CMIT ID

00459-01-C-PCHQR

Title

Catheter-Associated Urinary Tract Infection (CAUTI) Standardized Infection Ratio

Steward Organization Group

Centers for Disease Control and Prevention

Committee

MSR Recommendation Group

Current Program Use

Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting

CMS Program History

- Finalized for inclusion in the PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program in 2012.
- Implemented in the PCHQR Program in 2013.
- Also active in the Inpatient Rehabilitation Facility Quality Reporting Program and the Long-Term Care Hospital Quality Reporting Program.

Description

Annual risk-adjusted standardized infection ratio (SIR) of catheter-associated urinary tract infections (CAUTI) among adults and children hospitalized as inpatients at acute care hospitals, critical access hospitals, oncology hospitals, long-term acute care hospitals, and acute care rehabilitation hospitals. SIR is reported annually and is calculated by dividing the number of observed CAUTIs by the number of predicted CAUTIs.

Numerator

Number of annually observed catheter-associated urinary tract infections (CAUTI) in hospital inpatients.

Numerator Exceptions

N/A

Numerator Exclusions

N/A

Denominator

Number of annually predicted catheter-associated urinary tract infections (CAUTI) in hospital inpatients.

Denominator Exceptions

N/A

Denominator Exclusions

The following are not considered indwelling catheters by NHSN definitions:

- Suprapubic catheters
- Condom catheters
- “In and out” catheterizations
- Nephrostomy tubes
- Ileoconduits

Cascade of Meaningful Measures Priority

Safety

Level of Analysis

Facility

Care Setting

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

CBE Endorsement History

Endorsement History:

- Initial endorsement, 2012.
- New measure endorsed with conditions Spring 2025.

Link to Endorsement Measure Record: National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure

CBE Endorsement Status

Endorsed with Conditions

About this Analysis (Measure Score by PY)

Impact Summary: This measure aligns with Prospective Payment System-Exempt Cancer

Hospital Quality Reporting (PCHQR) Program goals by delivering outcome-based, facility-level data to inform consumer choice and promote accountability. It encourages hospitals and clinicians to improve inpatient care for Medicare beneficiaries by tracking and reporting best practices across varied care settings.

Performance change over time was difficult to assess as only 11 entities reported on this measure during the years assessed. Drawing from Table 1, if all hospitals improved their infection rates to match the average score found in Decile 3, there could be about 50 fewer CAUTI infections overall. On average, each hospital would see four fewer patients affected. Improving performance to achieve this average could help more patients avoid infections and lead to better health outcomes.

For this measure, Battelle reviewed the following publicly available datasets available at Hospitals data archive | Provider Data Catalog:

- Hospitals_02_2026.zip (which contains data from April 2024-March 2025 and is referred to as year 2024 in this assessment)
- Hospitals_02_2025.zip (which contains data from April 2023-March 2024 and is referred to as year 2023 in this assessment)
- Hospitals_01_2024.zip (which contains data from April 2022-March 2023 and is referred to as year 2022 in this assessment)
- Hospitals_01_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 “PCH_5” not marked as “Not Available” from the corresponding PCH_HEALTHCARE_ASSOCIATED_INFECTIONS_HOSPITAL.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)

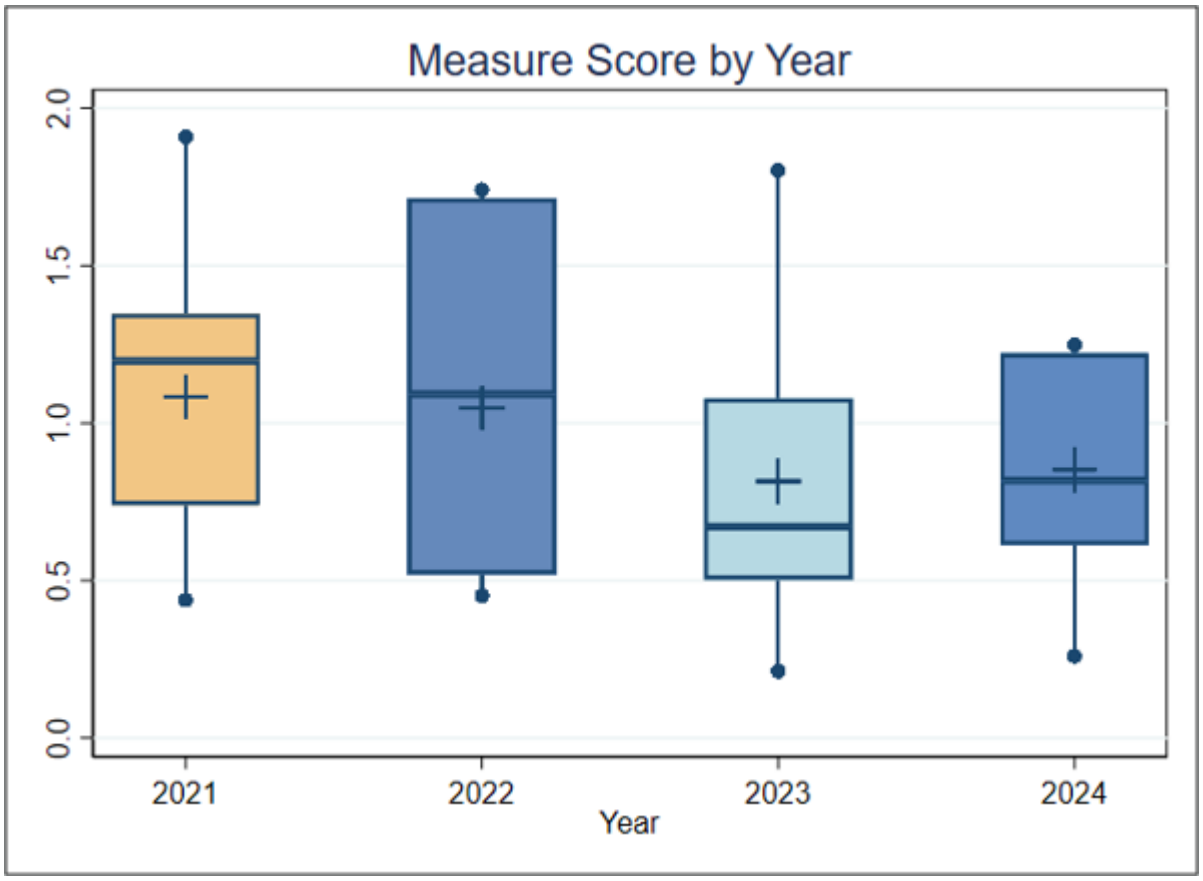

Figure 1. Boxplot of Measure Score by Year

Interpretation (Measure Score by PY)

Figure 1 Interpretation: There are only 11 entities per year, so any apparent trend may just as likely be attributed to random error, indicating little discernible change across the 4 years. 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, then smaller entity size may be associated with lower performance scores.

Interpretation (Score Distro)

Table 1 Interpretation: Note that there are data for only 11 entities, and that the SIR is not

available (N/A) for three of them due to an expected value less than 1. To estimate the number of negative outcomes (CAUTI infections), the number of patients is multiplied by the average raw rate for each decile. Right now, the total estimated number of negative outcomes across all deciles is about 100. If the average performance of Decile 3 (0.574%) is considered a plausible, achievable rate, and the entities in Deciles 4 through 10 improved to reach that rate, about 50 fewer negative outcomes could occur. This translates to about four patients per entity and means that improving performance on this measure could help ensure that fewer patients contract CAUTI infections, potentially leading to better health outcomes.

Table 1 (Score Distro)

Table 1. Importance in the Most Recent Year of Data Available (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)	0.851 (0.361)	N/A	0.260	0.574	0.729	0.654	0.906	1.223	1.216	1.248	N/A
Average Raw Rate (Standard Deviation)	0.102 (0.114)	0	0.032	0.050	0.066	0.072	0.081	0.122	0.138	0.147	0.410
Entities	11	2	1	1	1	1	1	1	1	1	1
Patients	119,667	974	21,860	2,017	31,633	12,421	12,326	4,911	11,564	21,717	244

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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