

Because NHSN did not hold the live annual training in 2020, please plan to use the 2019 NHSN Annual Training videos and slides for NHSN training throughout 2020.

Although there were not extensive changes made to the NHSN PSC protocols for 2020, NHSN wanted to note any differences between the training content provided in 2019 and the current 2020 protocols. Therefore, this document will detail changes to information presented in the 2019 videos and slides so that they align with the 2020 NHSN Patient Safety Component Manual updates.

The following slides will provide the slide number and slide information from the 2019 NHSN Training presentation and then explain updates or clarifications for 2020 related to the content provided in that particular slide.

It's a Bird, It's a Plane No---It's a Primary Bloodstream Infection



New Changes and Revisions 2019: CLABSI Exclusions, Slide 25

I See What's Happening Here: Can We Exclude This CLABSI?

- **IVDA's** - observed or suspected injection into their vascular access
 - Documentation must occur within the BSI IWP
- Epidermolysis bullosa (EB)
 - **Documentation must occur during current admission**
- Munchausen Syndrome by Proxy (MSBP) or “Factitious Disorder Imposed on Another”
 - **Documentation during current admission of confirmed or suspected MSBP**

NOTE: Optional – 2019 – Required 2020

2020 Update for Slide 25: New Changes and Revisions
2019: CLABSI Exclusions

I See What's Happening Here: Can We Exclude This CLABSI?

- **Patient Self-Injection** - observed or suspected injection into their vascular access
 - Documentation must occur within the BSI IWP
- Epidermolysis bullosa (EB)
 - **Documentation must occur during current admission**
- Munchausen Syndrome by Proxy (MSBP) or “Factitious Disorder Imposed on Another”
 - **Documentation during current admission of confirmed or suspected MSBP**

NOTE: Optional – 2019 – Required 2020

2019 Presentation, Slide 32

LCBI-1 Criterion:

- 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
 - Primary BSI's do NOT have a secondary BSI attribution period

2020 Updates for Slide 32: LCBI-1 Criterion

- 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
 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

2019 Presentation, Slide 39

■ LCBI-Criteria 2 & 3

LCBI 2: Any age patient have at least one: fever ($>38.0^{\circ}$ C), chills, or hypotension

LCBI 3: A patient <1 year of age have at least one: fever ($>38.0^{\circ}$ C), apnea, hypothermia, bradycardia

AND

- Organism(s) identified from blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide).

AND

- the same NHSN common commensal is identified from two or more blood specimens drawn on separate occasions by a culture or non-culture based microbiologic testing method.

2020 Updates for Slide 39: LCBI-2 and LCBI-3 Criteria

■ LCBI-Criteria 2 & 3

LCBI 2: Any age patient have at least one: fever ($>38.0^{\circ}$ C), chills, or hypotension

LCBI 3: A patient <1 year of age have at least one: fever ($>38.0^{\circ}$ C), apnea, hypothermia, bradycardia

AND

- Organism(s) identified from blood is not related to an infection at another site (See Appendix B: Secondary BSI Guide).

AND

- the same NHSN common commensal is identified from two or more blood cultures drawn on separate occasions **by a culture.**

2019 Presentation, Slide 53

MBI LCBI-1 Table:

Table 2: Mucosal Barrier Injury Laboratory-Confirmed Bloodstream Infection (MBI-LCBI)
Must meet **one** of the following MBI-LCBI criteria

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 blood specimens	
identified by culture or non-culture based microbiologic testing method		
with ONLY intestinal organisms from the NHSN MBI organism list*	with ONLY Viridans Group <i>Streptococcus</i> or <i>Rothia spp.</i> 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/mm³ 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 6](#)).

2020 Updates for Slide 53: MBI LCBI Table

MBI LCBI-1 Table:

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 <u>Viridans Group Streptococcus</u> and/or <u>Rothia spp</u> alone but no other organisms †	
<p>AND</p> <p>Patient meets at least <u>one</u> of the following:</p> <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> Grade III or IV gastrointestinal graft versus host disease [GI GVHD] ≥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. Is neutropenic, defined as at least two separate days with ANC[†] and/or WBC values <500 cells/mm³ 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). 		

Split this row to reflect the updated LCBI definition for 2020

2019 Presentation, Slide 60 MBI LCBI-2 and LCBI-3 Criteria

Mucosal Barrier Injury - LCBI 2 & 3

MBI-LCBI 2 Patient of any age meets criterion 2 for LCBI

MBI-LCBI 3 Patient ≤ 1 year of age meets criterion 3 for LCBI

with at least two blood specimens identified by a culture or non-culture based microbiologic testing method, with *viridans group strep* or *Rothia spp.* and 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 culture:
 - 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 7 calendar days before the date the positive blood culture is collected.
2. Is neutropenic, defined as at least 2 separate days with values of absolute neutrophil count (ANC) or total white blood cell count (WBC) < 500 cells/mm³ within a 7 day period which includes the date the positive blood culture was collected (Day 1), the 3 calendar days before and the 3 calendar days after.

2020 Updates for Slide 60: LCBI-2 and LCBI-3 Criteria

Mucosal Barrier Injury - LCBI 2 & 3

MBI-LCBI 2 Patient of any age meets criterion 2 for LCBI

MBI-LCBI 3 Patient ≤ 1 year of age meets criterion 3 for LCBI

with at least two blood specimens identified by a culture with viridans group strep or Rothia spp. and 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 culture:
 - 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 7 calendar days before the date the positive blood culture is collected.
2. Is neutropenic, defined as at least 2 separate days with values of absolute neutrophil count (ANC) or total white blood cell count (WBC) < 500 cells/mm³ within a 7 day period which includes the date the positive blood culture was collected (Day 1), the 3 calendar days before and the 3 calendar days after.

2019 Presentation, Slide 67

Event Information

Event Type *: BSI - Bloodstream Infection ▼

Date of Event *: 02/11/2019 8

Post-procedure: ▼

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

Location *: CTICU - CARDIOTHORACIC CC ▼

Date Admitted to Facility >: 02/04/2019 8

Risk Factors

Central line *: ▼

Any hemodialysis catheter present *: ▼

Extracorporeal life support present (e.g. ECMO) *: ▼

Ventricular assist device (VAD) present *: ▼

Select all that apply: If any option(s) from below are selected 'Yes', then mark the "Central Line" risk factor field 'No' if an eligible central line was also in place.

Known or suspected Munchausen Syndrome by Proxy during current admission: ▼

Observed or suspected patient injection into vascular line(s) within the BSI infection window period: ▼

Epidermolysis bullosa during current admission: ▼

Matching organism is identified in blood and from a site-specific specimen, both collected within the infection window period and pus is present at one of the following vascular sites from which the specimen was collected: ▼

Event Details

Specific Event >: LCBI - Laboratory confirmed bloodstream infection ▼

Specify Criteria Used *Signs & Symptoms (check all that apply)Any patient <=1 year old

- | | |
|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> Fever | <input type="checkbox"/> Fever |
| <input type="checkbox"/> Chills | <input type="checkbox"/> Hypothermia |
| <input type="checkbox"/> Hypotension | <input type="checkbox"/> Apnea |
| | <input type="checkbox"/> Bradycardia |

Laboratory (check one)

- Recognized pathogen(s) from one or more blood specimens
- Common commensal from >= 2 blood specimens

Underlying Conditions for MBI-LCBI (check all that apply)

- Allo-SCT with Grade >= 3 GI GVHD
- Allo-SCT with diarrhea
- Neutropenia

**2020 Updates for Slide 67:
BSI Event Data Collection Form: NHSN
Application**

Event Information

Event Type *: BSI - Bloodstream Infection
Post-procedure:
MDRO Infection Surveillance *: No, this infection's pathogen/location are not in-plan for Infection Surveillance in the MDRO/CDI Module
Location *: CTICU - CARDIOTHORACIC CC
Date Admitted to Facility >: 02/04/2019

Date of Event *: 02/11/2019

Risk Factors

Central line *:
Any hemodialysis catheter present *:
Extracorporeal life support present (e.g. ECMO) *:
Ventricular assist device (VAD) present *:

Select all that apply: If any option(s) from below are selected 'Yes', then mark the "Central Line" risk factor field 'No' if an eligible central line was also in place.

Known or suspected Munchausen Syndrome by Proxy during current admission:
Observed or suspected patient injection into vascular line(s) within the BSI infection window period:
Epidermolysis bullosa during current admission:
Matching organism is identified in blood and from a site-specific specimen, both collected within the infection window period and pus is present at one of the following vascular sites from which the specimen was collected:

In 2020, the instructions read: If any option(s) from below are marked "Yes", then mark the "Central Line" risk factor field "Yes" if an eligible central line was also in place.

Event Details

Specific Event >: LCBI - Laboratory confirmed bloodstream infection

Specify Criteria Used *

<u>Signs & Symptoms (check all that apply)</u>	<u>Laboratory (check one)</u>
<u>Any patient</u> <=1 year old	<input type="checkbox"/> Recognized pathogen(s) from one or more blood specimens
<input type="checkbox"/> Fever <input type="checkbox"/> Fever	<input type="checkbox"/> Common commensal from >= 2 blood specimens
<input type="checkbox"/> Chills <input type="checkbox"/> Hypothermia	
<input type="checkbox"/> Hypotension <input type="checkbox"/> Apnea	<u>Underlying Conditions for MBI-LCBI (check all that apply)</u>
<input type="checkbox"/> Bradycardia	<input type="checkbox"/> Allo-SCT with Grade >= 3 GI GVHD
	<input type="checkbox"/> Allo-SCT with diarrhea
	<input type="checkbox"/> Neutropenia

2019 Presentation, Slide 79

- Exclusion of viruses and parasites from LCBI-1 criterion
- Required Data Field CLABSI Exclusions
 - Extracorporeal membrane oxygenation (ECMO)
 - Ventricular assist device (VAD)
- Addition of Data Fields for **Optional** CLABSI Exclusion in the NHSN application and on the BSI event form
 - Epidermolysis Bullosa (EB)
 - Munchausen Syndrome by Proxy (MSBP)
 - Patient self-injection
 - Pus at vascular site
 - Group B Strep 1st 6 days of Life

2020 Updates for Slide 79: NHSN BSI Protocol Changes Summary

- Exclusion of viruses and parasites from LCBI-1 criterion
- Required Data Field CLABSI Exclusions
 - Extracorporeal membrane oxygenation (ECMO)
 - Ventricular assist device (VAD)
- Addition of Data Fields for **Required** CLABSI Exclusion in the NHSN application and on the BSI event form
 - Epidermolysis Bullosa (EB)
 - Munchausen Syndrome by Proxy (MSBP)
 - Patient self-injection
 - Pus at vascular site
 - Group B Strep 1st 6 days of Life