

What's In a Name: Understanding the Central Line Definition and Eligibility

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Motivational Quote of the Day

“Wise and humane management of [a] patient is the best safeguard against infection.”

---Florence Nightingale

Objectives

In today's presentation I will demonstrate key terms associated with central line associated bloodstream infection surveillance.

By the end of this lesson, you will be able to:

- Define key terms associated with central line associated bloodstream infection (CLABSI) events
- Highlight specific CLABSI exclusions and elements required to meet exclusionary criteria
- Discuss the present on admission (POA) and healthcare associated infection (HAI) time periods
- Assess current BSI knowledge through knowledge checks and case scenarios

Resources for Bloodstream Infection (BSI) Events

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NHSN Login

About NHSN



Enroll Facility Here



CMS Requirements



Change NHSN Facility Admin

Resources by Facility



Patient Safety Component



Nurse Staffing Hours Indicator

Annual Surveys, Locations & Monthly Reporting Plans

Analysis Resources



HAI Rebaseline



Antimicrobial Use & Resistance



BSI (CLABSI)

Bloodstream Infection (BSI) Events

Central Line-Associated Bloodstream Infection (CLABSI) and non-central line-associated Bloodstream Infection

[Print](#)

Protocols

[Chapter 4: Bloodstream Infection \(BSI\) Event – January 2025](#)

[PDF – 46 pages]

For full details on protocol definitions and the application of these definitions, please review the applicable protocol and [Chapter 2: Identifying Healthcare-associated Infections \(HAIs\) in NHSN](#).

[2025 Patient Safety Component Summary of Updates](#)

[PDF – 6 Pages]

Supporting Chapters

[Chapter 1: NHSN Overview – January 2025](#)

[PDF – 6 pages]

[Chapter 2: Identifying Healthcare-associated Infections \(HAIs\) in NHSN – January 2025](#)

[PDF – 28 pages]

[BSI Training](#)

[Educational Roadmap](#)

[CMS Requirements](#)

[HAI Checklists](#)

[FAQs](#)

[BSI Events](#)

[Analysis](#)

Resources for Bloodstream Infection (BSI) Events

BSI Event

[Primary Bloodstream Infection \(BSI\) form \(57.108\)](#)  [PDF – 200 KB]

- [Customizable form](#)  [DOCX – 80 KB]

- [Table of Instructions](#)  [PDF – 7 pages]

Denominator Forms

ACH

[Denominators for Intensive Care Unit \(ICU\)/Other locations \(not NICU or SCA\) form \(57.118\)](#)  [PDF – 80 KB]

- [Customizable form](#)  [DOCX – 60 KB]
- [Table of Instructions](#)  [PDF – 6 pages]

[Denominators for Neonatal Intensive Care Unit \(NICU\) form \(57.116\)](#)  [PDF – 80 KB]

- [Customizable form](#)  [DOCX – 60 KB]
- [Table of Instructions](#)  [PDF – 7 pages]

[Denominators for Specialty Care Area \(SCA\) form \(57.117\)](#)  [PDF – 80 KB]

- [Customizable form](#)  [DOCX – 60 KB]
- [Table of Instructions](#)  [PDF – 5 pages]

<https://www.cdc.gov/nhsn/psc/bsi/index.html>



FAQs

[BSI Events](#)

[Analysis](#)

[Annual Surveys](#)

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<https://www.cdc.gov/nhsn/faqs/faq-bsi.html>

Definitions and Key Terms for Central Line Associated Bloodstream Infection Determinations

Key Terms in Chapter 4: Bloodstream Infection Event (Central Line-Associated Bloodstream Infection and Non-central Line Associated Bloodstream Infection)

- **Central Line (CL):** An intravascular catheter that terminates at or close to the heart or **in one of the great vessels** which is used for **infusion, withdrawal of blood, or hemodynamic monitoring.**
- **Central Line Access:** Line placement, needle into the port, infusion or withdrawal through the line, flushes, hemodynamic monitoring. **Access = an eligible line for CLABSI events**
- **Eligible Central Line:** A central line (CL) that has been in place > 2 consecutive calendar days following the first access of the central line, **in an inpatient location**, during the current admission.

Key Terms in Chapter 4: Great Vessels Used in Central Line Determinations

Consider the following great vessels when making determinations about CLABSI events and counting CL device days:

- Aorta
- Pulmonary artery
- Superior vena cava
- Inferior vena cava
- Brachiocephalic veins

Key Terms in Chapter 4: Great Vessels Used in Central Line Determinations

Consider the following great vessels when making determinations about CLABSI events and counting CL device days:

- Internal jugular veins
- Subclavian veins
- External iliac veins
- Common iliac veins
- Femoral veins
- In neonates, the umbilical artery/vein

Key Terms in Chapter 4: Bloodstream Infection Event (Central Line-Associated Bloodstream Infection and Non-central Line Associated Bloodstream Infection)

- **Central Line Associated BSI (CLABSI):** A laboratory-confirmed bloodstream infection where an **eligible BSI organism** is identified, and **an eligible central line** is present on the LCBI date of event or the day before

NOTE: Neither the type of device nor the insertion site will determine if a line qualifies as a central line. Patients must have one or more qualifying central lines to be included in CLABSI surveillance.

Key Terms and Additional definitions from Chapter 4 are found here:

https://www.cdc.gov/nhsn/pdfs/pscmanual/4psc_clabscurrent.pdf

Central Line and Central Line Access Examples

Example 1: Central Line Determination

- Q: Since venous sheaths terminate in a great vessel, are they considered central lines?

A: NHSN uses the termination site of the catheter tip and the use of the catheter to determine if the central line definition is met. Given this, if the venous sheath terminates at the heart, close to the heart OR in one of the great vessels AND is used for infusions, blood withdrawal or hemodynamic monitoring, it is a central line. Additionally, it is important to remember both elements of NHSNs central line definition are required. If both requirements are not met, the device is not a central line. So, the short answer is---if the central line definition is met, then yes, the venous sheath is a central line

Example 2: Central Line Determination

- Q: During the NHSN Training, there was mention of midlines qualifying as central lines if they end in a great vessel. Can you expand on this qualification and confirm this conflicts with Chapter 4 guidance?

Devices **Not** Considered Central Lines for NHSN Reporting Purposes:

- Arterial catheters unless in the pulmonary artery, aorta, or umbilical artery
- Arteriovenous fistula
- Arteriovenous graft
- Extracorporeal life support (ECMO)
- Hemodialysis reliable outflow (HERO) dialysis catheter
- Intra-aortic balloon pump (IABP) devices
- Peripheral IV or Midlines
- Ventricular Assist Device (VAD)

Example 2: Central Line Determination

- Q: During the NHSN Training, there was mention of midlines qualifying as central lines if they end in a great vessel. Can you expand on this qualification and confirm this conflicts with Chapter 4 guidance?

A: NHSNs stance has always been neither the type of device nor the insertion site is used to determine if a device is considered a central line for NHSN reporting purposes (Chapter 4, page 4-5). Midline catheters by description are not intended to terminate in one of the great vessels or near the heart which is a part of the definition of a central line. However, the actual location of the catheter tip is the determining factor, and imaging obtained to verify line placement should indicate the location of the tip. The guidance also states facilities should consider the line's intended use.

Example 3: Central Line Determination

- Q: The global standards are increasingly supporting deeper location for midline tip termination now leaning in favor of catheter tip position in the distal and proximal axillary vein, and the proximal subclavian vein. With these newer locations, I believe that despite the name "midline" these would be counted as central lines in accordance with NHSN surveillance protocols. Is that the correct interpretation?

A: NHSN has guidance on devices that are not typically considered central lines based on "name" only. The guidance states "Neither the type of device nor the insertion site is used to determine if a device is considered a central line for NHSN reporting purposes."

Example 4: Central Line Determination

- **Q:** We have a patient that has what is clinically classified as a central venous catheter but terminates in the azygos vein. This was a deliberate clinical decision by her cardiac ICU and IR team. Because the line traverses the superior vena cava to terminate in the azygos vein, is her line counted as a CVC according the NHSN definition?
- **A:** The azygous vein a great vessel or the termination site of the tip at or close to the heart. As a result, the central line definition is not met.

Example 5: Central Line Determination

- Q: We have a patient that has what is clinically classified as a central venous catheter but terminates in the azygos vein. This was a deliberate clinical decision by her cardiac ICU and IR team. Because the line traverses the superior vena cava to terminate in the azygos vein, is her line counted as a CVC according the NHSN definition?

A: The azygous vein is not considered a great vessel. Based on location of the azygous vein, the central line tip does terminate at or close to the heart. As a result, the central line definition is not met.

Example 6: Central Line Determination

- Q: Could you help explain the change in the 2025 NHSN manual regarding “Removal of Atrial catheters (also known as transthoracic intra-cardiac catheters, those catheters inserted directly into the right or left atrium via the heart wall) from the list of “Devices Not Considered Central Lines for NHSN reporting.” If the central line definition is met, these catheters are now eligible for a CLABSI event.”

Why was this line previously excluded and why is it now eligible as a central line?

Example 6: Central Line Determination

A: When atrial catheters were added to the list of devices not considered central lines, it was based on research that indicated they would not meet the central line eligibility criteria (CL in place >2 consecutive calendar days on the BSI date of event or the day before). The central line definition is often met per NHSN guidance as the devices are considered intravascular catheters that terminate at or close to the heart or in one of the great vessels and used for withdrawal of blood, infusion, or hemodynamic monitoring. In most instances reviewed by NHSN, atrial catheters are considered central lines.

Central Line Definitions, Access, and Eligibility

Key Terms in Chapter 4: Bloodstream Infection Event (Central Line-Associated Bloodstream Infection and Non-central Line Associated Bloodstream Infection)

Central Line (CL): An intravascular catheter that **terminates at or close to the heart or in one of the great vessels** which is used for **infusion, withdrawal of blood, or hemodynamic monitoring**. For a list of great vessels for CLABSI reporting refer to the BSI chapter.

Central Line Access: Line placement, needle into the port, infusion or withdrawal through the line, flushes, hemodynamic monitoring. **Access = an eligible line for CLABSI events**

Eligible Central Line: A central line (CL) that has been in place > 2 consecutive calendar days following the first access of the central line, in an inpatient location, during the current admission. An eligible CL remain eligible for CLABSI events until the day after removal from the body or patient discharge, whichever comes first.

Central Line Associated BSI (CLABSI): A laboratory-confirmed bloodstream infection where an **eligible BSI organism** is identified, and an **eligible central line** is present on the LCBI date of event or the day before

Understanding Central Line Determinations and Eligibility

Date	7/1	7/2	7/3	7/4	7/5	7/6	7/7
Patient B Port Access	Port placed in IR Port In	Patient moves to IP unit Port In	Port In	Port In	Port In	Port In	Port In
Accessed	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eligible for CLABSI Event	CL Day 1 No	CL Day 2 No	CL Day 3 Yes	CL Day 4 Yes	CL Day 5 Yes	CL Day 6 Yes	CL Day 7 Yes

Patient B is seen in interventional radiology (IR) on 7/1, and a port is placed. IR is considered a non-housed inpatient location, so the central line day count for making a CLABSI determination begins on 7/1. On 7/2 Patient B moves to a new inpatient location, so the CL day count continues. Patient B becomes eligible for a CLABSI event on 7/3 and remains eligible until the day after discharge or port removal, whichever come first.

Understanding Central Line Determinations and Eligibility

Date	7/11	7/12	7/13	7/14	7/15	7/16	7/17
Patient S admitted to IP unit 7/11					De-accessed		+BC E.coli
Port Access	Port In	Port In	Port In				
Accessed	No	No	Yes	Yes	Yes	No	No
Eligible for CLABSI Event	CL Day 1 No	CL Day 2 No	CL Day 3 No	CL Day 4 No	CL Day 5 Yes	CL Day 6 Yes	CL Day 7 Yes

Patient S is admitted with a non-accessed port on 7/11. On 7/13 the port is accessed and later de-accessed on 7/15. Because the port is accessed for >2 consecutive calendar days, it becomes eligible for a CLABSI on 7/15. De-accessing the port **does not** remove the port from CLABSI surveillance. The port remains eligible for a CLABSI event until the day after port removal or the day after the patient is discharged, whichever comes first.

Understanding Central Line Determinations and Eligibility

Date	7/10	7/12	7/13	7/14	7/15	7/16	7/17
Patient I admitted to IP unit 7/10	CL in (placed)	CL in CLout	Midline inserted tip terminates in the subclavian	Midline In	Midline In	Midline In	+BC S. aureus
Accessed	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Eligible for CLABSI Event	CL Day 1 No	CL Day 2 No	CL Day 3 Yes	CL Day 4 Yes	CL Day 5 Yes	CL Day 6 Yes	CL Day 7 Yes

Patient I is admitted to the inpatient unit, and a CL is placed on 7/10. The CL is removed on 7/11, and a midline is inserted on 7/13. Because the midline terminates at or close to the heart or in one of the great vessel, it is considered a CL. The CL day count for making a CLABSI determination will continue uninterrupted. The positive BSI is a CLABSI event since an eligible central line is in place on the BSI DOE or the day before.

Understanding Central Line Determinations and Eligibility

Date	7/10	7/11	7/13	7/14	7/15	7/16	7/17
Patient G admitted to inpatient unit 7/10	CL in (on admission) CL out	Midline inserted (does not meet the CL definition)	Midline In	Midline In	Midline In	Midline In	+BC S. aureus
Accessed	Yes	Yes	No	No	No	No	No
Eligible for CLABSI Event	CL Day 1 No	CL Day 2 No	No	No	No	No	No

Patient G is admitted to the inpatient location on 7/10 with a central line in place. The CL is removed on admission, and a midline is inserted on 7/11. Because the midline does not terminate at or close to the heart or in one of the great vessels, it is not considered a CL. The positive BSI on 7/17 is not a CLABSI event because there is not an eligible central line in place on the BSI DOE or the day before.

Central Line Access and Eligibility Examples

Example 7: Central Line Eligibility

- Q: Is the BSI event a CLABSI?
 - The patient had a PICC line in place for 7 days (placed 8/15 through 8/21); Day 7 PICC removed
 - 8/23 (Day 9): BC x 1 with MRSA the other BC negative

A: No, the central line was not in place on the date of the event or the day prior, a full calendar day with no central line occurred. As a result, there is no eligible central line present on the BSI date of event (DOE).

Example 8: Central Line Eligibility

- Q: Is the BSI event a CLABSI?
 - The patient had a PICC line in place for 7 days (placed 8/15 through 8/21); Day 7 PICC removed
 - 8/23 (Day 9): BC x 1 with MRSA the other BC negative

A: No, the central line was not in place on the date of the event or the day prior, a full calendar day with no central line occurred. As a result, there is no eligible central line present on the BSI date of event (DOE).

BSI Bootcamp Step 4: Central Line Association for Bloodstream Infection (CLABSI) Exclusion Chin-ups

BSI Bootcamp Step 5: Central Line Association for Bloodstream Infection (CLABSI) Exclusion Work-out

BSI Bootcamp Step 6: Present on admission (POA) and healthcare associated infection (HAI)

BSI Bootcamp Step 7: Close out and Summary

Primary Bloodstream Infection Recap

- Understanding key terms in chapter 4 is essential to performing BSI/CLABSI surveillance.
- Central line determinations and eligibility is based on meeting the central line and eligible central line definition.
- CLABSI exclusions require an eligible central line, and it is important to review the requirements for each exclusion.
- Correct application of the present on admission time period can impact a CLABSI determination.

Bloodstream Infection Resources:

- **CLABSI protocols, forms, frequently asked questions:**
 - <http://www.cdc.gov/nhsn/acute-care-hospital/clabsi/index.html>
 - <http://www.cdc.gov/nhsn/newsletters.html>
 - [NHSN LCBI Checklist](#)
 - [FAQs: Bloodstream Infection \(BSI\) Events | NHSN | CDC](#)
- **Operational guidance for CMS reporting:**
 - <http://www.cdc.gov/nhsn/cms/index.html>
 - <http://www.cdc.gov/nhsn/acute-care-hospital/clabsi/index.html>
- **NHSN training:**
 - <http://www.cdc.gov/nhsn/training/>

For NHSN questions or concerns related to the Annual Training

Post questions in the Annual Training Community

Please submit questions to the NHSN Help Desk.

- Access new portal at <https://servicedesk.cdc.gov/nhsncsp> .
- If you do not have a SAMS login, or are unable to access Annual Training Community, you can still email the NHSN Help Desk at nhsn@cdc.gov include **Annual Training 2025** in Subject Line

For more information, contact CDC

1-800-CDC-INFO (232-4636)

TTY: 1-888-232-6348 www.cdc.gov

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.

