

Summary of the Composite Quality Scoring Methodology

Identifying top performers

- CMS will use a *Composite Quality Index* to identify the top performing hospitals participating in the Hospital Quality Incentive (HQI) Demonstration Project.
- The Composite Quality Index will identify hospitals that are performing in the top two deciles and establish the baseline thresholds for adjustment for Year 3 of the HQI demonstration project.
- The Composite Quality Index for focus areas with process and outcomes measures is comprised of two separate components:
 - 1) Composite Process Rate
 - 2) Risk-Adjusted Outcomes Index
- Focus areas without outcomes measures use only the Composite Process Rate.

Calculating the Composite Process Rate

- Each of the five clinical focus areas in the project has a set of process-based measures.
- The numerator values for each of the process-based measures are summed to create a *composite numerator*.
- The denominator values are summed to create a *composite denominator*.
- The composite numerator is divided by the composite denominator to derive the overall *Composite Process Rate*.

Calculating the Risk-Adjusted Outcomes Index

- Three of the clinical focus areas have outcomes measures.
- Both actual and risk adjusted outcomes measures are stated in positive terms. For example a 5 percent mortality rate in AMI is converted to a 95 percent survival rate.
- The outcomes index is calculated by dividing a hospital's actual outcomes rate by its risk-adjusted outcomes rate, then multiplying by 100 to derive a percentage value.
 - For the AMI measure – inpatient mortality rate will be risk-adjusted using the Joint Commission's logistic regression method
 - The probabilities for each patient are averaged to create the total risk-adjusted mortality rate.
 - The remaining outcomes measures will also be risk-adjusted. These are the proposed risk-adjustment methodologies.
 - CABG inpatient mortality rate – adjusted using 3M APR-DRG™.
 - Hip and Knee readmissions 30 days post discharge – adjusted using 3M APR-DRG.
 - CABG and Hip and Knee post-operative hemorrhage or hematoma, and post-operative physiologic and metabolic derangement – adjusted using risk-adjustment model designed specifically for AHRQ patient safety measures.

Weighting the components

- To account for the relative contribution of each of the Composite Ranking Index components, proportional weighting values must be applied.
 - In AMI for example, the Composite Process Rate accounts for 8 of the 9 measures, so a weighting factor of .89(8/9^{ths}) is applied.
 - In the same example, the single indicator Risk Adjusted Outcomes Index for Mortality is weighted with a factor of .11(1/9th).
 - $Composite\ Quality\ Index = (0.89 * Composite\ Process\ Rate) + (0.11 * Risk\ Adjusted\ Outcomes\ Index)$

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This document is a summary only.

This is the methodology referred to in Section 7 and Appendix A of the Terms and Conditions. It replaces the Qualidigm/Connecticut QIO model referred to in those documents.