VBP Impact Analysis - FFY 2021 Program

Quarterly Update Based on Hospital Compare's 2nd Quarter 2020 Data Release
-Version 1-

Analysis Description

The Value-Based Purchasing (VBP) Impact Analysis is intended to provide hospitals with a preview of the potential impact of the federal fiscal year (FFY) 2021 Medicare inpatient hospital VBP program based on publicly available data and program rules established by the Centers for Medicare and Medicaid Services (CMS).

The reports included in this analysis estimate VBP scores, impacts, and scoring trends and provide full detail on how the points and scores for each VBP measure and domain are calculated.

A report that compares actual FFY 2019 and FFY 2020 program performance to estimated FFY 2021 program performance is also included.

The analysis of the FFY 2021 program does not use the actual data CMS will use to calculate final VBP scores and Medicare inpatient payment redistributions. This data will not be publicly available until on or around the date that the official program is implemented.

Estimated FFY 2021 VBP scores, FFY 2021 adjustment factors, and FFYs 2019-2021 dollar impacts in this analysis will differ slightly from analyses provided by other organizations due to differences in data source and analytic methods. VBP scores and adjustment factors from FFY 2019 and FFY 2020 reflect actual performance under those programs.

The Performance Scorecard report breaks down estimated impacts by domain and by measure. Overall contribution amounts are distributed to each domain by weight. A hospital's VBP payment (contribution amount × slope × total performance score) is then distributed the same way. Estimated domain impacts are calculated by comparing the contribution amount and the VBP payment amount. Measure contribution amounts are determined by dividing the domain level contribution amounts by the number of scored measures in each domain. Measure VBP payments are then determined by taking this contribution value, then multiplying by the measure score divided by 10 to convert the score into a percentage. As with the domain level, impacts are estimated by then comparing the overall contribution amounts and VBP earnings. Please note that impacts provided on this report are heavily dependent on the VBP slope, which is based on national performance levels. As a result, although changes to measure VBP scores for FFY 2021 will affect these estimates, the relative size of the estimated impacts compared to the contribution amounts are dependent on the final slope determined for the VBP program.

Data Sources

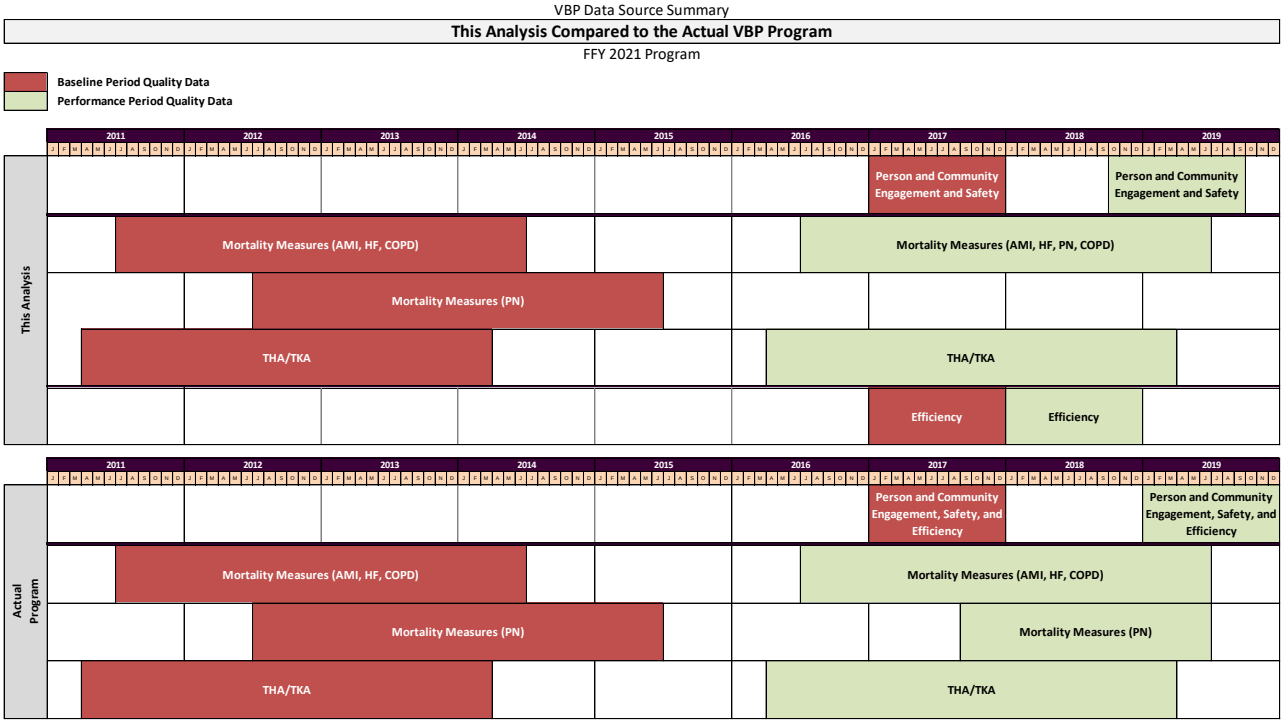
To measure hospital performance, this analysis utilizes data provided by CMS on its Hospital Compare website at https://www.medicare.gov/hospitalcompare/.

In general, historical data from Hospital Compare are used for the VBP baseline periods and the most recent data from Hospital Compare are used for the VBP performance periods. In some cases, the data periods analyzed between this analysis and the actual program match; in others, the best available proxy is used.

FFY 2021 VBP will assess hospital performance using measures grouped into four domains:

- Person and Community Engagement
- Clinical Outcomes
- Safety
- Efficiency and Cost Reduction.

The table below describes, by measure and by domain, the time periods analyzed in this analysis compared to the exact time periods that will be evaluated under the actual FFY 2021 program:



The following lists the Hospital Compare quarterly releases that correspond with the measure collection periods described in the above table:

Baseline Periods:

- 2nd quarter 2015 update: Mortality (AMI, HF, COPD); Total Hip Arthroplasty/Total Knee Arthroplasty (THA/TKA);
- 2nd quarter 2016 update: Mortality (PN);
- 3rd quarter 2018 update: Person and Community Engagement; Safety; and
- 4th quarter 2018 update: Efficiency.

Performance Periods:

- 4th quarter 2019 update: Efficiency;
- 2nd quarter 2020 update: Mortality; THA/TKA; Person and Community Engagement; and Safety.

The national performance standards used to evaluate hospital performance are taken directly from CMS and are available in the August 17, 2018 Inpatient Prospective Payment System (IPPS) FFY 2019 final rule *Federal Register*: https://www.govinfo.gov/content/pkg/FR-2018-08-17/pdf/2018-16766.pdf. These standards have been finalized and will be used for the actual program.

The national performance standards for the Medicare Spending per Beneficiary measure are calculated based on hospital performance scores during the performance period analyzed. CMS will establish the official FFY 2021 national performance standards for this measure based on data from the actual performance period. As a result, the actual national performance standards for this measure will differ from the standards estimated in this analysis.

Hospitals are only eligible for the VBP program if they are currently eligible for the Inpatient Quality Reporting (IQR) program.

Estimated VBP Program contributions and payouts are based on Medicare inpatient operating payments calculated from hospital payment data provided by CMS in the FFY 2021 IPPS proposed rule Impact File. By law, the VBP program will impact base operating inpatient payments only and therefore does not impact outlier, indirect medical education (IME), disproportionate share hospital (DSH), etc. Sole Community Hospitals contribute to the VBP Program based on their federal rate calculation, regardless of whether they are actually paid based on a hospital-specific rate. Medicare Dependent Hospitals contribute to the VBP Program based on the blended rate if paid at that rate; otherwise, the contribution is based on their federal rate calculation.

VBP trends and ranks for the FFY 2021 program year are based on hospital performance from the current and historical Hospital Compare updates. The trending of current estimates is intended to show how estimated VBP scores for each domain and the VBP Total Performance Score (TPS) change over time and how those scores compare to hospitals in the state and the nation (a hospital with VBP scores that are not improving at a rate comparable to or better than the nation may have scores that are improving but will lose ground overall under the program).

VBP Scoring and Impact Estimates

This analysis uses CMS-defined formulas for calculating VBP points for each measure under each domain. CMS has established the following formulas to calculate VBP points:

$$Achievement\ Points\ (all\ program\ measures) = 9 \times \left[\frac{Performance\ Period\ Score - Achievement\ Threshold}{Benchmark - Achievement\ Threshold}\right] + 0.5$$

$$Improvement\ Points\ (all\ program\ measures) = 10 \times \left[\frac{Performance\ Period\ Score - Achievement\ Threshold}{Benchmark - Achievement\ Threshold}\right] - 0.5$$

$$Final\ Points\ (all\ program\ measures) = Higher\ of\ Achievement\ and\ Improvement$$

$$Final\ Points\ (SSI\ measure) = \left[\frac{Final\ Point_{HAI3} \times Predicted\ Infection_{HAI3} + Final\ Pointy_{HAI4} \times Predicted\ Infection_{HAI4}}{Predicted\ Infection_{HAI3} + Predicted\ Infection_{HAI4}}\right]$$

$$Consistency\ Points\ (person\ and\ comm.engagement) = [20 \times Lowest\ Measure\ Consistency\ Points\ Multiplier] - 0.50$$

$$Consistency\ Points\ Multiplier\ (person\ and\ comm.engagement) = \left[\frac{Performance\ Period\ Score - Floor}{Achievement\ Threshold - Floor}\right]$$

The following describes the minimum requirements for measure scoring (other exclusionary criteria apply):

- Person and Community Engagement—100 surveys
- Clinical Outcomes —25 cases
- Safety —1 predicted infection
- Efficiency and Cost Reduction—25 cases.

If a hospital has insufficient data in the performance period, the measure is not scored. If a hospital has insufficient data in the baseline period, but usable data for the performance period, only a hospital's achievement points may be scored (no improvement points). The various reports in this analysis state when the necessary data to calculate VBP points are lacking.

The Affordable Care Act (ACA) requires the VBP Program to be budget neutral, such that all monies contributed to the program by hospitals are paid out during the same period. The VBP Program is funded with 2.0% of hospitals' Medicare IPPS base operating dollars.

For each hospital, once the final points are calculated for each individual measure, overall domain scores are then calculated for each of the program's domains (person and community engagement, safety, clinical outcomes, and efficiency). The overall domain scores are then combined to calculate a TPS for each hospital. The TPS serves as the basis for determining hospitals' VBP payments (or gain/loss) under the program. CMS is required to assign weights to each domain when calculating the TPS.

The following describes how overall domain scores will be calculated and how domains will be weighted to calculate each hospital's TPS for the FFY 2021 program:

- Calculating Overall Domain Scores (all domains): For each domain, the overall domain score is the sum of the final points earned for the domain divided by the maximum possible points for all useable measures in the domain. Hospitals must have a minimum of 100 HCAHPS surveys to obtain a Person and Community Engagement Domain score; 2 useable measures to obtain a Clinical Outcomes Domain score; 2 useable measures to obtain a Safety Domain Score; and 1 useable measure to obtain an Efficiency and Cost Reduction Domain Score.
- Domain Weighting and Calculating a TPS: The following weights will be applied to each domain to estimate each hospital's TPS under the FFY 2021 program:
    - Person and Community Engagement: 25%
    - Clinical Outcomes: 25%
    - Safety: 25%
    - Efficiency and Cost Reduction: 25%.

Hospitals only need domain scores in 3 out of the 4 domains in order to be included in the program, and the TPS will be reweighted proportionately to the scored domains.

$$Reweighted\ Domain\ Weight = Original\ Domain\ Weight \times \frac{1}{Sum\ of\ Remaining\ Domain\ Weights}$$

Once a TPS is calculated, CMS will use a linear payment exchange function to redistribute inpatient payments based on each hospital's performance under the VBP Program. The linear exchange function is the formula for a line that will start at 0% payment for a TPS of 0% and will end at some percentage (*x%*) for a TPS of 100%. The *x%* is based on the slope of the line and will be determined using the national distribution of TPSs, such that the sum of all hospitals' VBP payments will equal the amount of dollars contributed to the program.

Due to access to the actual program data not being available, this analysis of FFY 2021 VBP includes two alternative payment functions:

- Current Estimate: Using the most recent available data, each hospital's VBP payment percentage will equal its TPS multiplied by 3.24 (under the linear payment function, 3.24 is the calculated slope of the line using the most currently available data that will redistribute all VBP contributions based on hospital performance under the VBP Program). The slope estimated is expected to flatten out over time. Traditionally, hospital performance improves as more recent data become available and more time elapses between the data used for the baseline period and the performance period.
- Conservative Estimate: Under the conservative estimate the slope of the payment function is reduced and set to 2.0 to reflect anticipated improvement in VBP scores nationwide as data closer to the actual performance period become available.

The actual VBP slope used to adjust payments under the FFY 2021 program will differ from both the current estimate and conservative estimate provided in this analysis. While the Conservative Estimate of the slope is set at 2.0 to indicates how the slope would decrease with anticipated improvement nationwide, the final slope for FFY 2021 may be higher than 2.0. The final VBP slopes for the past two program years are as follows: 2.84 (FFY 2019) and 2.81 (FFY 2020).