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## CMIT ID

00001-02-C-PCHQR

## Title

30-Day Post-Operative Colon Surgery (COLO) and Abdominal Hysterectomy (HYST) Surgical Site Infection (SSI) Standardized Infection Ratio (SIR)

## 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 PCHQR Program in 2013.
- Implemented in the PCHQR Program in 2014.

## Description

Annual risk-adjusted standardized infection ratio (SIR) of observed over predicted deep incisional primary and organ/space surgical site infections (SSIs), over a 30-day post-operative surveillance period, among hospitalized adults who are  $\geq 18$  year of age with a date of admission and date of discharge that are different calendar days, and the patient underwent a colon surgery (COLO) or abdominal hysterectomy (HYST) at an acute care hospital or oncology hospital. The 30-day postoperative surveillance period includes SSIs detected upon admission to the facility or a readmission to the same facility or a different facility (other than where the procedure was performed) and via post-discharge surveillance.

## Numerator

Number of annually observed hospitalized patients who are  $\geq 18$  years of age with a date of admission and date of discharge that are different calendar days, and the patient underwent a colon surgery (COLO) or abdominal hysterectomy (HYST) and developed a deep incisional primary or organ/space surgical site infection (SSI) within the 30-day postoperative surveillance period. The 30-day postoperative surveillance period includes SSIs detected upon admission to the facility or a readmission to the same facility or a different facility (other than where the procedure was performed) and via post-discharge surveillance.

## Numerator Exceptions

N/A

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## Numerator Exclusions

N/A

## Denominator

Number of annually predicted hospitalized patients who are  $\geq 18$  years of age with a date of admission and date of discharge are different calendar days, and the patient underwent a colon surgery (COLO) or abdominal hysterectomy (HYST) and developed a deep incisional primary or organ/space surgical site infection (SSI) within the 30-day post-operative surveillance period. The 30-day postoperative surveillance period includes SSIs detected upon admission to the facility or a readmission to the same facility or a different facility (other than where the procedure was performed) and via post-discharge surveillance.

## Denominator Exceptions

N/A

## Denominator Exclusions

- Procedures that develop a postoperative surgical site infection (SSI) and the infection is present at the time of surgery (PATOS), the SSI event and surgical procedure are excluded
- ASA class VI
- Patients whose admission date and discharge date are the same day.
- Patients  $< 18$  years of age
- Patients  $\geq 109$  years of age
- Adult patients,  $\geq 18$  years of age, BMI is less than 12 or greater than 60
- Procedures reported in patients with sex reported as Other are excluded from the SSI SIR
- Surgical procedure duration less than 5 minutes or exceeding the IQR5 value

## Cascade of Meaningful Measures Priority

Safety

### Level of Analysis

Facility

### Care Setting

PPS-Exempt Cancer Hospital, Hospital: Inpatient, Hospital: Outpatient

## CBE Endorsement History

**Endorsement History:** Endorsed with conditions in 2012 and endorsement retained during maintenance review in 2025.

**Link to Endorsement Measure Record:** [30-Day Post-Operative Colon Surgery \(COLO\) and](#)

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## Abdominal Hysterectomy (HYST) Surgical Site Infection (SSI) Standardized Infection Ratio (SIR)

### **CBE Endorsement Status**

Endorsed

### **About this Analysis (Measure Score by PY)**

**Impact Summary:** This measure supports the PCHQR Program’s objectives by providing transparent, standardized infection ratio data that empowers consumers to make informed health care decisions and motivates hospitals and clinicians to focus on quality improvement and adherence to best practices in inpatient care for Medicare beneficiaries.

Analysis of measure performance over the past 4 years is impacted by the small number of PCHQR hospitals available to report on this measure, rather than low participation among a large eligible group.

With only seven entities per year in Figure 1a and eight in Figure 1b, distinguishing true trends from random variation is difficult, and little discernable change is observed across the 4 years. Tables 1a and 1b demonstrate potential improvements that translate to a reduction in surgical site infections of fewer than three eligible patients per entity.

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\_6” and “PCH\_7” not marked as “Not Available” from the corresponding PCH\_HEALTHCARE\_ASSOCIATED\_INFECTIONS\_HOSPITAL.csv file.

**About Figure 1a and 1b:** Figures 1a and 1b are boxplots that show 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)**

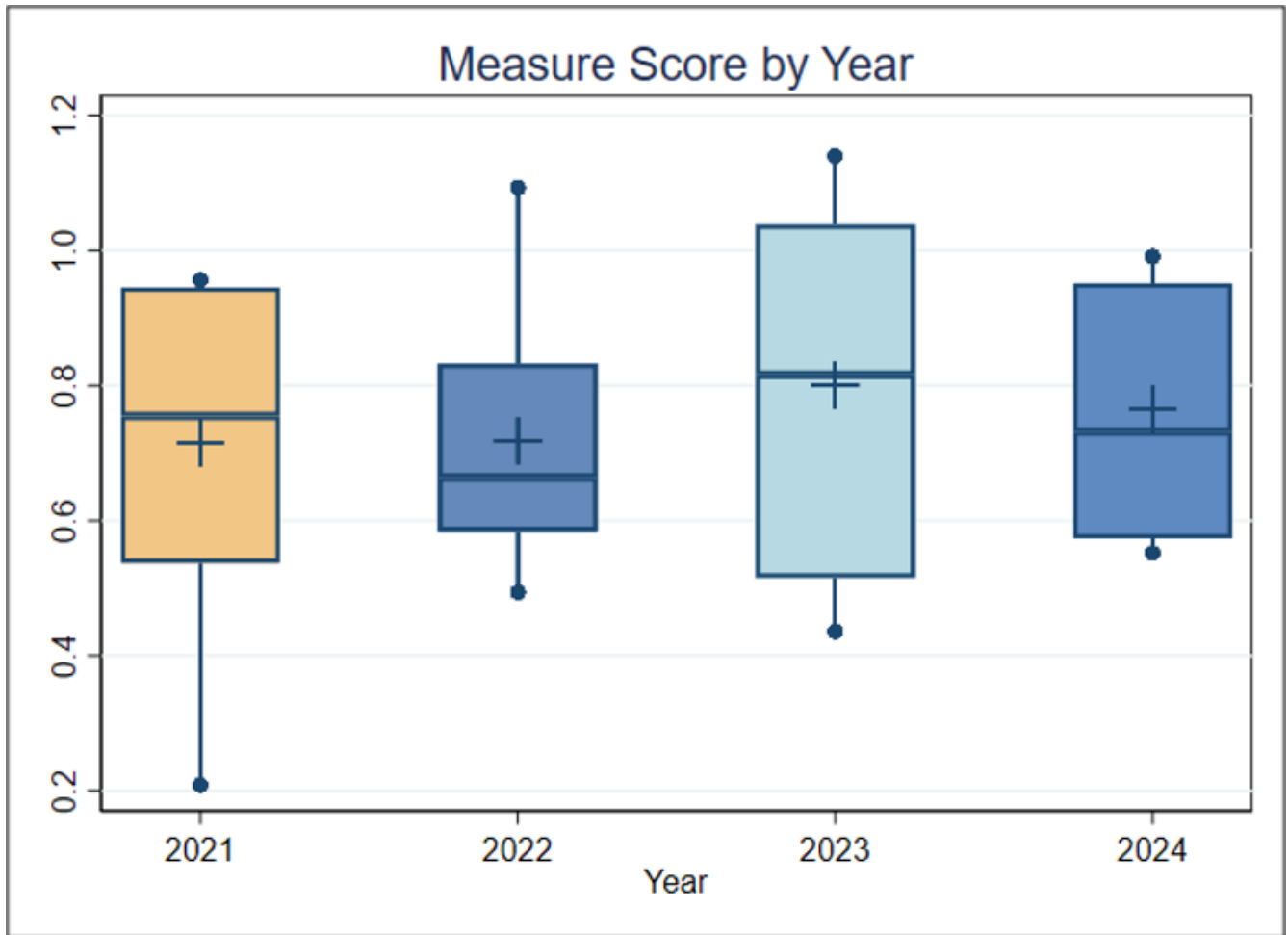


Figure 1a. Boxplot of Measure Score by Year (Colon Surgery)

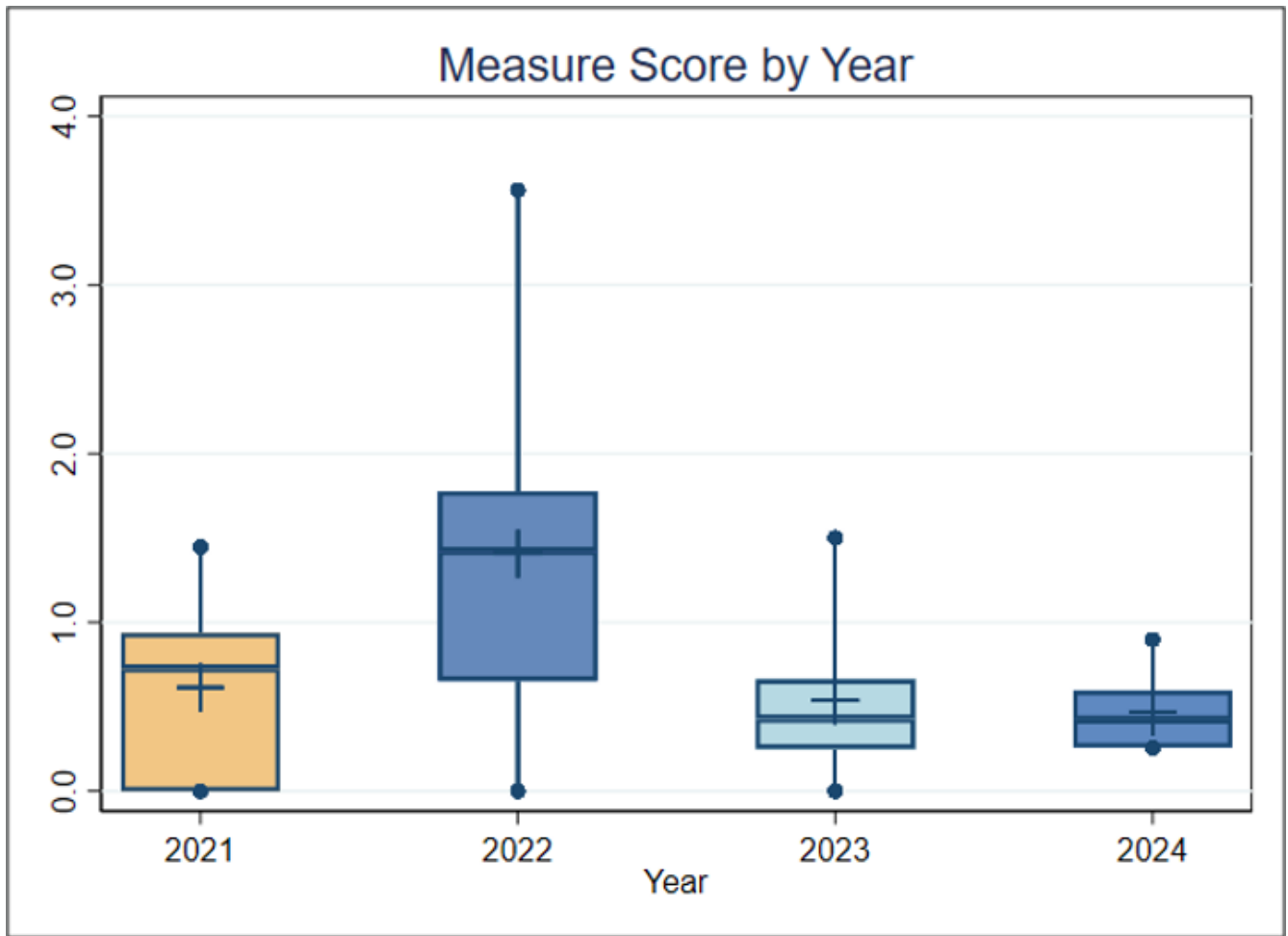


Figure 1b. Boxplot of Measure Score by Year (Abdominal Hysterectomy)

### Interpretation (Measure Score by PY)

**Figure 1a and 1b Interpretation:** In Figure 1a, each year includes data from only seven entities, while Figure 1b includes eight entities per year. Because of this small sample size, any trends observed over the 4 years could be due to random variation rather than meaningful change. Overall, the limited number of PPS-exempt cancer hospitals participating and reporting in this program makes analyzing overall performance trends difficult. For this measure, lower scores reflect higher quality of care.

### About this Analysis (Score Distro)

**About Table 1a and 1b:** Tables 1a and 1b illustrate the distribution of scores (SIRs), raw rates, and the number of patients represented within each entity. It is important to note that the entities with the lowest or highest scores may contain more or fewer patients than other entities. For example, if the lowest-scoring entity includes only 5% of the total patient population, then smaller entity size may be associated with lower performance scores.

### Interpretation (Score Distro)

**Table 1a and Table 1b Interpretation:** Note that there are data for only seven entities for Table 1a and eight entities for Table 1b. To estimate the number of negative outcomes (surgical site infections), the number of patients is multiplied by the average raw rate for each entity.

The total estimated number of negative outcomes across all entities for Table 1a is about 140. If the average performance of the lowest two entities (2.68%) is considered a plausible, achievable rate, and the other five entities improved to reach that rate, about 30 fewer colon surgery patients would experience surgical site infections. This translates to about four patients per entity and could mean that improving performance on this measure could help ensure that fewer colon surgery patients would contract surgical site infections, potentially leading to better health outcomes.

The total estimated number of negative outcomes (surgical site infections) across all entities for Table 1b is about 22. If all entities reduced the rate to 0%, 22 fewer abdominal hysterectomy patients would experience surgical site infections. This translates to less than three eligible patients per entity.

### Table 1 (Score Distro)

Table 1a. Importance (Entity by Measure Score, FY2024) Colon Surgery in the Most Recent Year of Data Available

	Overall	Entity 1	Entity 2	Entity 3	Entity 4	Entity 5	Entity 6	Entity 7
<b>Average SIR (Standard Deviation)</b>	0.764 (0.184)	0.574	0.552	0.644	0.732	0.907	0.951	0.991
<b>Average Raw Rate (Standard Deviation)</b>	3.55 (0.82)	2.68	2.68	3.08	3.21	4.22	4.47	4.50
<b>Entities</b>	7	1	1	1	1	1	1	1
<b>Patients</b>	3,840	486	784	455	467	284	1,164	200

Table 1b. Importance (Entity by Measure Score, FY2024) Abdominal Hysterectomy in the Most Recent Year of Data Available

	Overall	Entity 1	Entity 2	Entity 3	Entity 4	Entity 5	Entity 6	Entity 7	Entity 8
<b>Average SIR (Standard Deviation)</b>	0.471 (0.231)	N/A	0.257	0.260	0.318	0.423	0.593	0.547	0.898

<b>Average Raw Rate (Standard Deviation)</b>	0.599 (0.388)	0	0.376	0.388	0.446	0.631	0.826	0.840	1.283
<b>Entities</b>	8	1	1	1	1	1	1	1	1
<b>Patients</b>	2,561	3	266	258	224	317	242	238	1,013

### Importance Criterion Definition

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

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