

OPERATIONAL DEFINITION

MEASUREMENT: Central Line-associated Blood Stream Infections (CLA-BSI)

I. Description and Rationale

This measure answers the question: How often is a patient harmed due to central line-associated blood stream infections (CLABSIs)?

The current version of the National Healthcare Safety Network (NHSN) Manual: Patient Safety Component Protocol, will serve as the official reference guide for rules around defining/reporting central line-associated blood stream infections.

II. Population Definition

The patient population for this measure is defined per the patient population operational definition. Inpatient and observational stay patients will be included in the measure.

ALL units collect CLA-BSI data: PICU, CICU, NICU, Hematology-Oncology, and all other units.

Inclusion Criteria

All patients are included who are defined as inpatient or under observation at the hospital including one calendar day post discharge (including CLABSI's related to Mucosal Barrier Injuries (MBIs)).

Exclusion Criteria

Infection must not be present on admission into the hospital as defined by NHSN. For most infections, this means that the infection does not become evident until two calendar days or more after admission, but each infection must be assessed individually.

III. Data Source(s)

Each hospital will report data using their own collection methods until specific high detection methods are prescribed by the network.

IV. Sampling and Data Collection Plan

CLA-BSIs are assigned to the month when the infection occurred.

CLA-BSIs are collected at the PICU, NICU, CICU, Hematology-Oncology units, and for all remaining units (grouped as 'other')

V. Calculation

Numerator: Number of patients with a CLABSI event, as defined by CDC guidelines. For this measure, distinction is not made between an infection due to CVC/PICC insertion and one due to maintenance practices.

Denominator: Total number of central line days during the time period.

Main Measure: Number of CLABSI infections (both MBI and non-MBI) per 1000 central line days (Numerator/Denominator) x 1000

Note: For more information regarding blood culture monitoring and data collection within the HEM/ONC units, please refer to Appendix A.

VI. Data Quality Audit Procedures

Hospitals should develop their own procedures for auditing data quality until quality auditing procedures are suggested by the network.

VII. Notes

N/A

VIII. Experts/Resources

www.cdc.gov/nhsn

http://www.cdc.gov/nhsn/PDFs/pscManual/4PSC_CLABScurrent.pdf

IX. Attachments

N/A

X. Revision History

Version	Primary Author(s)	Description of Version	Date Completed
Version 1	Karen Zieker	Version 1	3/30/12
Version 2	Karen Zieker	Noted that 'other' includes all other CLABSI that do not fit the intensive care units	10/17/14

Version	Primary Author(s)	Description of Version	Date Completed
Version 3	Karen Zieker	Indicated the current year for the NHSN measure definition	3/25/15
Version 4	CLABSI Co-leaders	Exclusion time changed from 48 hrs to 2 calendar days; Added HEM/ONC events by: CLABSI, secondary infections, single positive cultures; Added events outside of HEM/ONC units with MBI; Process data observations collected by: PICU, CICU, NICU, Hematology-Oncology, and all other units	1/13/2016
Version 5	CLABSI Co-leaders	Changed inclusion criteria from 2 calendar days to 1 calendar day. Aligned with NHSN on manual reference and present on admission. Clarified culture calculation and added appendix	7/21/2017
Version 6	CLABSI Co-leaders	Added Appendix B for hospitals participating in the 2021 CLABSI Hem-Onc Pioneer Cohort. Refined language around the main measure for clarity	6/21/2021

Appendix A – Additional Outcomes Data for Hem-Onc Units

HEM/ONC patients residing in HEM/ONC units should have additional blood culture data collected and submitted for: Secondary Blood Stream Infections (BSI) and Single Positives.

- For further clarification on Secondary Infections, [click here](#) for the NHSN guidelines (pages 14-16).
- If a positive blood culture does not meet definitions for CLABSI or a Secondary Infection, it would be considered a Single Positive Culture.
- Calculation Example: Number of CLABSIs (including MBIs) + number of Secondary BSI + Single Positive Cultures (all others) = Total number of all positive blood cultures drawn from central lines on a HEM/ONC unit

Appendix B – For Hospitals in the SPS 2021 Hem-Onc Pioneer Cohort who have Chosen to Test the Administration of Levofloxacin Prophylaxis Factor (optional)

The information contained in Appendix B is for those hospitals participating in the Levofloxacin factors for the Hem-Onc Pioneer Cohort. These hospitals will provide information on additional outcome measures.

Members that choose to test the Levofloxacin factor in their hospital for high-risk patients, per the factor definition, will also submit data for the following outcome and balancing measures:

1. *CLABSI rate for patients with a primary diagnosis of AML and relapsed ALL on Hem-Onc and/or BMT units*
2. *C. diff rate for the Hem-Onc/BMT units: (# of C. diff infections per 1000 patient days) as defined by the NHSN (reference the ASP (antimicrobial stewardship) operational definition)*

Numerators (Monthly):

1. # of CLABSI infections (MBI and non-MBI) for patients with a primary diagnosis of AML and relapsed ALL on Hem-Onc and/or BMT units
2. # of C. diff Infections for patients on Hem-Onc/BMT units

Denominators (Monthly):

1. # of central line days for patients with a primary diagnosis of AML and relapsed ALL
2. Total # of patient days for patients on Hem-Onc/BMT units