a Positive Urine Culture as Possible CAUTI

1.	Determine the date of the urine culture collection.
2.	From the date of the urine culture determine the 7-day IWP: 3 days before the urine culture, the day of the urine culture and 3 days after for a total of 7 days.
3.	Determine if all of the elements of the UTI are met during the IWP. If yes, there is an infection event. If no, there is no event.
4.	Next determine the DOE : the date that the first element occurs for the first time within the IWP.
5.	Is the DOE in the POA time period? If yes, the infection is POA, if no, it is an HAI. (POA time period is defined as the day of admission to an inpatient location, the 2 days before admission, and the calendar day after admission)
6.	Next (if appropriate) determine if the HAI is device-associated, i.e. CAUTI. If the DOE occurred on or after calendar day 3 of device use in an inpatient location, and the device was in place on that day or the day before, the HAI is device-associated.

Applying the basics: Case 1

DATE	Infection Window Period
2/2 ED	**Patient female 35 years of age IUC inserted**
2/3 ADMIT	**Fever 100.9^0 F IUC day #1**
2/4	**Fever 100.8^0 F IUC day #2**
2/5	**urine culture: *CNS* 10^5 CFU/ml IUC day #3**
2/6	
2/7	
2/8	
2/9	

- Determine the IWP
- What is the DOE?
- Is this event catheter associated?
- Is this event POA or HAI?
- What is the RIT?
- What is the SBAP?

Rationale and Determination: Case 1

- The **2/5 positive urine culture** sets the **IWP**: 2/2 - 2/8.
- The **2/3 fever** is the **first element** to occur within the IWP therefore is the **DOE;**
  - RIT = 2/3-2/16; SBAP = 2/3-2/16
- Is this POA or HAI. It is Present on admit since the DOE was on hospital day 1.
- The IUC was **not** in place > 2 days in the **inpatient location** on the **DOE** therefore meets **SUTI 1b: Non-Catheter-Associated UTI**, and a UTI RIT and SBAP is set

Meets SUTI 1b: Non-Catheter-Associated UTI

DATE	SBAP	RIT	Infection Window Period
2/2 ED			IUC inserted
2/3 ADMIT **DOE POA**		1	Fever 100.9^0 F IUC day #1
2/4		2	Fever 100.8^0 F IUC day #2
2/5		3	urine culture: *CNS* 10^5 CFU/ml IUC day #3
2/6		4	
2/7		5	
2/8		6	Blood culture 2/8
2/9		7	

Transfer Rule: Case 2

Date	Details
2/2	Patient 75 years old seen in ED, IUC inserted
2/3	**Admitted** to Critical Care (CC) Temperature 100.2°F
2/4	Temperature 100.1°F
2/5	Urine culture collected and positive for 100,000 CFU/ml E. coli, Temperature 100.2F. Transferred to Medical unit
2/6	Fever 100.8
2/15	IUC removed, Discharged to home

Rationale and Determination: Case 2

- The 2/5 positive urine culture sets IWP: 2/2 – 2/8.
- The temps **2/3 and 2/4 are < 100.4 F,** cannot be used to meet UTI.
- There is a fever on 2/6 completing the criterion.
- **DOE** is therefore the 2/5 as the culture was the **first** element to occur for the **first** time within the IWP.
- IUC was in place > 2 consecutive day in an inpatient unit = CAUTI
- Location of attribution (LOA) = CC

DATE	Infection Window Period
2/2 ED	IUC inserted
2/3 ADMIT	Temp 100.2^0 F IUC day #1 Location CC
2/4	Temp 100.1^0 F IUC day #2 Location CC DOE; LOA = CC
2/5	urine culture: *E. coli* 10^5 CFU/ml Location CC/Med IUC day #3 100.2F
2/6	Fever 100.8
2/7	
2/8	
2/9	

COVID-19 Yes; No: Case 3

Date	Details
12/25	Patient admit for respiratory distress, IUC inserted; *COVID-19 (SARS CoV-2) positive*
12/25-28	No UTI signs/symptoms
12/29	Elevated wbc's, No UTI s/s, Positive blood with *S. aureus* and positive urine culture with > 10^5 CFU/ml *S. aureus*
12/30-1/1	No UTI s/s
1/8	IUC removed; *COVID-19 (SARS CoV-2) negative 1/25* Discharged to home 1/30

What is the IWP, DOE, event identified, report COVID-19 Yes or No?

Case COVID Yes; No

- **Required question for all HAI events occurring on or after January 1, 2022 COVID-19**
  - Answer COVID-19 as ‘YES’ if the patient is lab test confirmed COVID-19 prior to or on the date of event (HAI). Keep in mind that patients may undergo repeat testing post-treatment and may move from a ‘confirmed’ to ‘negative’ COVID-19 status.
  - Answer COVID-19 as ‘NO’ if the most recent lab test prior to or on the date of event (HAI) is negative.

We did not include in our definition a length of time for the patient to be considered 'confirmed'; however, we focus strictly on the current hospitalization and the response should be based on the lab test available within the current patient record.

It is our hope that the data received over time will enable us to identify the risk of the COVID-19 condition on HAIs.

Case COVID Yes No

Date	Details
12/25	Patient admit for respiratory distress, IUC inserted; *COVID-19 (SARS CoV-2) positive*
12/25-28	No UTI signs/symptoms (s/s)
12/29	Elevated wbc's, No UTI s/s, Positive blood with *S. aureus* and positive urine culture with > 10^5 CFU/ml *S. aureus*
12/30-1/1	Fever > 38.0 **(IWP=12/26-1/1; DOE = 12/29; COVID-19 = Yes)**
1/8	IUC removed, ; *COVID-19 (SARS CoV-2) negative* Discharged to home

Summary

- Reviewed the 2022 UTI Protocol, key concepts and common mistakes
- Remember
  - Positive urine culture OR UTI s/s on admission does not automatically meet POA
  - UTI is a primary site of infection; cannot be secondary to another site of infection
- Identified how to count urinary catheter days to determine infection association
  - Catheter count begins on day of insertion and if IUC in place in place prior to admission, begins with admission date to the first inpatient location
- Applied basic concepts using case studies including the COVID-19 Yes/No required, new for 2022

Recipe for good Goulash!

- Ingredients
  - 2 lbs lean ground beef or Turkey
  - 1 large onion, chopped
  - 30 ounces tomato sauce or juice
  - 2 cans diced tomatoes
  - 16 ounces package elbow macaroni cooked as directed
- In a large pot brown hamburger with onion. Drain grease, add sauce, tomatoes and cooked macaroni. Salt and pepper to taste, simmer for 15 minutes
- Serve in pasta bowls, top with your favorite cheeses

For any questions or concerns, contact the NHSN Helpdesk at nhsn@cdc.gov

For more information please contact Centers for Disease Control and Prevention
1600 Clifton Road NE, Atlanta, GA 30333
Telephone, 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov Web: www.cdc.gov