

2024 NHSN Laboratory Confirmed Bloodstream Infection (LCBI) Checklist

Laboratory Confirmed Bloodstream Infection (LCBI) Summary		
Criterion	Criterion Met	Date of Event (DOE)
LCBI 1	<input type="checkbox"/>	
LCBI 2	<input type="checkbox"/>	
LCBI 3	<input type="checkbox"/>	
MBI-LCBI 1	<input type="checkbox"/>	
MBI-LCBI 2	<input type="checkbox"/>	
MBI-LCBI 3	<input type="checkbox"/>	
Please refer to Chapter 4 Bloodstream Infection (BSI) Event of the Patient Safety Manual for additional information.		



Documentation Review Checklist		
Laboratory Confirmed Bloodstream Infection (LCBI)		
LCBI 2		
If LCBI 2 criteria is met, consider MBI-LCBI 2		
Element	Element Met	Date
Patient of any age has at least one of the following signs or symptoms:		
• Fever (> 38°C)	<input type="checkbox"/>	
• Chills	<input type="checkbox"/>	
• Hypotension	<input type="checkbox"/>	
AND		
• Organism(s) identified in blood is not related to an infection at another site (See Chapter 4 Appendix: Secondary BSI Guide).	<input type="checkbox"/>	
AND		
• The same NHSN common commensal is identified by a culture from two or more blood specimens collected on separate occasions (see Blood Specimen Collection).	<input type="checkbox"/>	
For common commensal organisms, see the Common Commensal tab of the NHSN Organism List accessed via the spreadsheet or refer to the new NHSN Terminology Browser .		
Notes:		
<ol style="list-style-type: none"> 1. Criterion elements must occur within the 7-day IWP (as defined in Chapter 2 Identifying HAIs for NHSN Surveillance) which includes the collection date of the positive blood specimen, the 3 calendar days before and the 3 calendar days after. 2. The two matching common commensal specimens represent a single element for use in meeting LCBI 2 criterion and the collection date of the <i>first</i> specimen is used to determine the BSI IWP. 3. At least one element (specifically, a sign or symptom of fever, chills, or hypotension) is required to meet LCBI 2 criterion; the LCBI 2 DOE will always be the date the <i>first</i> element occurs for the first time during the BSI IWP, whether that be a sign or symptom or the positive blood specimen. 		
Comments/Notes:		

Documentation Review Checklist		
Mucosal Barrier Injury Laboratory-Confirmed Bloodstream Infection (MBI-LCBI)		
Must meet <u>one</u> of the following MBI-LCBI criteria		
MBI-LCBI 1		
Element	Element Met	Date
Patient of any age fully meets LCBI 1 criterion with at least one blood specimen:		
1. Identified from one or more blood specimens obtained by a culture OR 2. Identified to the genus or species level by non-culture based microbiologic testing (NCT) methods (for example, T2 Magnetic Resonance [T2MR] or next-generation sequencing [NGS]). Note: <i>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.</i>	<input type="checkbox"/>	
AND		
ONLY intestinal organisms from the NHSN MBI organism list are identified*	<input type="checkbox"/>	
AND		
Patient meets at least one of the following:		
1. Is an allogeneic hematopoietic stem cell transplant recipient within the past year with one of the following documented during same hospitalization as positive blood specimen:	<input type="checkbox"/>	
a. Grade III or IV gastrointestinal graft versus host disease [GI GVHD]	<input type="checkbox"/>	
OR		
b. ≥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 the 7 calendar days before the date the positive blood specimen was collected.	<input type="checkbox"/>	
OR		
2. Is neutropenic, defined as at least two separate days with ANC and/or 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 (See Chapter 4 Table 5).	<input type="checkbox"/>	



MBI-LCBI 2		
Patient of any age fully meets LCBI 2 criterion with at least two matching blood specimens identified by culture	<input type="checkbox"/>	
AND		
ONLY Viridans Group <i>Streptococcus</i> and/or <i>Rothia</i> spp. alone but no other organisms are identified†	<input type="checkbox"/>	
AND		
Patient meets at least <i>one</i> of the following:		
1. Is an allogeneic hematopoietic stem cell transplant recipient within the past year with one of the following documented during same hospitalization as positive blood specimen:	<input type="checkbox"/>	
a. Grade III or IV gastrointestinal graft versus host disease [GI GVHD]	<input type="checkbox"/>	
OR		
b. ≥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 the 7 calendar days before the date the positive blood specimen was collected.	<input type="checkbox"/>	
OR		
2. Is neutropenic, defined as at least two separate days with ANC and/or 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 (See Chapter 4 Table 5).	<input type="checkbox"/>	

MBI-LCBI 3		
Patient ≤1 year of age fully meets LCBI 3 criterion with at least two matching blood specimens identified by culture	<input type="checkbox"/>	
AND		
ONLY Viridans Group <i>Streptococcus</i> and/or <i>Rothia</i> spp. alone but no other organisms are identified†	<input type="checkbox"/>	
AND		
Patient meets at least <i>one</i> of the following:		
1. Is an allogeneic hematopoietic stem cell transplant recipient within the past year with one of the following documented during same hospitalization as positive blood specimen:	<input type="checkbox"/>	
a. Grade III or IV gastrointestinal graft versus host disease [GI GVHD]	<input type="checkbox"/>	
OR		
b. ≥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 the 7 calendar days before the date the positive blood specimen was collected.	<input type="checkbox"/>	
OR		
2. Is neutropenic, defined as at least two separate days with ANC and/or 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 (See Chapter 4 Table 5).	<input type="checkbox"/>	
<ul style="list-style-type: none"> • An MBI-LCBI is a subset of the LCBI criteria; therefore, a BSI event must fully meet an LCBI criterion before evaluating for the corresponding MBI-LCBI criterion. • The MBI-LCBI DOE will always be the date the prerequisite LCBI criteria are met. Abnormal ANC and WBC values reflect risk factors for acquiring an MBI-LCBI, not symptoms of infection and therefore are not used in DOE determinations. 		
Notes:		
<ol style="list-style-type: none"> 1. If a patient meets both MBI-LCBI 1 and MBI-LCBI 2 criteria or MBI-LCBI 3 criteria (specifically has Viridans Group <i>Streptococcus</i> or <i>Rothia</i> spp. and only MBI organisms in the blood specimen), report organisms as MBI-LCBI 1 with the recognized pathogen as pathogen #1 and the common commensal as pathogen #2. 2. Any combination of ANC and/or WBC values can be used to meet neutropenic criteria provided they are collected on separate days within the 7-day period that includes the date of the positive blood specimen, the 3 calendar days before and the 3 calendar days after. 3. When a blood specimen positive for an organism not included on the NHSN MBI organism list is collected during the BSI RIT of an MBI-LCBI, the initial MBI-LCBI event is edited to an LCBI and the identified non-MBI organism is added. 		
See the MBI organism tab on the NHSN Organism List accessed via the spreadsheet or refer to the new NHSN Terminology Browser for eligible MBI organisms.		
†Eligible positive blood specimens must be collected on separate occasions and limited to the following:		
<ul style="list-style-type: none"> • Viridans Group <i>Streptococcus</i> identified in at least two sets of blood specimens • <i>Rothia</i> spp. identified in at least two sets of blood specimens • Viridans Group <i>Streptococcus</i> and <i>Rothia</i> spp. identified in at least two sets of blood specimens 		

Blood Specimen Collection

The “two or more blood specimens drawn on separate occasions” criterion is met if there is blood collected from at least two separate blood draws on the same or consecutive calendar days

AND

the blood cultures are assigned separate specimen numbers, processed individually, and are reported separately in the final laboratory report.

1. Specimen Collection Considerations: Blood specimens drawn through central lines can have a higher rate of contamination than blood specimens collected through peripheral venipuncture. However, all positive blood specimens, regardless of the site from which they are drawn or the purpose for which they are collected, must be included when conducting in-plan CLABSI surveillance (for example, weekly blood cultures performed in hematology and oncology locations).
2. Catheter tip cultures cannot be used in place of blood specimens for meeting LCBI criteria.
3. In MBI-LCBI 1, 2 and 3, “no other organisms” means there is no identification of a non-MBI-LCBI pathogen (such as *S. aureus*) or 2 matching common commensals (such as coagulase-negative *staphylococci*) collected from the blood on separate occasions that would otherwise meet LCBI criteria. If this occurs, the infection does not meet MBI-LCBI criteria.
4. When a blood specimen positive for an organism not included on the NHSN MBI organism list is collected during the BSI RIT of an MBI-LCBI, the initial MBI-LCBI event is edited to an LCBI and the identified non-MBI organism is added.

MBI RIT Exception: An MBI-LCBI designation will not change to an LCBI event if the following criteria are met:

1. The blood culture with the non-MBI organism is collected during an existing BSI (MBI-LCBI) RIT
- AND**
2. The blood culture with the non-MBI organism is determined secondary to an NHSN site-specific infection

(Please see Example 5 in Chapter 4 Appendix: Secondary BSI Guide and Example 2b in Chapter 2 Pathogen Assignment.)

****Please note, once an LCBI is identified, refer to Chapter 4 Bloodstream Infection (BSI) Event of the NHSN Patient Safety Component Manual at https://www.cdc.gov/nhsn/pdfs/pscmanual/4psc_clabscurrent.pdf for Reporting Instructions and additional guidance on making central line associated (CLABSI) determinations and exclusions.**