Quality Program Measure Trends Analysis
Quarterly Update Based on Hospital Compare's 3Q2020 Data Release
-Version 1-

Analysis Description

The Quality Program Measure Trends Analysis (3rd quarter 2020 update) is designed to provide hospitals with a comparative review over time of the quality data collected by the Centers for Medicare and Medicaid Services (CMS) and published on the Hospital Compare website at https://www.medicare.gov/hospitalcompare/.

The measures analyzed represent those included in the Medicare Quality Programs:
- Value Based Purchasing (VBP);
- Readmissions Reduction Program (RRP);
- Hospital Acquired Conditions (HAC) reduction program; and
- Comprehensive Care for Joint Replacement (CJR) program.

The analysis also includes Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey data and overall star ratings. Measures are divided into categories: Star Ratings, Safety, Person and Community Engagement (VBP/CJR), Outcomes, Readmissions, and Efficiency. The analysis includes measures that CMS has adopted for use in at least one of the four programs for the current program year and forward. Certain measures do not apply to all program years. The "Notes" tab of the analysis specifies the applicable program years for each measure. Measures collected by CMS and included in the Hospital Compare database that have not been adopted for use in one of the programs are not evaluated in this analysis, with the exception of star ratings. Measures that have been finalized for use in one of the four programs but are lacking complete data in Hospital Compare are not evaluated in this analysis.

Hospital performance levels are shown in graphical form with relevant comparisons to national standards. These standards are intended to give a hospital an indication of how it would perform in the quality programs. National performance comparisons can be toggled on and off by user. Multiple measures in each domain can be viewed using the scrolling bar at the bottom of the graph or by selecting/deselecting measures in the filter section on the left.

Hospital performance levels are also shown in tabular form including rankings within the nation and the state to show how hospital performance is changing relative to performance across the country (a hospital with performance levels that are not improving at a rate comparable to or better than the nation may have performance levels that are improving but will have a national ranking that is falling). Rankings are not provided for hospitals that do not meet the minimum case count requirement for at least one quality payment program. Hospital counts, case count minimums, and reporting practices by CMS may change from quarter to quarter.

Z-scores are calculated with respect to the measure and data period. Higher z-scores are better. A z-score is the distance from the national mean in units of standard deviation and allows measures on different scales to be compared. There is also a tab in the analysis where measures are ordered by z-score. Z-scores are compared for the most recent data period for each measure (up to 5 Hospital Compare release quarters back). If a hospital does not have any data in the last 5 hospital compare releases, no measures will be ranked and these charts will read no data. Z-scores are not compared for those measures that do not meet case count requirements.

The graphs in this analysis are set to display hospital performance relative to national performance (Average, 25th, 50th, 75th, and 90th percentiles). As a result, the axis for each chart varies. The start period drop down indicates the oldest Hospital Compare release of data shown in charts/reports throughout the analysis and can be used to filter out older periods of data from inclusion in those charts/reports. When changing the start period, measure and comparison group selections will reset. When changing the comparison groups, measure selections will be reset.

This analysis evaluates performance for all prospective payment system and critical access hospitals included in CMS' Hospital Compare database, not just those included in the programs. Therefore, in some cases, there may be multiple measures that are unavailable for a hospital for all quarters.

In order to focus on measures relevant to the quality programs going forward, this analysis does not include measures that CMS has removed for the current program year.

This analysis eliminates measure case counts requirements and therefore, when possible, calculates measure scores for hospitals when the measures that do not meet program case count requirements and therefore CMS does not provide a measure score but provides the data elements to calculate the score. This analysis indicates measure scores that are calculated by highlighting the data row in gray.

Data is not shown for releases where data was incomplete or where the measures were not yet being reported. If no data exists for a measure within the chosen timeframe there will be no option in the filters to select the measure.

Sources, Time Periods, and Measures Analyzed
The following describes the sources, time periods, and measures evaluated in this analysis by measure category:

Star Ratings:
Hospital performances are from the quarterly updates to the CMS Hospital Compare quality database. Hospitals are given between 1 and 5 stars based on their performance.

For the Overall Star Rating, quality data is from 2nd quarter 2016 through 4th quarter 2019. Also shown are the number of hospitals with each star category for each quarter within the state and the nation. If a state does not have any hospitals in one or more star category, that spot will be blank. The Overall Star Rating is provided in 4th quarter.

For the HCAHPS star ratings, quality data is from 1st quarter 2016 through 3rd quarter 2020.

Star ratings developed by CMS and included in the Hospital Compare database are not tied to any payment program and thus do not affect reimbursement.

Safety Measures:

For the 6 hospital-acquired infection (HAI) measures, hospital performance levels are from the 1st quarter 2016 through 3rd quarter 2020 updates to the CMS Hospital Compare quality database for data that are complete. National performance standards are calculated based on hospital performance when not available on Hospital Compare.

For the one patient safety indicator (PSI) composite measure, PSI-90, hospital performances are from the annual updates to the CMS Hospital Compare database from 2nd quarter 2016 through 2nd quarter 2020. The 3rd quarter 2017 Hospital Compare update to the PSI-90 is comprised of 10 composite indicators, rather than the previous 8 indicators. Due to the change in measure composition, results between the previous measure and the modified measure are slightly different and should not be compared. The 2nd quarter 2018 update uses AHRQ Quality Indicators Software version 8.0 as well as diagnosis coding from ICD-10 rather than ICD-9 used in the previous period. National performance standards are calculated based on hospital performance when not available on Hospital Compare.

The 7 Safety measures analyzed include:

- Central Line-Associated Bloodstream Infection (ICU + Select Wards) (HAI-1)
- Catheter Associated Urinary Tract Infection (ICU + Select Wards) (HAI-2)
- Surgical Site Infection – Colon (HAI-3)
- Surgical Site Infection – Abdominal Hysterectomy (HAI-4)
- Methicillin Resistant Staph Infection (MRSA) (HAI-5)
- Clostridium Difficile (C.Diff) (HAI-6)
- Patient Safety and Adverse Events (Composite of 10).

The measure collection dates are listed directly in the analysis.

The VBP Program takes a weighted average of the final scores for the two SSI measures (abdominal hysterectomy and colon surgical site infection) when determining the Safety domain score. This analysis shows the measures independently to provide hospitals with performance levels and rankings for each individual measure.

Person and Community Engagement/HCAHPS Measures (VBP):
Hospital performances are from the updates to the CMS Hospital Compare quality database from 1st quarter 2016 through 3rd quarter 2020. National performance standards are calculated based on hospital performance when not available on Hospital Compare. The measure collection dates related to these database updates are listed directly in the analysis.

The 9 Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey VBP measures analyzed include:
- Communication with Nurses
- Communication with Doctors
- Responsiveness of Hospital Staff
- Communication about Medicines
- Discharge Information
- 3-Item Care Transitions Measure (CTM-3)
- Patients' Rooms and Bathrooms Were Always Kept Clean
- Area Around Patients' Rooms was Always Kept Quiet at Night
- Overall Rating of Hospital.

The VBP Program technically evaluates 8 measures—the "clean and quiet" measures are combined for the purposes of VBP. This analysis provides hospitals with performance levels and rankings for each individual measure.

Person and Community Engagement/HCAHPS Measures (CJR):
The HCAHPS measures in the CJR program differ from those in the VBP program in that the CJR program uses the linear mean score for each measure and also includes a 'Patient Would Recommend Hospital' measure. Hospital performances are from the quarterly updates to the CMS Hospital Compare quality database from 3rd quarter 2016 through 3rd quarter 2020. National performance standards are calculated based on hospital performance when not available on Hospital Compare. The measure collection dates related to these database updates are listed directly on the analysis.

Outcomes of Care Measures:
For the five mortality and one complication rate measures, hospital performances are from the annual updates to the CMS Hospital Compare quality database from 2nd quarter 2016 through 2nd quarter 2020 where complete data are available. National performance standards are calculated based on hospital performance when not available on Hospital Compare.

The 6 Patient Outcomes measures analyzed include:
- AMI 30-Day Mortality Rate (MORT-30-AMI)
- HF 30-Day Mortality Rate (MORT-30-HF)
- PN 30-Day Mortality Rate (MORT-30-PN)
- COPD 30-Day Mortality Rate (MORT-30-COPD)
- CABG 30-Day Mortality Rate (MORT-30-CABG)
- Risk Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA) (COMP-HIP-KNEE).

The measure collection dates are listed directly in the analysis.

In the VBP program, the five mortality rates are converted to survival rates. The mortality rates in this analysis are not converted.

Readmission Measures:
For the six readmission measures, hospital performances are from the annual updates to the CMS Hospital Compare quality database from 2nd quarter 2016 through 2nd quarter 2020 where complete data are available. National performance standards are calculated based on hospital performance when not available on Hospital Compare.

The 6 Readmissions measures analyzed include:
- AMI 30-Day Readmission Rate (READM-30-AMI)
- HF 30-Day Readmission Rate (READM-30-HF)
- PN 30-Day Readmission Rate (READM-30-PN)
- COPD 30-Day Readmission Rate (READM-30-COPD)
- CABG 30-Day Readmission Rate (READM-30-CABG)
- Risk Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA) 30-Day Readmission Rate (READM-30-HIP-KNEE).

The measure collection dates are listed directly in the analysis.

Efficiency Measures:

Hospital performance for the Medicare Spending Per Beneficiary measure is from the 3rd quarter 2016 to the 4th quarter 2019 updates to Hospital Compare. National performance standards are calculated based on hospital performance when not available on Hospital Compare.

The Efficiency measure analyzed is:
- Medicare Spending Per Beneficiary (MSPB-1).

The measure collection dates are listed directly on the analysis.