



HAC Reduction Program Analysis – Federal Fiscal Year (FFY) 2022 Program

Update Based on Hospital Compare's 4th Quarter 2020 Data Release

-Version 1-

Analysis Description

The Hospital-Acquired Condition (HAC) Reduction Program Analysis is intended to provide hospitals with a preview of the potential impact of the FFY 2022 Medicare Inpatient HAC Reduction Program, based on publicly available data and the program rules established by the Centers for Medicare and Medicaid Services (CMS).

The reports included in this analysis evaluate hospital performance under the FFY 2022 program. CMS did not update the HAI measures in 4Q2020 hospital compare and therefore this analysis uses 3Q 2019/2020 updates of Hospital Compare. The analysis includes estimates and details on how HAC measures and domain scores are calculated and how payment penalties are determined and applied under the program.

For FFY 2022 HAC, performance periods are impacted by the extraordinary circumstances exception granted by CMS in response to the public health emergency so no claims data or chart-abstracted data reflecting services provided January 1, 2020 - June 30, 2020 will be used in calculations for the HAC Program. Case counts are adjusted accordingly where possible to reflect this change in performance periods. Performance period case counts for the HAI measures have been adjusted to estimate the required minimum of 1 predicted infection for each measure. PSI-90 case counts are not available and therefore cannot be adjusted in this analysis.

Due to data limitations, this analysis does not use the data for the same performance periods that CMS will use to calculate its final FFY 2022 HAC Program scores. That data will not be available on Hospital Compare until the start of FFY 2022. The estimated scores and dollar impacts shown in this analysis will differ from the final CMS calculations and may vary from those provided by other organizations due to differences in source data and analytic methods.

Data Sources

This analysis utilizes data published by CMS on its Hospital Compare website at <https://www.medicare.gov/hospitalcompare/>.

The HAC Reduction Program for FFY 2022 will assess hospital performance using Medicare claims and Centers for Disease Control (CDC) measures:

- PSI-90: Patient Safety and Adverse Events Composite—the modified PSI-90 measure to be used for the FFY 2021 program is made up of 10 individual PSI measures, and will be constructed using the AHRQ Quality Indicators software version 9.0.

- HAI_1: Central Line Associated Blood Stream Infection (CLABSI) (*ICU and Select Wards*)
- HAI_2: Catheter Associated Urinary Tract Infection (CAUTI) (*ICU and Select Wards*)
- Pooled Surgical Site Infection (SSI) Standardized Infection Ratio (SIR) – this measure combines performance on two individual measures: SSI-Colon (HAI_3) and SSI-Abdominal Hysterectomy (HAI_4). Observed infections for both SSI measures are divided by expected infections for both measures to calculate a pooled SIR.
- HAI_5: Methicillin-resistant Staphylococcus Aureus (MRSA)
- HAI_6: Clostridium difficile (C.diff.)

The table below describes the performance periods analyzed in this analysis compared to the performance periods that will be evaluated for the FFY 2022 HAC program year:

		FFY 2022 Program Timeline																																																																								
		2017												2018												2019												2020												2021																								
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
Actual Program														AHRQ PSI-90 Claims Based Measure (AHRQ Software: Modified Version 10.0)												No longer included*																								FFY 2022 Payment Adjustment																								
														CDC Chart Abstracted Measures (CLABSI, CAUTI, SSI, MRSA, C.diff)												No longer included*												CDC Chart Abstracted Measures																																				
This Analysis														AHRQ PSI-90 Claims Based Measure (AHRQ Software: Modified Version 10.0)																																				FFY 2022 Payment Adjustment																								
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*These performance periods are impacted by the extraordinary circumstances exception granted by CMS in response to the public health emergency so no claims data or chart-abstracted data reflecting services provided January 1, 2020 - June 30, 2020 will be used in calculations for the HAC Program.

Estimated Inpatient Prospective Payment System (IPPS) payments and HAC penalties for were calculated based on the hospital payment data provided by CMS in its FFY 2021 Final Rule Correction Notice Impact File. Estimated IPPS payments and HAC penalties for FFYs 2020 and 2022 were calculated by adjusting estimated FFY 2021 IPPS payments by a deflation/inflation factor.

By law, hospitals determined to be in the top (i.e. worst performing) quartile for total HAC scores will be penalized 1.0% of their total Medicare IPPS operating, uncompensated care and capital payments, inclusive of Disproportionate Share Hospital (DSH), Indirect Medical Education (IME), Low Volume Hospital (LVH) and any payment adjustment(s) made under the Readmission Reduction Program (RRP) and/or Value-Based Purchasing (VBP) Program. The penalty is also applied to outlier payments (if applicable). Due to year to year variability, impacts shown in this analysis do not take into account penalty adjustments to outlier payments.

Program Scoring and Impact Estimates

For all program-eligible hospitals, winsorized z-scores are assigned to each individual measure. A z-score represents how different a hospital performed relative to the national average, in terms of standard deviations from the mean, and is represented by the formula:

$$Z\text{-Score} = \frac{(\text{Hospital's Measure Performance} - \text{Mean Performance for All Hospitals})}{\text{Standard Deviation for All Hospitals}}$$

Z-scores, mean performance, and standard deviation are calculated after nationwide hospital performance has been winsorized. Winsorization is intended to remove the effects of extreme outliers from a dataset by selecting a specific interval of data, and assigning outliers to the minimum or maximum of that interval. The winsorization method adopted by CMS sets all values below the 5th percentile, to the 5th percentile value. Likewise, all values above the 95th percentile are set to the 95th percentile value.

CMS' z-score calculations for the program may differ from those provided in this analysis for several reasons, including: differences in methodological approach in assigning standard deviations, differing lists of excluded hospitals, and differing performance periods.

Lower scores are better, with negative values representing performance below (better than) the national average, while positive values are assigned to scores that are above (worse than) the national average.

The program requires that hospitals meet certain minimum standards for inclusion of HAC measures. The following describes the minimum requirements for measure scoring in each domain:

- PSI 90 AHRQ claims-based measure: Hospitals are required to have a minimum of 3.0 predicted (i.e. expected) infections for at least one of the individual PSI measures during the 24-month performance period.
- CDC chart-abstracted measures: Hospitals are required to have a minimum of 1.0 predicted (i.e. expected) infection during the 24-month performance period in order to be scored on a measure. To receive a score for the pooled SSI measure, the combined predicted infections for both SSI-Colon and SSI-Abdominal Hysterectomy must be greater than 1.0 instead. Hospitals not submitting data for an individual HAI measure, unless provided with a waiver, will receive the maximum points for that measure. This analysis assumes that hospitals are provided with a waiver for measures without data.

All measures are weighted equally to determine a total HAC score. If a hospital does not have data for a measure, the total HAC score is based solely on the remaining, useable measure(s). Hospitals without a valid score on any measures are not eligible for the program.

Once total HAC scores for all program-eligible hospitals are determined, CMS will calculate the 75th percentile score to determine the top quartile (worst performing) of program-eligible hospitals. Hospitals with a total HAC score falling at or above the 75th percentile will receive the payment penalty of 1.0%.

When CMS determines the 75th percentile score, several hospitals may be tied at that score, causing the number of penalized hospitals to exceed 25% of the total. If/when this occurs, CMS will adjust the penalty threshold to ensure that no more than 25% of program eligible hospitals are penalized. In order to be conservative, and to alert hospitals that are very close to the penalty score, this analysis does not adjust for ties. It is estimated that approximately 24.98% of hospitals nationally receive the penalty in this analysis.