2023 CLABSI Medical Record Abstraction Tool Instructions

Section 1a. Patient Information: Complete patient identifiers and demographics from patient medical record and ADT data.

Section 1b. Screening Questions: Using the selected positive blood culture (PBC) from the facility provided line list, determine the following:

b1. Was the selected PBC collected on or after facility day 3 or was the date of event (DOE) the day of transfer or discharge, or the next day? If Yes, continue to next question.

b2. Was central line (CL) in place** for >2 calendar days AND in place the day of or day prior to selected PBC collection? (**In place: day of CL insertion is considered CL Day 1, unless patient was admitted to facility with CL in place, then day of first line access in an inpatient location is CL Day 1.) If Yes, continue to next question.

b3. Were any organisms identified excluded pathogens from the LCBI definition? If No, this is a candidate PBC. Continue to next section. **NOTE:** If there is a recognized pathogen in addition to one of these organisms, work up the blood specimen for an LCBI.

Section 2. Positive Blood Cultures:

Document positive blood cultures (PBCs) in reverse chronological order. Start by entering the selected PBC as row 1. Review the 14 days prior to the selected PBC's collection date and document any additional PBCs identified. If additional PBCs are identified during the 14-day period, review the next 14 days prior to the earliest additional collection date and document any additional PBCs found. Repeat this process until no additional PBCs are identified within a 14-day period of each other or the admit date is reached.

Indicate if PBC was a "Surveillance Location (SL) blood culture", defined as those collected during SL stays, the day of departure from the SL, or the following three (3) calendar days. Note: These SL PBCs are eligible for possible SL CLABSI. Non-SL blood specimens may also be important to establish BSI repeat infection timeframe (RIT) and other location of attribution.

For each organism, indicate whether it is a pathogen (P) or common commensal (CC); the list of common commensals is available in LCBI Criteria. **NOTE:** Common commensals should only be evaluated as matched pairs/multiples if they were drawn on same/consecutive days; otherwise, they are considered contaminants. The matching common commensals represent a single element; therefore, the collection date of the **first** common commensal is the date of the blood collection element. If signs/symptoms of LCBI 2/3 criteria occur within the 3 days prior to the date of the blood collection element, the first sign/symptom is used as the DOE to determine the RIT dates.

Using clinical information (which can include signs/symptoms and test results), enter the PBC's date of event (DOE), which is the date of the first element used to meet NHSN BSI criterion occurs for the first time within the seven-day infection window period, then divide the PBCs into distinct repeat infection timeframes (RIT) and enter the PBC's RIT end date. PBCs during previous BSI RIT (regardless of change in organism) are considered a single Infection Event.

LCBI Infection Window Period (IWP): The NHSN LCBI Infection Window Period is defined as the 7-days during which all LCBI criteria must be met. It includes the day the first positive blood specimen is obtained, the 3 calendar days before and the 3 calendar days after.

The LCBI RIT is a 14-day timeframe during which no LCBI are reported. The DOE for LCBI is Day 1 of the 14-day BSI RIT. If criteria for LCBI are met again within the 14-day LCBI RIT, no new LCBI is identified or reported. Additional organisms identified in blood during the LCBI RIT are added to the initial event.

Section 3a. Location: Document the facility location of attribution for the selected PBC.

Section 3b. Central Lines: Document any central line present on the day of or day prior to the specimen collection date of the selected PBC. Do not document individual lines removed and replaced on same/consecutive days. *Note: An eligible central line is defined as an IV catheter ending at/near heart or in great vessel (aorta, PA, SVC, IVC, brachiocephalic, internal jugular, subclavian, external iliac, common iliac, or femoral vein; umbilical artery/vein), inserted or accessed and used for infusion, blood draw, or hemodynamic monitoring (NHSN Patient Safety (PS) Manual BSI Chapter 4).*

Section 4. Use Table 1 below to determine if the selected PBC's infection episode meets the criteria to qualify as LCBI. If yes, select the LCBI type.

Table 1. LABORATORY CONFIRMED BLOODSTREAM INFECTION (LCBI) CRITERIA

a. *Evaluate the selected PBC as potential Laboratory Confirmed Bloodstream Infection (LCBI), using the columns below to* ***determine if there was an LCBI, and which type (LCBI 1, LCBI 2, or LCBI 3) was met, if any.*** *All elements listed in a column are required to meet the LCBI definition.*

b. *If an LCBI definition is met, determine whether the LCBI also meets the corresponding definition of mucosal-barrier injury (MBI-LCBI), which is a subset of LCBI.*

c. *ONLY IF an Infection Event is related to infection at another primary site, document the alternative primary site and specific type of infection on page 4,* ***attach completed NHSN checklist for alternative primary site****, and cite evidence (e.g., required cultures, test results, symptoms, and DOE dates) documenting that alternative primary site infection definition was met within an infection window period (date of the diagnostic test, the three calendar days before and the 3 three calendar days after) and that all requirements of the* ***NHSN PS Manual BSI Chapter, Appendix B: Secondary Bloodstream Infection Guide*** *are met. NOTE: ENDO (endocarditis) has a 21-day infection window period consisting of the date of the diagnostic test, the ten days before and the ten days after.*

LCBI type:	LCBI 1 (any age)	LCBI 2 (any age)	LCBI 3 (age ≤1 year only)
Organism(s) in blood element	☐ Patient of any age has a recognized bacterial or fungal pathogen, not included on the NHSN common commensal list: 1. Identified from one or more blood specimens obtained by a culture OR Identified to the genus or species level by non-culture based microbiologic testing methods (for example, T2 Magnetic Resonance [T2MR] or Karius test). Note: If blood is collected for culture within 2 days before, or 1 day after the NCT, disregard the result of the NCT and use only the result of the CULTURE to make an LCBI surveillance determination. If no blood is collected for culture within this time period, use the result of the NCT for LCBI surveillance determination.	☐ Matching common commensal(s)* (CC) identified from two or more blood cultures drawn on separate occasions on same or consecutive days (this is one element and can bridge to other elements either forward or backward).	☐ Matching common commensal(s)* (CC) identified from two or more blood cultures drawn on separate occasions on same or consecutive days (this is one element and can bridge to other elements either forward or backward).

Other site exclusion	☐ Organism(s) identified from blood is not related to an infection at another site. ➢ *If alternative primary site is likely, a completed NHSN checklist is required, with review of NHSN PS Manual BSI Chapter 4, Appendix B: Secondary BSI Guide. Type of alternative primary site infection, date of alternative primary event, and Appendix B criterion is recorded under outcomes on p 4.*	☐ Organism(s) identified from blood is not related to an infection at another site. ➢ *If alternative primary site is likely, a completed NHSN checklist is required, with review of NHSN PS Manual BSI Chapter 4, Appendix B: Secondary BSI Guide. Type of alternative primary site infection, date of alternative primary event, and Appendix B criterion is recorded under outcomes on p 4.*	☐ Organism(s) identified from blood is not related to an infection at another site. *If alternative primary site is likely, a completed NHSN checklist is required, with review of NHSN PS Manual BSI Chapter 4, Appendix B: Secondary BSI Guide. Type of alternative primary site infection, date of alternative primary event, and Appendix B criterion is recorded under outcomes on p 4.*
Age and Symptoms/ Signs element	Any Age (Any symptom or No Symptoms/Signs)	Any Age ☐ At least ONE of: ○ Fever >38.0°C ○ Chills ○ Hypotension	Infant ≤1 year of age ☐ At least ONE of: ○ Fever >38.0°C ○ Hypothermia <36.0° ○ Apnea ○ Bradycardia
Timeframe	(NA)	☐ All LCBI 2 elements must occur within the Infection Window Period, the seven-day time period which includes the date the positive blood specimen was collected, the 3 calendar days before and the 3 calendar days after.	☐ All LCBI 3 elements must occur within the Infection Window Period, the seven-day time period which includes the date the positive blood specimen was collected, the 3 calendar days before and the 3 calendar days after.

**Common Commensal organisms include, but are not limited to* diphtheroids*, Corynebacterium* spp. [not *C. diphtheria*], *Bacillus* spp. [not *B. anthracis*], *Propionibacterium* spp., coagulase-negative staphylococci [including *S. epidermidis*], viridans group streptococci*, Aerococcus* spp., *Micrococcus* spp., and *Rhodococcus* spp. *(For a complete list of Common Commensals, see the Common Commensal tab of the 2018 NHSN Organisms List, located on the NHSN Data Validation webpage under 2018 Resources: https://www.cdc.gov/nhsn/validation/index.html.)*

For any event meeting LCBI criteria above, determine whether event is an MBI-LCBI using criteria below.

Patient meets at least one of the following:

☐ Is an allogeneic hematopoietic stem cell transplant recipient within the past year with one of the following documented during the same hospitalization as positive blood specimen:
- ○ Grade III or IV gastrointestinal graft vs. host disease (GI-GVHD) and/or
- ○ ≥1 liter diarrhea in a 24-hour period (or ≥20 mL/kg in a 24-hour period for patients <18 years of age) with onset on or within 7 calendar days before the date the positive blood specimen was collected

OR

☐ Is neutropenic, defined as at least two (2) separate days with absolute neutrophil count (ANC) and/or total white blood cell (WBC) values <500 cells/mm^3 collected within a 7-day time period which includes the collection date of the positive blood specimen, the 3 calendar days before, and the 3 calendar days after. (Refer to NHSN PS Manual BSI Chapter 4)

—AND—

(*select appropriate LCBI column)*

MBI	☐ Organism(s) is one of the MBI-LCBI organisms (see NHSN BSI Chapter, Appendix A: Partial List of Criterion 1 MBI-LCBI Eligible Enterobacteriaceae Genera, or MBI Organisms tab on the NHSN Organism List for a complete list), **and** no other organism(s) are isolated	☐ Organism(s) are viridans group streptococci and/or *Rothia* spp. with no other organism(s) isolated	☐ Organism(s) are viridans group streptococci and/ or *Rothia* spp. with no other organism(s) isolated

Section 6. Was the LCBI Healthcare-Associated (HAI) or Present on Admission (POA)?

Determine whether the date of event of LCBI occurred 2 days before facility admission or the day after facility admission (POA)? Select Yes or No.

Note: Acceptable documentation for POA includes self-reported symptoms by the patient (e.g., patient states fever > 38.0°C). Criteria documented by a healthcare professional (e.g., nursing home documented fever or stated patient was febrile prior to arrival at the hospital) is also acceptable. Physician diagnosis of LCBI without criteria documentation cannot be accepted.

Section 7. Determining whether the HAI-LCBI is a CLABSI:

Review CLABSI exclusion criteria and select all that apply. If no exclusion criteria are selected, the HAI LCBI is a CLABSI. Proceed to the next section.

- **ECMO or VAD:** *If the patient had an Extracorporeal life support (ECMO) or Ventricular assist device (VAD) that has been in place for more than 2 consecutive days on the BSI DOE and is still in place on the DOE or the day before, such cases are considered LCBIs but are **NOT** central line associated (not a CLABSI) for NHSN reporting purposes. Note: If the patient was admitted to a facility with central line in place, day of first line access as an inpatient is considered central line Day 1.*

- **Patient injection:** Patient has medical documentation of suspected or observed self-injection into the vascular access line within the infection window period.

- **Epidermolysis bullosa (EB) or Munchausen Syndrome by Proxy (MSBP):**
  - **EB:** During the current admission, there is documentation of a diagnosis of EB
  - **MSBP:** During the current admission, there is documentation was a suspicion or confirmed diagnosis, during the current admission, of Munchausen Syndrome by Proxy (MSBP), or was there a confirmed diagnosis of Epidermolysis bullosa (EB)? If a CL was in place >2 days on a BSI DOE, these events are considered LCBIs but are **NOT** considered central line associated. Select Yes or No.

- **Pus at a vascular access site**: Occasionally, a patient with both a central line and another vascular access device will have pus at the other access site. If there is pus at the site of one of the following vascular access devices and a specimen collected from that site has at least one matching organism to an organism identified in blood that is collected in the LCBI IWP, the BSI will not be considered central line associated. Vascular access devices included in this exception are limited to the following:
  - Arterial catheters
  - Arteriovenous fistulae
  - Arteriovenous grafts
  - Atrial catheters (also known as transthoracic intra-cardiac catheters, those catheters inserted directly into the right or left atrium via the heart wall)
  - Hemodialysis reliable outflow (HERO) dialysis catheters
  - Intra-aortic balloon pump (IABP) devices
  - Non-accessed CL (those neither inserted nor used during current admission)

- Peripheral IV or Midlines

- **Group B Streptococcus identified in the first 6 days of life:** Group B Streptococcus identified from blood, with a date of event during the first 6 days of life, will not be reported as a CLABSI. A BSI RIT is set, and any associated device days should be included in counts for denominator summary data.

Section 7. Was Surveillance Location (SL) the Location of Attribution?

Answer questions **a-c** to identify if patient was in a SL on date of LCBI Event* or day before Event? **Date of LCBI Event is date when first of required LBCI elements occurred.* If there was a transferring location, was this a SL?

Section 8. Outcome and Case Classification

8a. Outcome Determination: Select the outcome for the selected PBC. If outcomes b is selected, complete the additional fields as listed.

8b. Case Classification: Select the case classification for the selected PBC. If the selected PBC was correctly reported or correctly not reported, the validation for this patient is complete. If the selected PBC was over- or under-reported, proceed to 8c.

8c. Misclassification Reason: Select the most appropriate reason identified for misclassification. If an "Other" option is selected, enter the specific reason.