HAC Reduction Program Analysis – Federal Fiscal Year (FFY) 2020 Program

Update Based on Hospital Compare's 2nd Quarter 2019 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 2020 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 2020 program using the 2nd quarter 2018/2019 data 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.

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 2020 HAC Program scores. That data will not be available on Hospital Compare until the start of FFY 2020. 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 http://www.hospitalcompare.hhs.gov/.

The HAC Reduction Program for FFY 2020 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 2020 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 2020 HAC program year:

FFY 2020 Program Timeline

Estimated Inpatient Prospective Payment System (IPPS) payments and HAC penalties for FFY 2020 were calculated based on the hospital payment data provided by CMS in its FFY 2020 Final Rule Impact File. Estimated IPPS payments and HAC penalties for FFYs 2018 and 2019 were calculated by adjusting estimated FFY 2020 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:

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

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: 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.

In FFYs 2018 and 2019, there were two domains and after z-scores were determined, overall scores for each domain were calculated by averaging the z-scores included in that domain. If a hospital did not have data or did not meet the minimum requirements for scoring on a measure, that measure was not included in the calculation of the overall domain score.

Each was assigned a weight to calculate the total HAC score. The following weights were applied to each domain to calculate a hospital's total HAC score for those program years:

- Domain 1 (PSI 90 AHRQ claims-based measure): 15%
- Domain 2 (CDC chart-abstracted measures): 85%

If a hospital does not have data for a domain, the total HAC score was based solely on the remaining, useable domain. Hospitals without a valid score in either domain were not eligible for the program.

Beginning with the FFY 2020 program, domains have been removed and 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 24.99% of hospitals nationally receive the penalty in this analysis.

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