

Summary of updates (clarifications and changes) in the 2020 KNHSS BSI protocol

- 1. A) For LCBI-1 definition** – Patient of any age has a recognized bacterial or fungal pathogen, not included on the NHSN common commensal list, identified from one or more blood specimens obtained by culture OR non-culture based microbiologic testing (NCT).

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 his time period, use the result of the NCT for LCBI surveillance determination.

B) For LCBI-2 & LCBI-3 definition - Non-culture based microbiologic testing (NCT) cannot be used for LCBI-2 or LCBI-3 diagnosis. The same NHSN common commensal should be identified by a culture, from two or more blood specimens collected on separate occasions for LCBI 2/3 diagnosis.

- 2. If a patient meets both LCBI-1 and LCBI-2/3 criteria**, report LCBI-1 with the recognized bacterial or fungal pathogen entered as pathogen # 1 and the common commensal as pathogen # 2.
- 3. Organisms that are parasites and viruses are excluded as LCBI pathogens**. This exclusion applies to meeting a primary BSI only. Viruses and parasites are eligible for use in secondary BSI determinations.
- 4. For Central Line (CL) denominator device day counts in all in-patient locations:** All central lines on inpatient units should be included in device day counts regardless of access or the number of days the central line has been in place. . .
- 5. For MBI-LCBI-** Formula for calculating Absolute Neutrophil Count (ANC) if not provided by your laboratory:

ANC = Absolute Segs + Absolute Bands

OR

ANC = WBC x %Segs + %Bands / 100

Example: WBC: 2000/mm³ Segs: 20% Bands: 20%

ANC = 2000 x (20+20)/100 = 800 cells/mm³

- 6. When one of the exclusions listed below is met, these events are reported as LCBIs, but NOT CLABSI, even in the presence of a CL. In such a case, please mark the “Is central line a risk factor” field =” No” in the presence of an eligible central line:**

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- a) In case of patients with Extracorporeal life support (ECMO) OR Ventricular assist device (VAD) that has been in place for more than 2 days on the BSI date of event (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 KNHSS reporting purposes. CL device days should be included in summary denominator counts. Check the “Patient has eligible “ECMO” or “VAD “option if this exclusion is present.
- b) Group B Streptococcus in neonates: 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 will be set but no central line association is made. CL device days should be included in summary denominator counts. Check the “Group B Strep ≤6 days after birth” option if this exclusion is present.
- c) Pus at the 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 vascular access devices listed below and a specimen collected from that site has at least one matching organism to an organism identified in blood -both collected within the infection window period -such cases are considered LCBIs but are not central line associated (not a CLABSI) for KNHSS reporting purposes. Check the “Pus at non-CL vascular access site” option if this exclusion is present.

Vascular access devices included in this exception are limited to:

- 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

- d) **MBI-LCBI:** MBI-LCBI cases are considered LCBIs but are not central line associated (not a CLABSI) for KNHSS reporting purposes. CL device days should be included in summary denominator counts. Check the “MBI-LCBI” option if this exclusion is present.

7. Refer to the 2020 NHSN master organism excel spreadsheet for a complete list of MBI and common commensal organisms.
8. **MBI RIT Exception** – A non-MBI organism is NOT assigned to an MBI-LCBI (primary BSI) event when a blood culture with the non-MBI organism is collected during a BSI (MBI-LCBI) RIT and also

deemed secondary to an NHSN site-specific infection. The MBI-LCBI designation will not change to an LCBI event.

Example: On day 7 of hospital admission, *E. faecalis* is identified in a blood culture meeting MBI-LCBI 1 criteria. During the BSI RIT of the MBI-LCBI 1 event, a blood culture with a non-MBI

organism (*Staphylococcus aureus*) is collected but is deemed secondary to a SKIN 2a. Because the *Staphylococcus aureus* (a non-MBI organism) is secondary to the SKIN 2a, the MBI-LCBI 1 designation will not change to an LCBI 1.

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Hospital Day	RIT	Infection Window Period	Infection Window Period	RIT	BSI
1					
2					
3					
4					
5		WBC – 400 cells/mm ³			
6					
7	1	Blood culture: <i>E. faecalis</i>			
8	2				
9	3				
10	4	WBC – 300 cells/mm ³	Erythema, Pain	1	
11	5		Skin culture: <i>Staphylococcus aureus</i>	2	
12	6			3	
13	7			4	
14	8			5	
15	9			6	
16	10			7	
17	11			8	
18	12			9	
19	13		Blood culture: <i>Staphylococcus aureus</i>	10	
20	14			11	
21				12	
22				13	
23				14	
24					
25					
26					
		MBI-LCBI 1 Date of Event = HD 7 Pathogen: <i>E. faecalis</i>	SKIN 2a & Secondary BSI Date of Event = HD 10 Pathogen: <i>Staphylococcus aureus</i>		

Infection Window Period
(First positive diagnostic test, 3 days
before and 3 days after)

**Repeat Infection Timeframe
(RIT)**
(date of event = day 1)

**Secondary BSI Attribution
Period (SBAP)**
(Infection Window Period + RIT)

Date of Event (DOE)
Date the first element occurs for the first
time within the infection window period