

Summary Description of the Maryland Hospital QBR Score Calculation

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The QBR score upon which the payment adjustments are based combines clinical the score, which comprises Opportunity and Appropriateness scores, and the HCAHPS score. The clinical score is based on performance on process measures across four clinical domains (AMI, HF, PN and SCIP). For the FY 2012 rate year, the Opportunity model included 21 clinical measures, and HCAHPS included 8 dimensions. The domain scores (Opportunity, Appropriateness, HCAHPS) evaluate hospital performance on each measure based on the higher of an "Attainment Score" in the most recent measurement period, or an "Improvement Score" based on a comparison of that hospital's performance in the most recent period relative to a base period. To avoid giving credit for an improvement score based on a performance record which was worsened in the previous year, the Improvement Score is based on the highest rate in previous years included in the program.

Performance points are given based on a range between "Benchmark" and an "Attainment Threshold", which are determined using the previous calendar year's data. The Benchmark is a reference point defining a high level of performance, which is equal to the mean of the top decile. Hospitals whose rates are equal to or above the benchmark receive 10 full Attainment points. The Attainment Threshold is the minimum level of performance required to receive minimum Attainment points, which is set at the 50th percentile. The Improvement points are earned based on a scale between the hospital's prior year score (baseline) on a particular measure and the Benchmark and range from 0 to 9. The formulas to calculate the Attainment and Improvement points are as follows:

- Attainment Points: $[9 * ((\text{Hospital's performance period score} - \text{Attainment threshold}) / (\text{benchmark} - \text{Attainment threshold})) + .5]$, where the hospital performance period score falls in the range from the Attainment threshold to the benchmark
- Improvement Points: $[10 * ((\text{Hospital performance period score} - \text{Hospital baseline period score}) / (\text{Benchmark} - \text{Hospital baseline period score})) - .5]$, where the hospital performance score falls in the range from the hospital's baseline period score to the benchmark

In addition to Attainment and Improvement points, HCAHPS domain includes consistency points to provide incentive to improve all of HCAHPS dimensions. Hospitals may earn 0-20 points based on their lowest HCAHPS dimension. Hospital would receive 0 consistency points if its performance on one or more HCAHPS dimensions during the performance period was at least as poor as the worst performing hospital's performance on that dimension during the baseline period. A hospital would receive a maximum score of 20 consistency points if its performance on all eight HCAHPS dimensions was at or above the Attainment threshold (50% of hospital performance during the baseline period).

The lowest dimension score is defined as the lowest value across the eight HCAHPS dimensions using the following formula:

$$((\text{Hospital's performance period score} - \text{floor}) / (\text{Attainment threshold} - \text{floor})).$$

The formula for the HCAHPS consistency points score is as follows:

$(20 * (\text{lowest dimension score}) - 0.5)$, rounded to the nearest whole number, with a minimum of zero and a maximum of 20 consistency points.

In considering the performance of hospitals on the basis of the selected process measures, the initiation work group identified several measures for which all hospitals were performing at a very high level. Where hospital performance is concentrated at high values, a measure is said to have "topped off." It is important to distinguish "topped-off measures from "non-topped off" measures because the methodology should not provide a reward for very small variations in scoring. For example, it may not be appropriate to provide a greater Attainment reward to a hospital that scores .983 than a hospital that scores .980. In the first two years of the program a "topped-off" measure was defined as one where it is difficult to distinguish the scores between the 75th percentile and the 90th percentile. An additional criterion, the truncated coefficient of variation less than 0.10, was added in FY2012. The truncated coefficient of variation is calculated by eliminating 5% of the lowest and 5% of the highest performance scores from the calculation. The quality initiatives' work groups and staff believed it was important to retain these topped off measures in the analysis. Retaining topped off measures would enable to calculate the appropriateness score based on a comprehensive set of measures and would eliminate the need to track which measures were included or excluded from the program each year. (Although the list of topped off measures seems fairly consistent, staff observed slight changes over the years). Special rules concerning the scoring of performance on topped off measures, however, have been developed. The benchmark for the topped off measures is set at 90% and the Attainment threshold is set at 65%.

The hospital's overall performance score for each domain is the ratio of its earned points divided by its available points. Opportunity and Appropriateness models are weighted equally to calculate the clinical score. The clinical score constitutes 70% of the final QBR score combined with the HCAHPS score, which is 30% of the total.

The QBR program requires specific thresholds for each domain. For the Opportunity score, a measure should have at least 10 cases reported, for appropriateness 25 and for HCAHPS 100. In addition, to avoid assessment based on a narrow perspective, hospitals should have a minimum of 5 measures scored for the clinical model.

The original scaling approach for adjusting payment levels was an exchange rate function (cubed-root functional form) for translating scoring into payment adjustment to minimize rate changes for miniscule differences in total scores, however, HSCRC has established that a linear function provides a better straightforward application and adapted it for rate year 2012. The maximum amount of penalties/rewards is 0.5% of the total revenue of the hospital, translating to a total amount at risk of \$7.1 million for FY2012.