

CMIT ID

00460-01-C-LTCHQR

Title

Central Line-Associated Bloodstream Infection (CLABSI) Standardized Infection Ratio

Steward Organization Group

Centers for Disease Control and Prevention

Committee

MSR Recommendation Group

Current Program Use

Long-Term Care Hospital Quality Reporting

CMS Program History

- Finalized for inclusion in the Long-Term Care Hospital Quality Reporting Program in 2011.
- Implemented in the Long-Term Care Hospital Quality Reporting Program in 2013.
- Also active in the PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program.

Description

Annual risk-adjusted standardized infection ratio (SIR) of central line-associated bloodstream infections (CLABSI) among adults and children hospitalized as inpatients at acute care hospitals, critical access hospitals, oncology hospitals, and long-term acute care hospitals. SIR is reported annually and is calculated by dividing the number of observed CLABSIs by the number of predicted CLABSIs.

Numerator

Number of annually observed central line-associated bloodstream infections (CLABSI) in hospital inpatients.

Numerator Exceptions

N/A

Numerator Exclusions

N/A

Denominator

Number of annually predicted central-line associated bloodstream infections (CLABSI) in hospital inpatients.

Denominator Exceptions

N/A

Denominator Exclusions

The following devices are not considered central lines and are excluded:

- 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)

CLABSI events reported to NHSN as mucosal barrier injury laboratory-confirmed bloodstream infections (MBI-LCBIs) are excluded.

Cascade of Meaningful Measures Priority

Safety

Level of Analysis

Facility

Care Setting

Hospital: Inpatient Acute Care Facility, Hospital: Long-Term Care, PPS-Exempt Cancer Hospital, Hospital: Outpatient

CBE Endorsement History

Endorsement History:

- The measure was first endorsed in 2012.
- Measure retained endorsement in 2025 through maintenance cycle as new measure ID [CBE #0139](#).

Link to Endorsement Measure Record: [Catheter-Associated Urinary Tract Infection \(CAUTI\) Standardized Infection Ratio | Partnership for Quality Measurement](#)

CBE Endorsement Status

Endorsed

About this Analysis (Measure Score by PY)

Impact Summary: This measure supports the Long-Term Care Hospital Quality Reporting Program by assessing health care-associated central line-associated bloodstream infections (CLABSIs) among patients in long-term care hospitals, an outcome closely associated with patient safety and infection prevention.

Based on the most recent data, the total estimated number of CLABSIs across all deciles is approximately 1,200. If long-term care hospitals with higher CLABSI rates improved their performance to levels observed among better-performing facilities, the analysis suggests that up to about 1,000 CLABSIs could potentially be avoided, indicating a substantial opportunity for improved patient outcomes.

For this measure, Battelle reviewed the following publicly available datasets available at [Long-Term Care Hospital - Provider Data | Provider Data Catalog \(cms.gov\)](#):

- long-term_care_hospitals_03_2026.zip (which contains data from April 2024-March 2025 and is referred to as year 2024 in this assessment)
- long-term_care_hospitals_03_2025.zip (which contains data from April 2023-March 2024 and is referred to as year 2023 in this assessment)
- long-term_care_hospitals_03_2024.zip (which contains data from April 2022-March 2023 and is referred to as year 2022 in this assessment)
- long-term_care_hospitals_03_2023.zip (which contains data from April 2021-March 2022 and is referred to as year 2021 in this assessment)

Battelle analyzed all values for “L_007_01” not marked as “Not Available” from the corresponding Long-term_Care_Hospital-Provider_Data.csv file.

About Figure 1: Figure 1 is a boxplot that shows how scores have changed based on the most recent 4 years of data available. For each year, the boxplot displays a box with lines and dots to help visualize the range and distribution of scores. The dots represent the points where the lowest 5% and highest 5% of scores fall, and the line connecting them shows where 90% of the scores are located. The box itself covers the middle half of the scores, from the 25th to the 75th percentile. Inside the box, a horizontal line marks the median score, which is the middle value, while a “+” sign shows the average score. This type of graph makes overall trends in scores over time as well as the consistency and spread of the results easier to understand.

Figure 1 (Measure Score by PY)

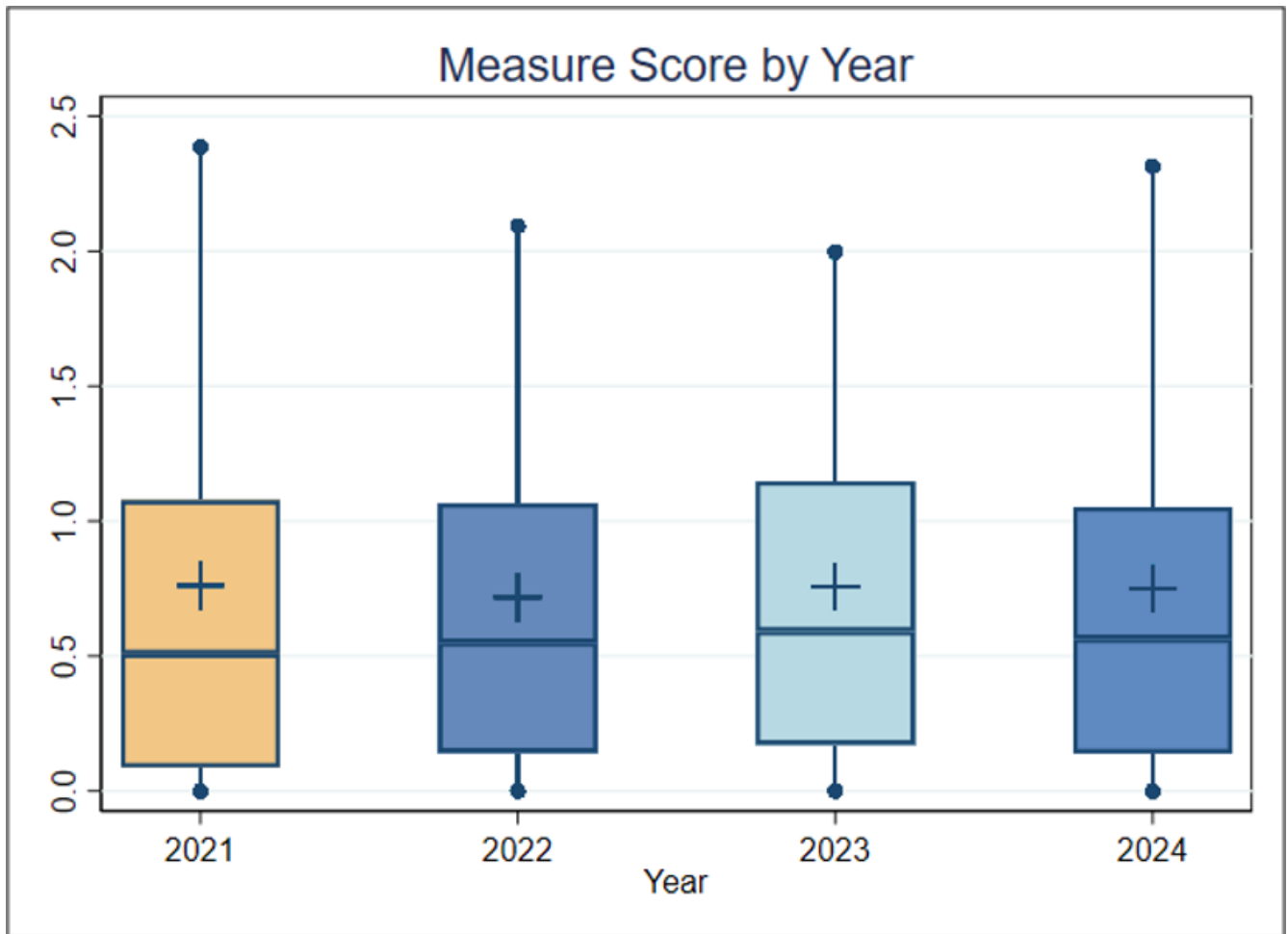


Figure 1. Boxplot of Measure Score by Year

Interpretation (Measure Score by PY)

Figure 1 Interpretation: There is little discernible change across the 4 years; the median score ranged between a minimum of 0.51 to a maximum of 0.59. For this measure, a lower score indicates better quality of care.

About this Analysis (Score Distro)

About Table 1: Table 1 illustrates the distribution of scores (standardized infection ratio [SIR]), raw rates, and the number of patients represented within each group. It is important to note that the groups (referred to as deciles, each comprising 10% of the organizations) with the lowest or highest scores may contain more or fewer patients than other groups. For example, if the lowest-scoring decile includes only 5% of the total patient population, this smaller group size may be associated with lower performance scores.

Interpretation (Score Distro)

Table 1 Interpretation: To estimate the number of negative outcomes (CLABSIs), the number of patients is multiplied by the average raw rate for each decile. In 2024, the total estimated number of negative outcomes across all deciles is about 1,200. If the average performance of Decile 3 (0.011%) is considered a plausible, achievable score, and the entities in Deciles 4 through 10 improved to reach that score, about 1,000 fewer negative outcomes could occur. This translates to about three patients per entity and means that improving performance on this measure could help ensure that several hundred fewer patients contract CLABSIs, potentially leading to better health outcomes.

Table 1 (Score Distro)

Table 1. Importance (Decile by Measure Score, FY2024)

	Overall	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
Average SIR (Standard Deviation)	0.750 (0.815)	0	0	0.121	0.308	0.531	0.661	0.854	1.037	1.500	2.500
Average Raw Rate (Standard Deviation)	0.090 (0.137)	0	0	0.011	0.036	0.054	0.074	0.099	0.124	0.176	0.361
Entities	312	32	31	31	31	31	32	31	31	31	31
Patients	1,230,531	100,154	69,485	131,684	142,337	125,319	153,281	129,301	150,564	109,106	119,300

Importance Criterion Definition

The Meaningfulness criterion will be evaluated as part of the full Preliminary Assessment available in September.

Criterion Definition

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