2020 NHSN Training Webinar

Patient Safety Component Protocol and Annual Facility Survey Updates

January 30, 2020

Agenda

- Guidelines for Non-culture Based Testing to meet LCBI Criteria – Dominique Godfrey
- MBI-LCBI Updates – LaTasha Powell
- SSI 2020 Updates – Victoria Russo
- 2019 Patient Safety Component Annual Surveys – Agasha Amor

Out With the Old In with the New:
Guidelines for Non-culture Based Testing to meet Laboratory Confirmed Bloodstream Infection Criteria

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Purpose

Share the 2020 updates on the use of Non-culture Based Testing (NCT) to meet Laboratory Confirmed Bloodstream Infection (LCBI) Criteria and Review the Central Line Associated Bloodstream Infections (CLABSI) exclusions

Objective

At the completion of this presentation, you will:

- Know the changes to LCBI criteria from 2019-2020, examples of how to meet LCBI-1 criterion in 2020 using NCT methodology, examples of how to meet LCBI-2 criterion in 2020 using a culture, the Central Line Associated Bloodstream Infection (CLABSI) exclusions, and how to report the CLABSI exclusions for 2020 to the National Healthcare Safety Network (NHSN)

Why the Change in the LCBI Definition?

- Change was in response to questions and/or concerns from users

- Some NCTs are intended by the manufacturer to be accompanied by a companion blood culture collection
  - For example, for one of the NCTs, the instructions for use state that a blood culture also should be collected
    - These instructions were factored into the decision to create a timeframe in the LCBI-1 definition when an NCT was used and a recognized pathogen identified

Why the Change in the LCBI Definition?

- Non-culture based testing methodologies added a level of complexity when making a CLABSI determination (for example the intent of NCTs)
  - Does a +NCT meet LCBI-1 criterion?
  - Is bacteremia suspected or some other source of infection?

- The clinical intent for the use of NCTs is not always to identify a bloodstream infection
  - May be used to diagnose infection at another site other than blood
  - May be used to identify a specific pathogen for targeted antimicrobial therapy

Key Definitions

What Exactly Does This Mean: Culture Based Testing?

- Culturing requires that a specimen be inoculated to a **culture** media, incubated and observed for actual growth of microorganisms and can take several days to weeks for a final report depending upon the organism identified.

Table 1: Laboratory-Confirmed Bloodstream Infection Criteria:
Must meet **one** of the following LCBI criteria:

Criterion	*Comments and reporting instructions that follow the site-specific criteria provide further explanation and are integral to the correct application of the criteria.* Once an LCBI determination is made, proceed to the MBI-LCBI definitions and determine if the corresponding MBI-LCBI criteria are also met (for example, after meeting LCBI 2, investigate for potential MBI-LCBI 2)
LCBI 1 If LCBI 1 criteria is met, consider MBI-LCBI 1	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 2. Identified to the genus or species level by non-culture based microbiologic testing (NCT) 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. **AND** Organism(s) identified in blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide).

- An example of culture media is blood culture collection bottles.

What Exactly Does This Mean: Non-Culture Based Testing on Blood Specimens?

- Non-culture based testing refers to identification of microorganisms directly from a blood specimen (not from a culture of a blood specimen), using a method of testing such as genomic sequencing or magnetic resonance assays.

Table 1: Laboratory-Confirmed Bloodstream Infection Criteria:
Must meet **one** of the following LCBI criteria:

Criterion	*Comments and reporting instructions that follow the site-specific criteria provide further explanation and are integral to the correct application of the criteria.* Once an LCBI determination is made, proceed to the MBI-LCBI definitions and determine if the corresponding MBI-LCBI criteria are also met (for example, after meeting LCBI 2, investigate for potential MBI-LCBI 2)
LCBI 1 If LCBI 1 criteria is met, consider MBI-LCBI 1	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 2. Identified to the genus or species level by non-culture based microbiologic testing (NCT) 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. **AND** Organism(s) identified in blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide).

Comparison of 2019 and 2020 LCBI Criteria:

A Look Into the Past

2019 LCBI-1 Criterion

LCBI 1 If LCBI 1 criteria is met, consider MBI-LCBI 1	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 a culture or non-culture based microbiologic testing methods **AND** Organism(s) identified in blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide).

LCBI-1 2019 Definition

2020 LCBI-1 Criterion

LCBI 1	
If LCBI 1 criteria is met, consider MBI-LCBI 1	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 2. Identified to the genus or species level by non-culture based microbiologic testing (NCT) 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.

Definition update in 2020

2019 LCBI-2 Criterion

LCBI 2 If LCBI 2 criteria is met, consider MBI-LCBI 2	Patient of any age has at least ***one*** of the following signs or symptoms: fever (>38.0°C), chills, or hypotension **AND** Organism(s) identified in blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide). **AND** The same NHSN common commensal is identified by a culture or non-culture based microbiologic testing method, from two or more blood specimens collected on separate occasions (see Blood Specimen Collection). Common Commensal organisms include, but not 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 full list of common commensals, see the Common Commensal tab of the NHSN Organisms List.

LCBI-2 2019 Definition

2020 LCBI-2 Criterion

LCBI 2 If LCBI 2 criteria is met, consider MBI-LCBI 2	Patient of any age has at least ***one*** of the following signs or symptoms: fever (>38.0°C), chills, or hypotension **AND** Organism(s) identified in blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide). **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). 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 full list of common commensals, see the Common Commensal tab of the NHSN Organisms List.

Definition in update 2020

2019 LCBI-3 Criterion

LCBI 3 If LCBI 3 criteria is met, consider MBI-LCBI 3	Patient ≤ 1 year of age has at least *one* of the following signs or symptoms: fever (>38.0°C), hypothermia (<36.0°C), apnea, or bradycardia **AND** Organism(s) identified in blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide). **AND** The same NHSN common commensal is identified by a culture or non-culture based microbiologic testing method, from two or more blood specimens collected on separate occasions (see Blood Specimen Collection). Common Commensal organisms include, but not 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 full list of common commensals, see the Common Commensal tab of the NHSN organisms list.

LCBI-3 2019 Definition

2020 LCBI-3 Criterion

LCBI 3 If LCBI 3 criteria is met, consider MBI-LCBI 2	Patient ≤ 1 year of age has at least *one* of the following signs or symptoms: fever (>38.0°C), hypothermia (<36.0°C), apnea, or bradycardia **AND** Organism(s) identified in blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide). **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). 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 full list of common commensals, see the Common Commensal tab of the NHSN organisms list.

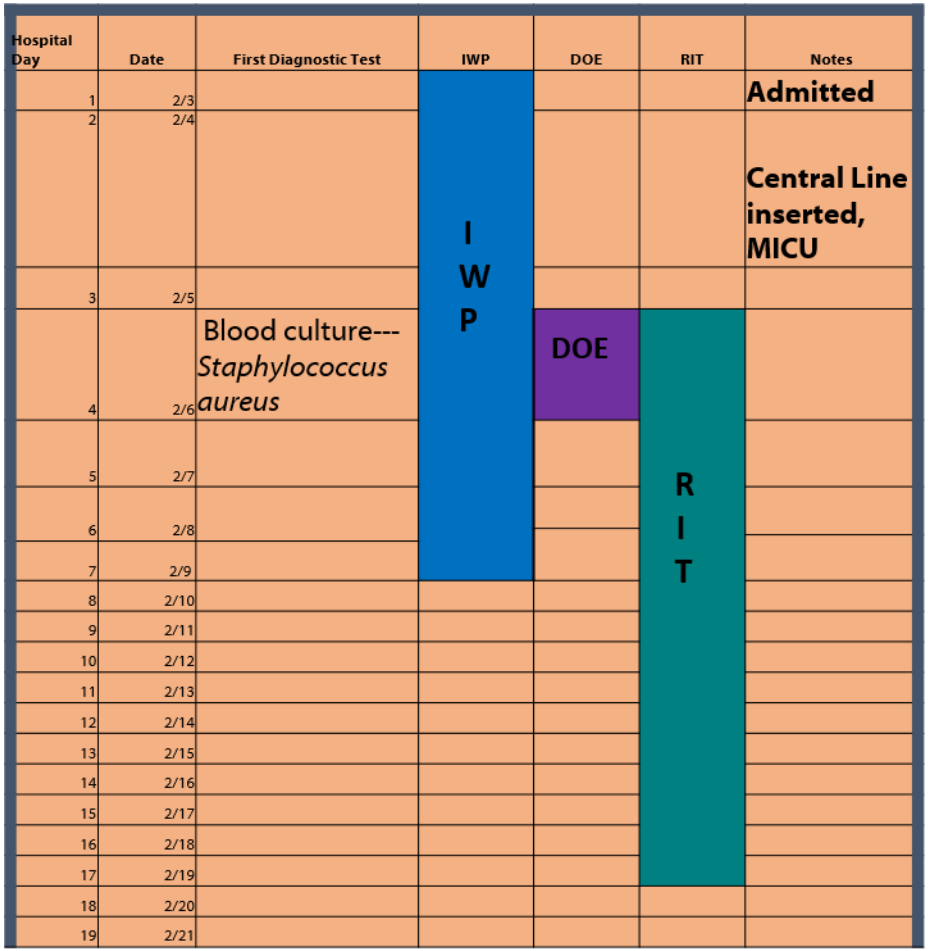
Definition update in 2020

Examples of How to Meet LCBI-1 Criterion

2019 LCBI-1 Criterion

LCBI-1 criterion is met on 2/6. The infection window period (IWP) is 2/3-2/9, and a BSI repeat infection timeframe is established from 2/6-2/19. This is a CLABSI event because there was an eligible central line on the DOE.

Rationale: Because *Staphylococcus aureus* is a recognized pathogen, LCBI-1 criterion is met. No other criteria, such as signs/symptoms, are needed to meet LCBI-1 criterion.



NOTE: This determination also would apply in 2020 because LCBI-1 criterion is met using a positive blood culture.

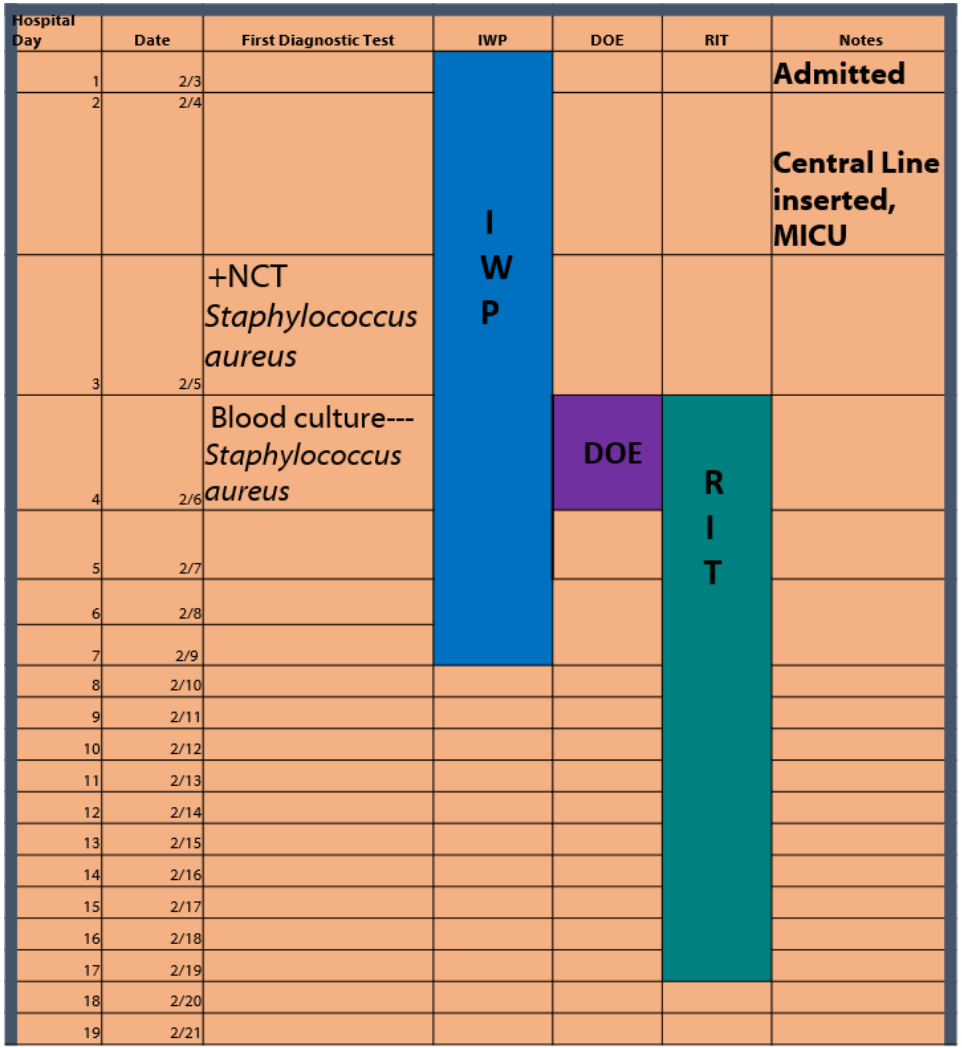
See Page 4-7 of the 2019 BSI chapter

2020 LCBI-1 Criterion

LCBI-1 criterion is met on 2/6. The infection window period (IWP) is 2/3-2/9, and a BSI repeat infection timeframe is established from 2/6-2/19. This is a CLABSI event because there was an eligible central line on the DOE.

Rationale: Because a positive blood culture is collected within the 2 days before or the 1 day after the +NCT, the NCT is disregarded. The only result used is the positive culture result for *Staphylococcus aureus*. The matching organisms identified by NCT and culture has no impact on the date of event.

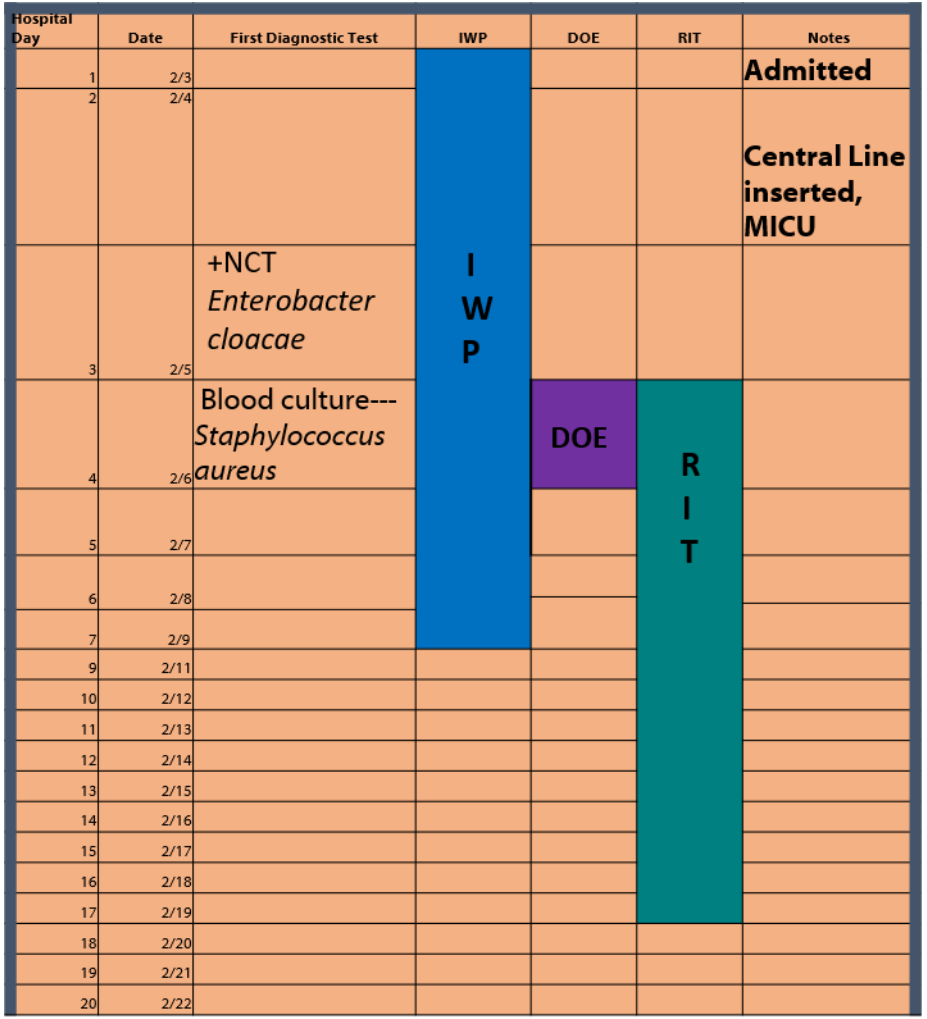
See Page 4-7 of the 2020 BSI chapter



2020 LCBI-1 Criterion

LCBI-1 criterion is met on 2/6. The infection window period (IWP) is 2/3-2/9, and a BSI repeat infection timeframe is established from 2/6-2/19. This is a CLABSI event because there was an eligible central line on the DOE.

Rationale: Because the positive blood culture is collected within the 2 days before or 1 day after the +NCT, the NCT is disregarded. <u>The only result used is the positive culture result for *Staphylococcus aureus*.</u> The identification *E. cloacae* by NCT would not be reported as a pathogen for this event nor would it change the DOE since the NCT result is disregarded.

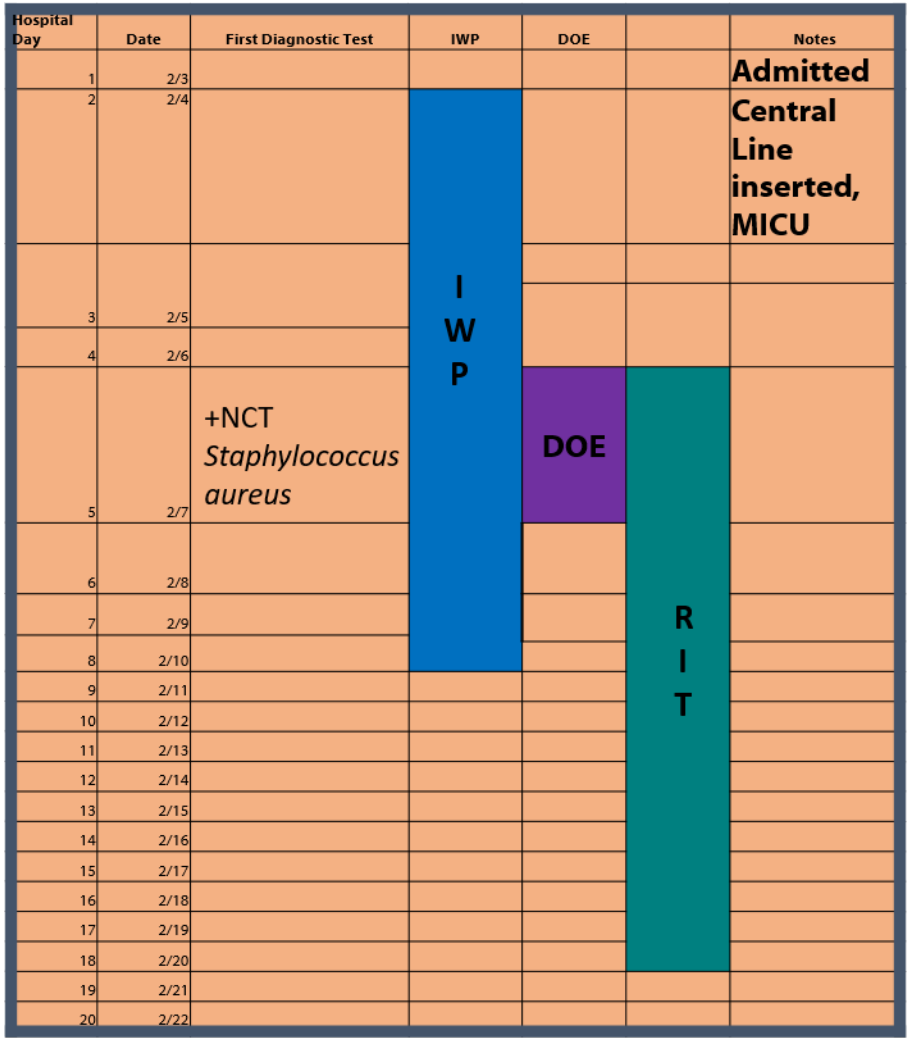


See Page 4-7 of the 2020 BSI chapter

2020 LCBI-1 Criterion

LCBI-1 criterion is met on 2/7. The infection window period (IWP) is 2/4-2/10, and a BSI repeat infection timeframe is established from 2/7-2/20. This is a CLABSI event because there was an eligible central line on the DOE.

Rationale: Because there is no positive blood culture collected within 2 days before or 1 day after the +NCT, the +NCT result identifying *Staphylococcus aureus* is used.



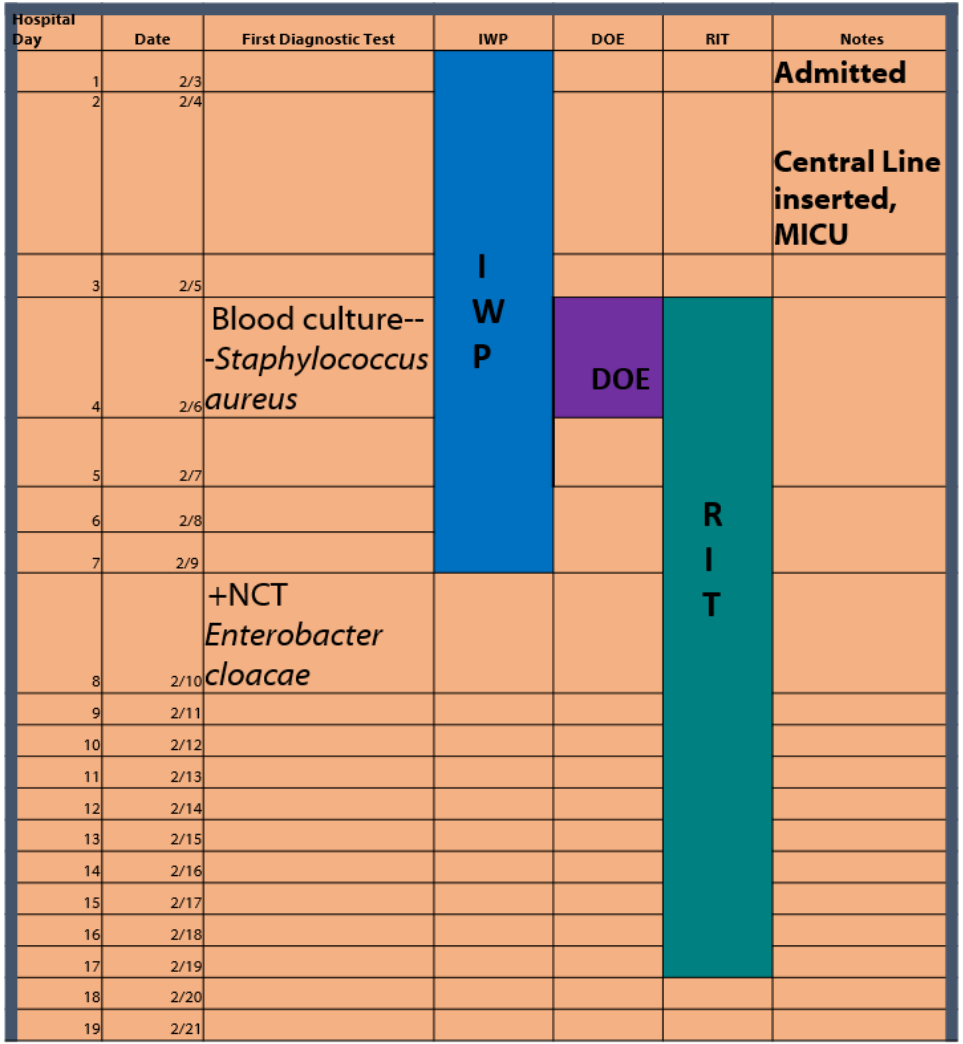
See Page 4-7 of the 2020 BSI chapter

2020 LCBI-1 Criterion

LCBI-1 criterion is met on 2/6. The infection window period (IWP) is 2/3-2/9, and a BSI repeat infection timeframe is established from 2/6-2/19. This is a CLABSI event because there was an eligible central line on the DOE. Both *S. aureus* and *E. cloacae* are reported as pathogens for this event.

Rationale: +NCT collection date occurs in the BSI RIT and *E. cloacae* is identified. There is no blood culture collected within 2 days before or 1 day after the +NCT; therefore the *E. cloacae* is added to the initial LCBI-1 event.

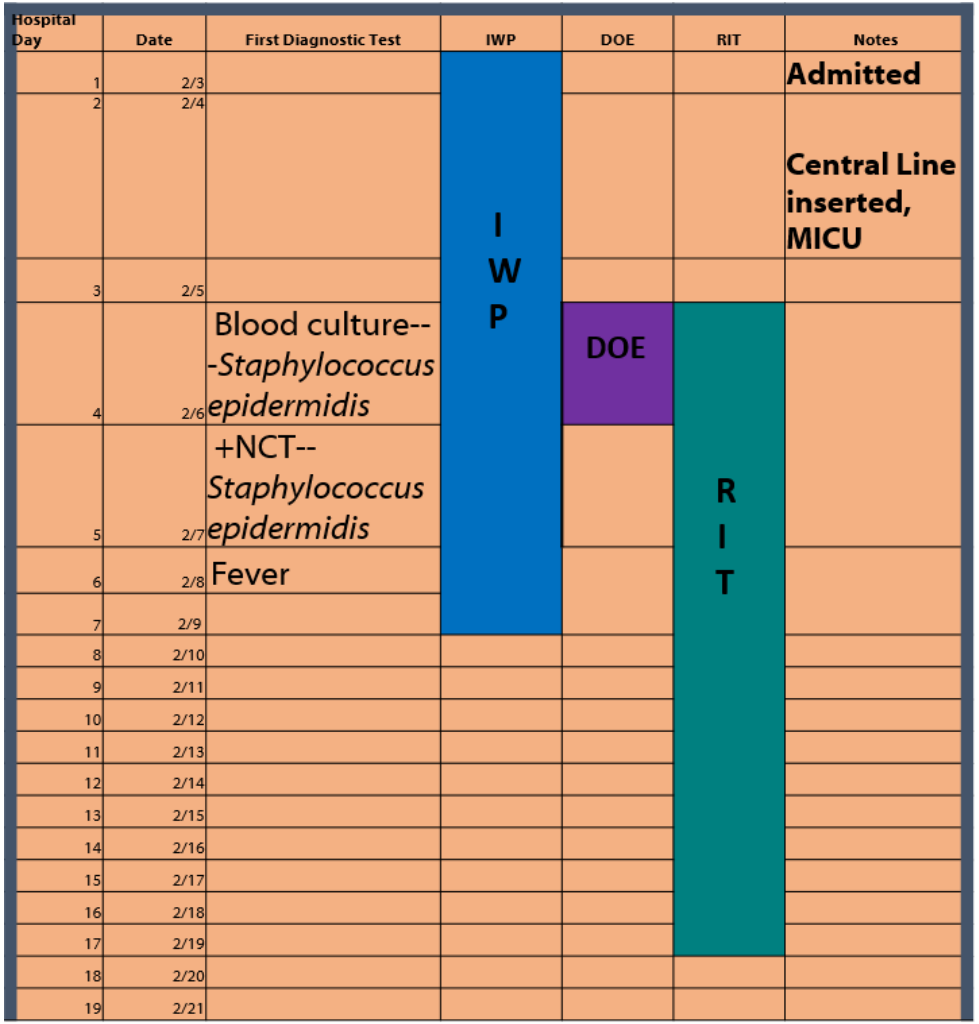
See Page 4-7 of the 2020 BSI chapter



Examples of How to Meet LCBI-2 or LCBI-3 Criterion

2019 LCBI-2 Criterion

LCBI-2 criterion is met on 2/6. The infection window period (IWP) is 2/3-2/9, and a BSI repeat infection timeframe is established from 2/6-2/19. This is a CLABSI event because there was an eligible central line on the DOE.
Rationale: Because companion tests (culture and NCT) identify *Staphylococcus epidermidis* and there is a fever in the IWP, LCBI-2 criterion is met.



See Page 4-8 of the 2019 BSI chapter

2020 LCBI-2 Criterion

LCBI-2 criterion is not met.

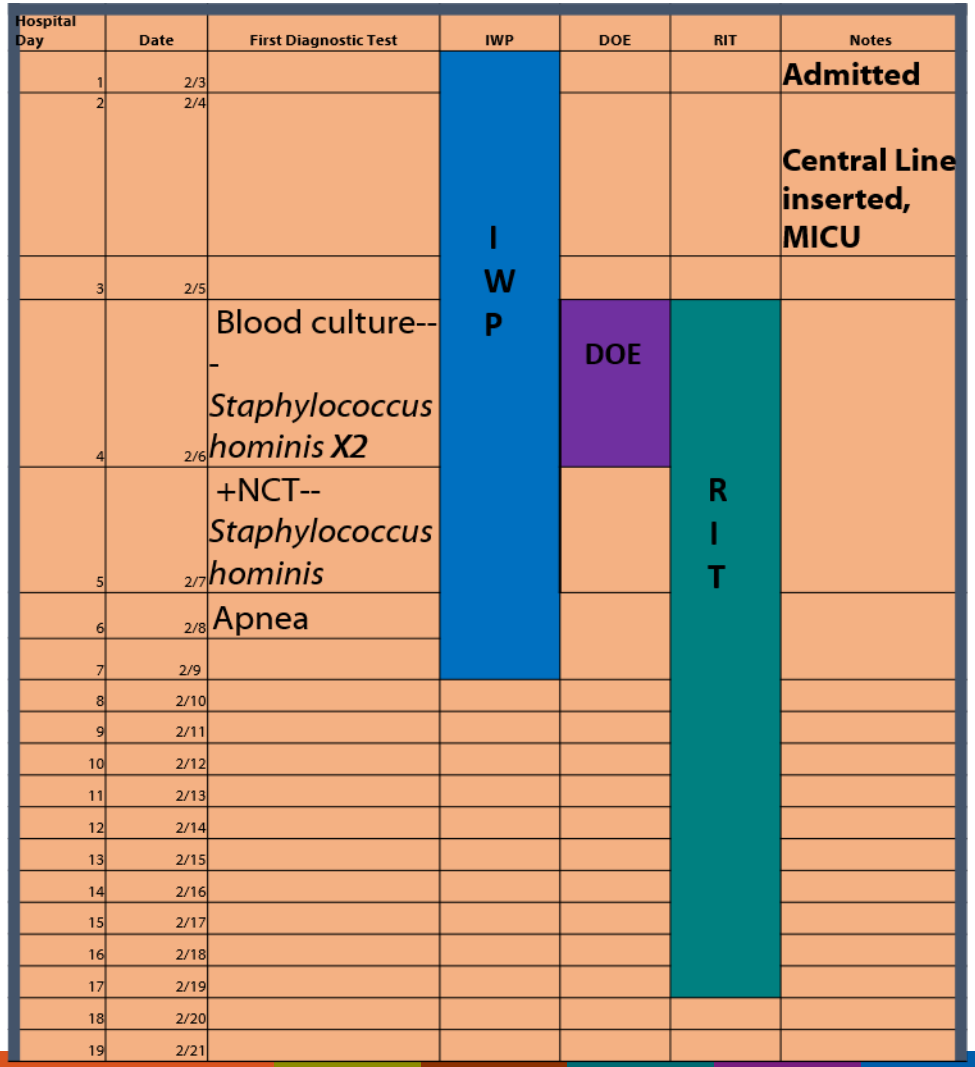
Rationale: Although fever is documented during the IWP, the +NCT result is not used as a companion culture. Only a single common commensal is identified by culture. Per NHSN guidance, the single culture result is considered a contaminant and not eligible for use to meet LCBI-2 criterion.

Hospital Day	Date	First Diagnostic Test	IWP	DOE	RIT	Notes
1	2/3					Admitted
2	2/4					Central Line inserted, MICU
3	2/5					
4	2/6	Blood culture--- *Staphylococcus epidermidis*				
5	2/7	+NCT-- *Staphylococcus epidermidis*				
6	2/8	Fever				
7	2/9					
8	2/10					
9	2/11					
10	2/12					
11	2/13					
12	2/14					
13	2/15					
14	2/16					

See Page 4-8 of the 2020 BSI chapter

2019 LCBI-3 Criterion

LCBI-3 criterion is met on 2/6. The infection window period (IWP) is 2/3-2/9, and a BSI repeat infection timeframe is established from 2/6-2/19. This is a CLABSI event because there was an eligible central line on the DOE.
Rationale: Because companion cultures of *Staphylococcus hominis* are collected and there is apnea in the IWP, LCBI-3 criterion is met. The +NCT is not a part of the determination.



See Page 4-9 of the 2019 BSI chapter

2020 LCBI-3 Criterion

LCBI-3 criterion is not met.

Rationale: Although apnea is documented during the IWP, the +NCT result is not used as a companion culture. Only a single common commensal is identified by culture. Per NHSN guidance, the single culture result is considered a contaminant.

Hospital Day	Date	First Diagnostic Test	IWP	DOE	RIT	Notes
1	2/3					Admitted
2	2/4					Central Line inserted, MICU
3	2/5					
4	2/6	Blood culture--- *Staphylococcus hominis*				
5	2/7	+NCT-- *Staphylococcus hominis*				
6	2/8	Apnea				
7	2/9					
8	2/10					
9	2/11					
10	2/12					
11	2/13					
12	2/14					
13	2/15					
14	2/16					

See Page 4-9 of the 2020 BSI chapter

A Note on NCT

- NCT methodology is only used to meet LCBI-1 criterion.

- Test results from NCT methodologies are only available for use in meeting LCBI-1 criterion when the organism is identified to the genus or species level.

- Culture based testing is the only testing methodology used to meet LCBI-2 and/or LCBI-3 (positive blood cultures identifying common commensals). **NCT is not used.**

A Note on NCT

- When the NCT specimen collection date occurs in the repeat infection timeframe (RIT), an organism identified by NCT is only added to the event if the organism identified is a recognized pathogen and there is no blood culture collected within the 2 days prior or 1 day after the NCT.

- NCT may still be used for criteria of some site-specific infections. If an NCT is used to identify an organism in blood for one of the other sites of infection and the other requirements of the Secondary BSI Guide are met, the BSI may be attributed as secondary.

CLABSI Exclusions in 2020 and How to Report

Guidance on Reporting the CLABSI Exclusions

- ALL of the CLABSI exclusions require that an eligible central line has been in place for more than 2 consecutive calendar days on the BSI DOE, and is still in place on the BSI DOE or the day before.

- **Reporting of ALL CLABSI Exclusions to NHSN is required in 2020.** However, when met, these events are not included in the CLABSI event data that are sent to CMS.

- When an exclusion is met, the event is considered an LCBI, but is NOT considered central line associated, even in the presence of a CL.
  - Mark the "central line field = Yes" if an eligible central line had been in place for more than 2 consecutive calendar days on the BSI DOE, and is still in place on the BSI DOE or the day before.

Guidance on Reporting the CLABSI Exclusions

- In each instance, a subsequent positive blood specimen resulting in a BSI with a date of event outside of the BSI RIT must be investigated and meet the CLABSI exclusion criteria again in a new BSI IWP in order to determine it is not central line associated.

- Meeting LCBI criteria will result in setting a BSI RIT and any associated device days should be included in counts for denominator summary data.

See Page 4-12 of the BSI chapter

Summary of CLABSI Exclusions:

- **Extracorporeal life support (ECMO) or Ventricular Assist Device (VAD):** A BSI meeting LCBI criteria with an eligible central line where extracorporeal life support (ECMO) **OR** a VAD is present for more than 2 days on the BSI DOE, and is still in place on the DOE or the day before, will be considered an LCBI. Report such events, marking the CL field "Yes" and the ECMO or VAD fields as "Yes."

- **Patient Injection:** A BSI meeting LCBI criteria that is accompanied by documentation of observed or suspected patient injection into the vascular access line, within the BSI IWP, is considered an LCBI but not a CLABSI for NHSN reporting purposes. If a CL is present for more than 2 days on the BSI DOE, and is still in place on the DOE or the day before, report such events, marking the CL field yes and the patient Injection field as "Yes."

See Page 4-11 and 4-12 of the BSI chapter

Summary of CLABSI Exclusions:

- **Epidermolysis bullosa (EB) or Munchausen Syndrome by Proxy (MSBP):** If during the current admission, there is a diagnosis of EB or documentation of known or suspected MSBP, also known as factitious disorder imposed on another (FDIA), and if a CL is present for more than 2 days on the BSI DOE, and is still in place on the DOE or the day before, report such events, marking the CL field "Yes" and the EB or MSBP fields as "Yes."

- **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 following vascular access devices and a specimen collected from that site has at least one matching organism to an organism identified in blood, report such events, marking the "pus at the vascular access site" field as "Yes". If a CL is present for more than 2 days on the BSI DOE, and is still in place on the DOE or the day before, mark the CL field "Yes", also.

See Page 4-12 of the BSI chapter

Summary of CLABSI Exclusions:

- **Pus at the vascular access site:** 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

See Page 4-12 of the BSI chapter

Summary of CLABSI Exclusions: A Note on Group B Streptococcus

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

- The NHSN application will not allow this event to be saved when Group B Strep is identified from blood with a date of event during the first 6 days of life.

See Page 4-13 of the BSI chapter

Summary of LCBI Updates and CLABSI Exclusions

- NCT methodology is only used to meet LCBI-1 criterion.

- NCT methodology is not used to meet LCBI-2 or LCBI-3 criterion.

  Culture based testing is the only testing methodology used.

- **Reporting of the CLABSI exclusions to NHSN is required.** However, when met, these events are not included in the CLABSI event data that are sent to CMS.

See Page 4-13 of the BSI chapter

MBI-LCBI Updates

LaTasha R. Powell RN, BSN, MPH, CIC

Objectives

- Explain the MBI – LCBI 2 and 3 clarification regarding non-culture-based testing.
- Summarize the Pathogen Assignment Exception related to the MBI – LCBI events.

MBI-LCBI Clarification

Revised table will be published in the 2021 BSI Protocol

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 criteria.

The MBI-LCBI DOE will always be the date the prerequisite LCBI criteria was 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.

MBI-LCBI 1	MBI-LCBI 2	MBI-LCBI 3
Patient of **any age** fully meets LCBI 1 criteria	Patient of **any age** fully meets LCBI 2 criteria	Patient **≤1 year of age** fully meets LCBI 3 criteria
with at least **one** blood specimen	with at least **two matching** blood specimens	
identified by culture or non-culture based microbiologic testing method	identified by culture collected on separate occasions (see Blood Specimen Collection)	
with **ONLY intestinal organisms** from the NHSN MBI organism list*	with **ONLY Viridans Group *Streptococcus*** *and/or* ***Rothia spp.*** alone but no other organisms †	

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:
   a. Grade III or IV gastrointestinal graft versus host disease [GI GVHD]
   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.
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 Table 5).

Non-culture based testing (NCT) is not eligible for LCBI 2 or -LCBI 3 in 2020.

Therefore, NCT is not eligible to cite an MBI-LCBI 2 or MBI-LCBI 3 in 2020.

MBI-LCBI RITs and Pathogen Assignment

Pathogen Assignment – The Rules

- BSI pathogens may be assigned to more than one infection source at the same time in the following scenarios.
  1) Secondary BSI pathogen assigned to two different site-specific infections (see Example 1)
     OR
  2) Secondary BSI pathogen assigned to a site-specific infection and assigned as pathogen to a primary BSI event (see Example 2).

Example 2:

On day 4 of hospital admission, *S. aureus* is identified in a blood culture meeting the HAI, LCBI 1 criterion. On day 8 the patient has a fever > 38.0° C and *E. coli* is identified in a urine culture meeting the SUTI definition. On hospital day 13, a blood culture positive for *E.coli* is identified. **Because the blood culture occurs within both the LCBI RIT and the SUTI secondary BSI attribution period, the pathogen, *E.coli* is assigned to both events.**

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
(Infection Window Period + RIT)

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

Hospital Day	RIT	Infection Window Period	Infection Window Period	RIT	BSI
1					
2					
3					
4	1	**Blood culture**: *S. aureus*			
5	2				
6	3				
7	4				
8	5		Fever >38.0 C,	1	
9	6		**Urine culture**: >100,000 cfu / ml *E.coli*	2	
10	7			3	
11	8			4	
12	9			5	
13	10			6	
14	11			7	
15	12			8	
16	13	Blood Culture: *E.coli*	Blood Culture: *E.coli*	9	
17	14			10	
18				11	
19				12	
20				13	
21				14	
22					
		LCBI **Date of Event = 4** **Pathogen: S. aureus and E.coli**	**SUTI & Secondary BSI** **Date of Event = 8** **Pathogen: E.coli**		

E. Coli blood culture added to BSI RIT and UTI SBAP

Chapter 2, page 2-19

MBI-LCBI RIT and Pathogen Assignment Prior to 2020 (Example)

- BSI pathogens may be assigned to more than one infection source at the same time in the following scenarios.
  1) Secondary BSI pathogen assigned to two different site-specific infections (see Example 1)
     OR
  2) Secondary BSI pathogen assigned to a site-specific infection and assigned as pathogen to a primary BSI event (see Example 2).

Non-MBI Organism collected during MBI-LCBI BSI RIT

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.

Hospital Day	RIT	Infection Window Period	Infection Window Period	RIT	SBAP
1					
2					
3		ANC-200 cells/mm³			
4					
5					
6		**Blood Culture-** Enterococcus Sp.	Erythema		
7			Swelling		
8		ANC-300 cells/mm³			
9			**Skin Culture-** MRSA		
10					
11					
12					
13					
14					
15					
16		**Blood Culture-** MRSA	**Blood Culture-** MRSA		
17					
18					
19					
20					
21					
22					
		HAI LCBI 1 Date of Event: Day 6 Pathogen: Enterococcus /MRSA	***HAI SKIN 2a & Secondary BSI Date of Event: Day 6 Pathogen: MRSA***		

Day 6 MBI-LCBI 1 cited

Day 6 SKIN 2a cited

Day 6 MBI-LCBI 1 Designation Changed to an LCBI 1

Pathogen Assignment during an MBI-LCBI BSI RIT – Exception in 2020

5. 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 – *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. Please see Example 5 in the Secondary BSI Guide section of this protocol and Chapter 2 Pathogen Assignment (Example 2b).*

Pathogen Assignment during an MBI-LCBI BSI RIT - Exception in 2020

5. 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 *– 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. Please see Example 5 in the Secondary BSI Guide section of this protocol and Chapter 2 Pathogen Assignment (Example 2b).*

Hospital Day	RIT	Infection Window Period	Infection Window Period	RIT	SBAP
1					
2					
3		ANC-200 cells/mm³			
4					
5					
6		**Blood Culture-** Enterococcus Sp.	Erythema		
7			Swelling		
8		ANC-300 cells/mm³			
9			**Skin Culture-** MRSA		
10					
11					
12					
13					
14					
15					
16			**Blood Culture-** MRSA		
17					
18					
19					
20					
21					
22					
		MBI-LCBI 1 Date of Event: Day 6 Pathogen: Enterococcus	***HAI SKIN 2a & Secondary BSI Date of Event: Day 6 Pathogen: MRSA***		

Day 6 MBI-LCBI 1 cited

Day 6 SKIN 2a cited

Day 6 MBI-LCBI 1 Designation is not changed

Summary

- NCT methodology is only used to meet LCBI-1 criterion
- Positive blood culture results from culture based testing is the only testing methodology used to meet LCBI-2 and/or LCBI-3
- NCT testing is not eligible to cite MBI-LCBI 2 or 3
- A non-MBI organism blood culture does not have to be assigned to the BSI RIT of the MBI-LCBI event if this blood specimen is deemed secondary to an NHSN site-specific infection.
- All BSI's meeting a CLABSI exclusion in 2020 are reportable to NHSN with the exception of the GBS exclusion.

SSI 2020 Updates

Victoria Russo, MPH, CIC

Denominator for Procedure Detail: Scope

Scope

ICD-10-PCS Scope Designation table updated

Scope: An instrument used to reach and visualize the interior of a body cavity or organ site of the operative procedure.

- NHSN operative procedures performed using laparoscope: Scope = YES.
- The fifth character indicates the approach to reach the procedure site:

ICD-10 5th Character	Approach	NHSN Scope Designation
0	Open	NO
3	Percutaneous (Included only in CRAN and VSHN categories- procedures with BURR holes)	NO
4	Percutaneous endoscopic	YES
7	Via natural or artificial opening	NO
8	Via natural or artificial opening with endoscopic	NO
F	Via natural or artificial opening with percutaneous endoscopic assistance	YES

Scope

Clarification related to CPT codes and Scope

- For CPT codes, the scope question can be answered based on the procedure code description.
- Using HYST code 58570 as an example, the procedure code description indicates Laparoscopy, surgical, with total hysterectomy. Laparoscopy is **Scope = YES**.

HYST	58570	Laparoscopy, surgical, with total hysterectomy, for uterus 250 g or less

SSI Event Detail: Infection Present at Time of Surgery (PATOS) – (SSI Event Reporting Instruction #3)

PATOS

Reporting instruction updated to provide clarification related to the application of PATOS

- An abscess is considered evidence of infection.
- Wound class cannot be used for PATOS determination.
- Evidence of infection must be noted intraoperatively and documented within the narrative portion of the operative note or report of surgery.

PATOS

Question: Where within the patient medical record can I find the documentation I need to answer the PATOS question on the SSI event form?

Answer: The PATOS response (YES/NO) is determined by evidence of infection documented in the operative procedure report. The evidence of infection must be noted intraoperatively and documented within the narrative portion of the operative note or report of surgery. The language/verbiage in the operative procedure report must clearly reflect infection is 'seen' during the operative procedure and should additionally include reference to the tissue level where the infection is seen.

2019 Patient Safety Component Annual Surveys

Agasha Amor, MPH

Gentle Reminder: Quarter 3 CMS Reporting Deadline

- The CMS deadline to submit 2019 Quarter 3 data is February 18, 2020. It is recommended to complete the annual survey before the CMS deadline so that your data are risk adjusted using the matching survey year. If the annual facility survey is not completed before the CMS Quarter 3 deadline, NHSN will utilize the current completed survey for SIR risk adjustment.

Gentle Reminder: Annual Survey Deadline

- Deadline to complete annual survey is March 1, 2010

Data Quality

- NHSN will be conducting Data Quality checks on Annual Survey variables that are utilized in the SIR and SUR risk-adjustment calculations.

- Errors in data entry amongst the following survey data variables can affect your SIR and SUR.

Variable	Survey Type
Facility Bed Size	ACH, LTACH, IRF
Patient Days	ACH, LTACH, IRF
Admissions	ACH, LTACH, IRF
ICU Bed Size	ACH, LTACH
Medical School Affiliation	ACH
Teaching Status	ACH
Single Occupancy Rooms	LTACH
Ventilator Dependence Admissions	LTACH
Hemodialysis Admissions	LTACH
LTAC Setting	LTACH
Orthopedic Condition Admissions	IRF
Traumatic spinal cord Dysfunction Admissions	IRF
Non-Traumatic spinal cord dysfunction Admissions	IRF
Stroke Admissions	IRF
IRF Setting	IRF

2019 PSC Annual Survey Changes

2019 PSC Annual Survey Changes

- Sections with Additions, Clarifications and Retired questions
  - Neonatal Patient Care Practices and Admission information section
  - Antibiotic Stewardship Practices section
  - Water Management Practices section

Facility Neonatal Patient Care Practices and Neonatal Admission Information Section

- Facility Neonatal or Newborn Patient Care Practices and Admission Infections
  - Changes to the section header
  - More clarification to the N/A option on Question 25
    - ***N/A, my facility does not provide neonatal or newborn patient care services at any level (i.e., my facility does not provide delivery services, Level I well newborn care, Level II special care, or neonatal intensive care)***

Facility Neonatal Patient Care Practices and Neonatal Admission Information Section

- **Objective:** To help us better understand your facility's practices and protocols for administering antimicrobials to newborns.
- The old Question 30 has been retired. The new Question 30 is now a 'select all that apply question.'

OLD Question 30	New Question 30
If your facility administers antimicrobials (oral or parenteral) to newborns residing in their mother's room, to which NHSN location(s) is the baby mapped? (Select all that apply)	If babies are roomed with their mother in a labor and delivery or postpartum ward and are administered oral or parenteral antimicrobials, such as ampicillin, what location is the medication administration attributed to in the electronic medication administration record (eMAR) system and/or bar code medication administration (BCMA) system?

Antibiotic Stewardship Practices Section

- Change of wording for Question 35 to ***Our facility has a policy or formal procedure for: (Check all that apply)***

  Required documentation of indication of antibiotic orders

Old Question 35a	**New Question 35a**
If selected: Our stewardship team monitors adherence to the policy or formal procedure for required documentation of indication for all antibiotic orders.	Formal procedure – If selected: Our stewardship team audits antibiotic orders to review appropriateness indications

- **Minor Change to Question 38:** *Clostridium difficile* to *Clostridioides difficile*

Optional Antibiotic Stewardship Practices Question

- Question 43 was retired

Our facility has a clinical decision support tool embedded in the electronic health record for antibiotic use or stewardship interventions available to prescribers.

Water Management Program Section

- Clarification: The wording for the current Questions 50–51 have been edited

Q.	Old	Q.	New
51	Have you performed an assessment of the water systems in your facility to identify areas of risk for growth and transmission of Legionella and other opportunistic waterborne pathogens? (e.g., *Pseudomonas*, *Acinetobacter*, *Burkholderia*, and nontuberculous mycobacteria)	50	Have you ever conducted a facility risk assessment to identify where *Legionella* and other opportunistic waterborne pathogens (e.g., *Pseudomonas*, *Acinetobacter*, *Burkholderia*, *Stenotrophomonas*, nontuberculous mycobacteria, and fungi) could grow and spread in the facility water system (e.g., piping infrastructure)?
52	Has your hospital established a team specifically for the purpose of developing and implementing a water management program to prevent the growth and transmission of Legionella and other waterborne pathogens?	51	Does your facility have a water management program to prevent the growth and transmission of *Legionella* and other opportunistic waterborne pathogens?

Water Management Program Section

- Question 51 (previously Question 52) includes more answer choices.

51. Does your facility have a water management program to prevent the growth and transmission of *Legionella* and other opportunistic waterborne pathogens? ☐ Yes ☐ No

If Yes, who is represented on your facility WMP team? (Check all that apply)

- ☐ Hospital Epidemiologist/ Infection Preventionist
- ☐ Hospital Administrator/Leadership
- ☐ Facilities Manager/ Engineer
- ☐ Maintenance Staff
- ☐ Equipment/Chemical Acquisition/Supplier
- ☐ Compliance/ Safety Officer
- ☐ Risk/Quality Management Staff
- ☐ Infectious Disease Clinician
- ☐ Consultant
- ☐ Laboratory Staff

Thank You!

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.