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# Quality Rating System Scoring Specifications

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March 28, 2014

DRAFT

**CMS is accepting comments on the proposed QRS scoring specifications until April 28, 2014. Please email all comments to [Marketplace\\_Quality@cms.hhs.gov](mailto:Marketplace_Quality@cms.hhs.gov) with subject line "QRS Scoring Specification Comments."**

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## 1.0 Introduction

The Quality Rating System (QRS) is intended to provide Health Insurance Marketplace (Marketplace) consumers with information regarding the relative quality and price of Qualified Health Plans (QHPs) offered in Marketplaces. The Centers for Medicare & Medicaid Services (CMS) released a Federal Register Notice on November 19, 2013 (available at <http://www.gpo.gov/fdsys/pkg/FR-2013-11-19/pdf/2013-27649.pdf>) which described the development, design, and framework of the proposed QRS, and solicited public comments on the list of proposed QRS quality measures, the hierarchical structure of the measure set, and elements of the QRS rating methodology. In that Notice we stated our intent to provide further details regarding the QRS including the rating methodology.

This document outlines the proposed QRS scoring methodology that CMS would eventually use to create the ratings for the QHPs offered in the Marketplaces. It details the specifications regarding how the QRS quality measures are combined and then converted into categorical (5 star) ratings, giving QHP performance scores that range from one to five stars. The document also includes a high-level summary of the steps involved in the proposed scoring of QHPs offered in the Marketplaces. We now solicit comment on all aspects of the QRS scoring methodology, including the key features outlined in the 5.0 Scoring Process Summary of this document.

We intend to consider and address all comments received on the November 19, 2013 Federal Register Notice, on this technical scoring specifications guidance, and from the proposed rule (available at <https://federalregister.gov/a/2014-06134> and published in the Federal Register on March 21, 2014) as we finalize the quality standards and details regarding the QRS to prepare issuers regarding the collection and submission of data for the QRS. A glossary defining technical terms used within this document appears in Appendix D.

## 2.0 Background

Section 1311 of the Patient Protection and Affordable Care Act (Affordable Care Act) calls for the creation of a competitive Health Insurance Exchange, also known as a Health Insurance Marketplace, in every state. A Marketplace is a resource where individuals, families, and small businesses can learn about their health coverage options and compare health insurance plans. Qualified individuals, employers, and employees can also choose a QHP offered in the Marketplace and enroll in such coverage. Marketplaces will help consumers and small businesses review their options and shop for quality, affordable health insurance for themselves and their employees.

The Affordable Care Act requires health plans to meet specific standards in order to be certified as QHPs and be offered in the Marketplace. These requirements include, but are not limited to: the provision of the essential health benefits package described in 45 C.F.R. Part 147 and 45 C.F.R. Part 156 Subpart B; the fulfillment of certification standards described in 45 C.F.R. 156 Subpart C; and compliance with Marketplace processes, procedures, and requirements as set forth in 45 C.F.R. 155 Subpart K.

Section 1311(c)(3) of the Affordable Care Act directs the Secretary of HHS to develop a quality rating system—based on relative quality and price—for QHPs offered in Marketplaces. Section 1311(c)(4) also requires HHS to develop an enrollee satisfaction survey that assesses consumer experience with QHPs offered through a Marketplace for each QHP with more than 500 enrollees in the prior year. These sections of the Affordable Care Act also require the Marketplaces to publicly report this information to consumers.

The QRS is designed to provide consumers with comparable and useful information regarding the quality of QHPs offered through the Marketplaces to inform consumer and employer choice. In addition, the results of the QRS will be used to facilitate regulatory oversight of QHPs with regard to compliance with the quality standards in the Affordable Care Act. The QRS ratings will help consumers understand how QHP products perform both overall and in specific areas such as clinical care, access to care, member experience, and efficiency of care. The QRS ratings will be made available on Marketplace websites along with other important information about QHPs including cost, covered services, doctor referral requirements, and provider directories.

### 3.0 QRS Measure Set and Structure

CMS' approach to measure selection, the organization and hierarchical structure of the proposed QRS measures are described in detail in Section II of the November 19, 2013 Federal Register Notice.<sup>1</sup> The QRS measures proposed by CMS are organized into a hierarchical structure that is designed to make the information more approachable and understandable to individual consumers and employers.

Individual measures are the building blocks of the QRS hierarchical structure. Combinations of two or more individual measures or indicators that result in a single score are known as composites. Measures are grouped into composites so that large amounts of information can be streamlined and reported in formats that are easy for consumers to understand. Grouping measures into composites also helps differentiate performance across health plans, reduce random variability, and provide meaningful and comparable information to consumers. (Note: Not all measures in the QRS are part of a composite as described in the November 19, 2013 Federal Register Notice).

The QRS organizes measures and composites into a set of eight “domains” that represent unique and important aspects of quality: (1) Clinical Effectiveness, (2) Patient Safety, (3) Care Coordination, (4) Prevention, (5) Access, (6) Doctor and Care, (7) Efficiency and Affordability, and (8) Plan Services. These domains are then grouped into three “summary indicators” which align with CMS priority areas: (1) Clinical Quality Management; (2) Member Experience; and (3) Plan Efficiency, Affordability, and Management. The summary indicators organize the domains into broad categories that the consumer may use when evaluating health plan options. All three summary indicators would then be grouped into a single global rating. The global rating summarizes all measures, composites, and domains in the hierarchical structure of the QRS. In this report, score averages at different levels of the hierarchy are referred to as “components” of the QRS. The hierarchical structure of the QRS appears in Exhibit 1.

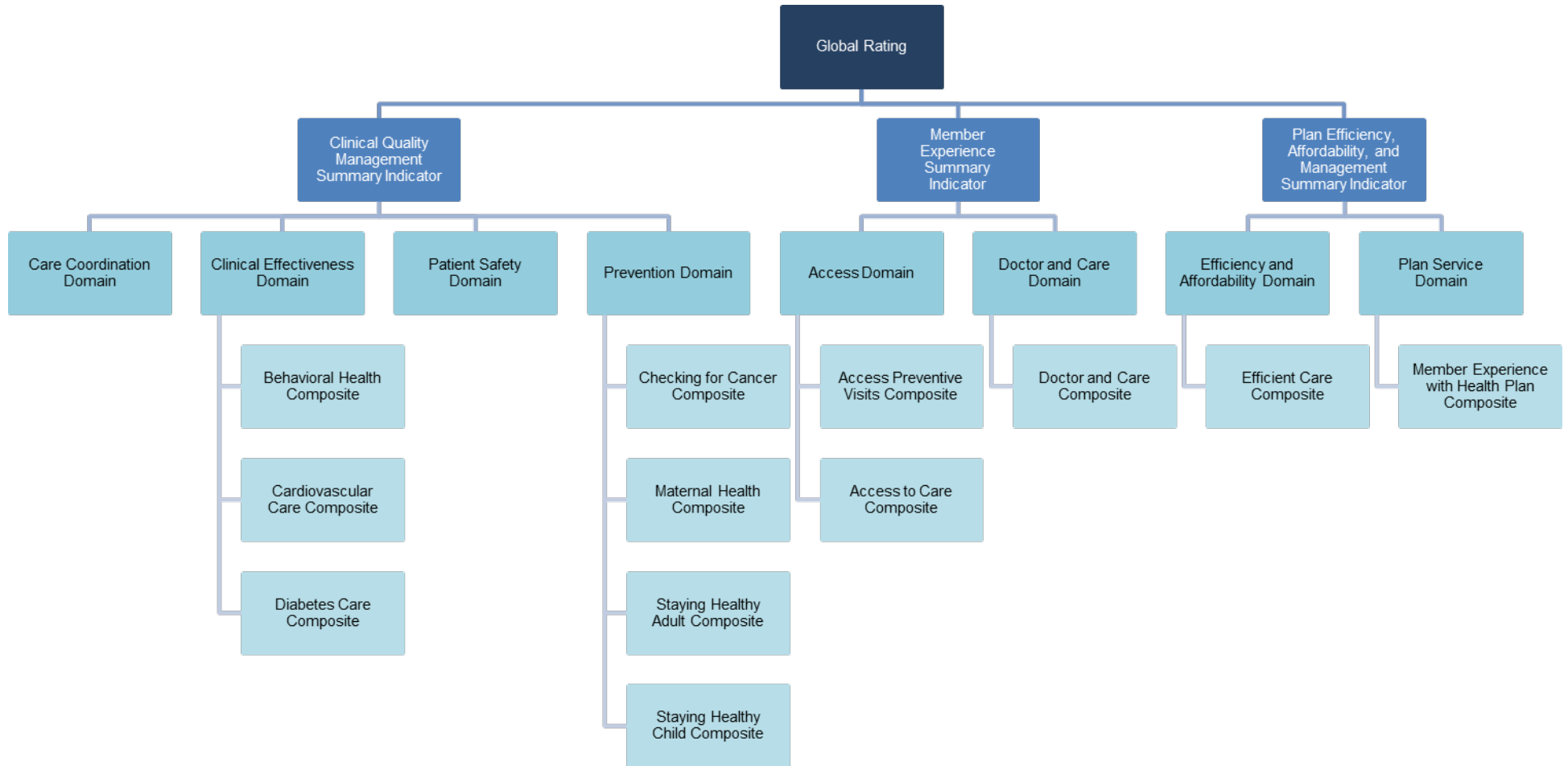
The proposed QRS measure set consists of 42 measures: 29 clinical measures which encompass clinical effectiveness, prevention, access and efficiency topics and 13 Consumer Assessment of Healthcare Providers and Systems (CAHPS) measures, that will be collected through the enrollee satisfaction survey (or QHP Enrollee Experience Survey), and encompass member experience, plan service and prevention topics. The complete mapping of measures to QRS components appear in Appendix A.<sup>2</sup>

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<sup>1</sup> Patient Protection and Affordable Care Act; Exchanges and Qualified Health Plans, Quality Rating System (QRS) Framework, Measures and Methodology; Notice with Comment, 78 FR 69418 (Nov. 19, 2013).

<sup>2</sup> A separate measure set and hierarchical structure has been developed to support a Child-only QRS rating. At the present time, HHS continues to research the number of Child-only QHP offerings on the Marketplaces. Too few Child-only QHPs may prohibit reliable Child-only QRS rating calculations and accompanying scores. HHS intends to provide separate technical guidance that will outline the specifications for developing Child-only QRS scores. The guidance contained in this document is specific to the QRS for family and adult self-only coverage.

Exhibit 1. Overview of QRS Hierarchical Structure



## 4.0 Proposed Scoring Process Detailed Specifications

This section describes the proposed scoring process, which combines measure scores to create QRS ratings for QHPs offered in the Marketplace, at all components of the hierarchy. Exhibit 2 shows the specific steps for calculating the QRS ratings. The subsections that follow describe each step in greater detail.

**Exhibit 2. Steps for Calculating the QRS Ratings**

Step	Substeps
<b>Step 1. Prepare Data for Scoring</b>	<ul style="list-style-type: none"> <li>Prepare measure scores for the QRS.</li> </ul>
<b>Step 2. Standardize Measure Scores</b>	<ul style="list-style-type: none"> <li>Determine whether sample size allows for the use of measure scores in QRS ratings.</li> <li>Use percentile ranks based on all reporting QHPs to standardize the measure scores before combining them.</li> </ul>
<b>Step 3. Calculate Composite Ratings</b>	<ul style="list-style-type: none"> <li>Use a half-scale rule to determine whether there are enough valid measure scores to calculate the composite score.</li> <li>Combine measure scores into composite scores using equal weights.</li> <li>Divide composite scores into ratings at score values of 25, 50, 75, and 90 to create groups 1,2,3,4, and 5.</li> </ul>
<b>Step 4. Calculate Domain Ratings</b>	<ul style="list-style-type: none"> <li>Use a half-scale rule to determine whether there are enough valid composite scores to calculate the domain score.</li> <li>Create averages of composite scores using equal weights.</li> <li>Divide domain scores into ratings at score values of 25, 50, 75, and 90 to create groups 1,2,3,4, and 5.</li> </ul>
<b>Step 5. Calculate Summary Indicator Ratings</b>	<ul style="list-style-type: none"> <li>Use a full-scale rule to determine if all valid domain scores are present to calculate the summary indicator score with the exception related to the Patient Safety domain score.<sup>3</sup></li> <li>Create averages of domain scores using equal weights.</li> <li>Divide summary indicator scores into ratings at score values of 25, 50, 75, and 90 to create groups 1,2,3,4, and 5.</li> </ul>
<b>Step 6. Calculate Global Ratings</b>	<ul style="list-style-type: none"> <li>Use a full-scale rule to determine if all valid summary indicator scores are present to calculate the global score.</li> <li>Create an average of the summary indicator scores using equal weights.</li> <li>Divide the global score into a rating at score values of 25, 50, 75, and 90 to create groups 1,2,3,4, and 5.</li> </ul>

### 4.1 Prepare Data for Scoring

Some QRS measures are constructed from subscores or “indicators”. CMS will combine these individual indicator scores to create measure scores for the QRS. There are two averaging<sup>4</sup> methods that will be used – unweighted and weighted – for the QRS measures that have indicators. Both of these methods are described in detail below.

<sup>3</sup> The exception to the full-scale rule for the Patient Safety domain score which is part of the Clinical Quality Management Summary Indicator is explained in detail in Section 4.5.

<sup>4</sup> Here, and throughout this document, “average” refers to the arithmetic mean.

Appendix B identifies the QRS measures with multiple indicators whose scores will be calculated using an unweighted average method.<sup>5</sup> Appendix C identifies the QRS measures with multiple indicators whose scores will be calculated as weighted averages.<sup>6</sup>

### 4.1.1 Unweighted Indicator Averages

QRS measures with multiple indicators based on standard CAHPS 4.0 composites (e.g., Getting Needed Care) will be combined using unweighted averages.<sup>7</sup> Where the method is an unweighted average, the indicator scores are averaged directly using the following equation:

$$X = \frac{\sum_1^i x_i}{i}$$

where X is the final measure score and  $x_i$  is the indicator score. Exhibit 3 shows an example of an unweighted average calculation of the measure score.

**Exhibit 3. Example of Unweighted Average of Indicator Scores**

QRS Measure: Getting Needed Care	Example Value
CAHPS Question: Easy Care, Tests, or Treatment	0.10
CAHPS Question: Easy to See Specialist	0.20
<b>Measure Score</b>	<b>0.15</b>

$$\text{Getting Needed Care} = \frac{\text{Easy Care, Tests, or Treatment} + \text{Easy to See Specialist}}{\text{Number of Indicators}}$$

$$\text{Getting Needed Care} = \frac{0.10 + 0.20}{2} = \frac{0.30}{2} = 0.15$$

<sup>5</sup> Legacy CAHPS composites (see Appendix B) are the only measures constructed without weighted indicators. These are not weighted based on conventional CAHPS scoring, which uses unweighted averages (AHRQ (2013). For additional explanation see: *Instructions for Analyzing Data from CAHPS Surveys: Using the CAHPS Analysis Program Version 4.1*, p. 50 available from [https://cahps.ahrq.gov/surveys-guidance/docs/2015\\_instructions\\_for\\_analyzing\\_data.pdf](https://cahps.ahrq.gov/surveys-guidance/docs/2015_instructions_for_analyzing_data.pdf).

<sup>6</sup> At the time of this writing, there are two QRS measures whose indicators are not final. These are: CAHPS – Coordination of Members’ Health Care Services and CAHPS – Cultural Competency. We anticipate the methods for combining indicators with these measures will be determined in 2015 and we will include information on the calculation of the scores for these measures in future technical guidance.

<sup>7</sup> Appendix B identifies the CAHPS 4.0 composites that will be calculated using unweighted averages.

## 4.1.2 Weighted Indicator Averages

The scores for other QRS measures with multiple indicators will be combined as weighted averages such that indicators with larger samples count more than indicators with smaller samples using the following equation:<sup>8</sup>

$$X = \frac{\sum_1^i n_i * x_i}{\sum_1^i n_i}$$

where X is the final measure score,  $x_i$  is the indicator score, and  $n_i$  is the indicator denominator. Exhibit 4 shows an example of this weighted average calculation of the measure score.

**Exhibit 4. Example of Weighted Average of Indicator Scores**

QRS Measure: Annual Monitoring for Patients on Persistent Medications	Example Denominator	Example Value
Annual Monitoring for Patients on Persistent Medications: ACE and ARB	200	0.30
Annual Monitoring for Patients on Persistent Medications: Anticonvulsants	100	0.60
Annual Monitoring for Patients on Persistent Medications: Digoxin	200	0.30
Annual Monitoring for Patients on Persistent Medications: Diuretic	100	0.60
<b>Measure Score</b>		<b>0.40</b>

*Annual Monitoring for Patients on Persistent Medication =*

$$\frac{\text{Annual Monitoring for Patients on Persistent Medications: ACE and ARB} * \text{Denominator} + \text{Annual Monitoring for Patients on Persistent Medications: Anticonvulsants} * \text{Denominator} + \text{Annual Monitoring for Patients on Persistent Medications: Digoxin} * \text{Denominator} + \text{Annual Monitoring for Patients on Persistent Medications: Diuretic} * \text{Denominator}}{\text{Total Denominator}}$$

*Annual Monitoring for Patients on Persistent Medications =*

$$\frac{0.30(200) + 0.60(100) + 0.30(200) + 0.60(100)}{600} = \frac{240}{600} = 0.40$$

<sup>8</sup> Appendix C identifies the QRS measures that will be calculated using weighted averages. A weighted approach was employed for the measures in Appendix C to ensure the correct proportional contributions of indicators when calculating the average. Without the weighting, or if equal weighting was used, for these measures, the indicators with small sample sizes would have equivalent proportions of contribution (i.e., equal weight/importance) to compute the average as indicators with larger sample sizes and would result in bias.



### 4.1.3 Measure Sample Sizes

Measure scores with insufficient sample sizes are regarded as not reportable and will be excluded from QRS scores. For all measures created by averaging indicators, the sample size is the maximum denominator among the indicators used to create the measure. For instance, for the measure Getting Care Quickly, if the indicator Getting Care Quickly-Non-Urgent Care had a sample size of 33 and the indicator Getting Care Quickly – Urgent Care had a sample size of 15, the official sample size used to determine whether the combined Getting Care Quickly measure was reportable would be 33.

Minimum sample sizes for the QRS measures are yet to be determined. We anticipate establishing the minimum sample sizes in 2015 when Marketplace data is available and will publish these details in future technical guidance.<sup>9</sup> The standardization and scoring process will regard measure scores with insufficient sample sizes as missing.<sup>10</sup> Exhibit 5 shows some examples of how observed sample sizes might compare to minimum sample sizes.

**Exhibit 5. Examples of Minimum Sample Sizes**

Observed Sample Size	Minimum Sample Size	Measure is Reportable
45	30	Yes
30	30	Yes
20	30	No
15 + 33 (in the case of measures combined from indicators) = 33	30	Yes

## 4.2 Standardize Measure Scores

Before creating composites and higher-level QRS components, CMS will standardize the measure scores using percentile ranks.<sup>11</sup> For each measure, CMS proposes to use every reportable QHP's performance rates to create national percentile ranks. QRS percentile ranks will be based on one, national, all-product reference group. National standardization would ensure that consumers are comparing the QRS ratings for QHPs offered in the Marketplace using a uniform standard.

<sup>9</sup> The minimum sample size to be established in 2015 is the sample size threshold for when a measure result will be included in the QRS scoring formula. The minimum sample size required for submission of a validated measure will be based on the measure steward's validation protocol.

<sup>10</sup> CMS will conduct research and consumer testing to determine the manner to display and convey information about missing and non-reportable data in the QRS.

<sup>11</sup> To standardize measure scores, CMS will use SAS PROC RANK with the number of groups fixed at 100. CMS will exclude data with small sample sizes before calculating percentile ranks. This approach calculates the rank as  $n/(N+1)$  where  $n$  is the QHP's position in the rank order and  $N$  is the number of observations. The SAS PROC UNIVARIATE procedure, with percentile definition 4 (PCTLDEF=4), is an alternative method that will produce equivalent results.

## 4.3 Calculate Composite Ratings from Measure Scores

Composite ratings are QHP-level ratings based on combinations of standardized QRS measure scores. This section describes the rules CMS will use to calculate composite ratings. Composites, like all QRS components (i.e. domains, summary indicators, and global ratings), are calculated as equally weighted averages of their components.<sup>12</sup> However, there is one QRS measure, Antidepressant Medication Management (AMM), in the Behavioral Health composite of the Clinical Effectiveness domain, whose indicators are not combined as a single measure before QRS scoring.<sup>13</sup> We are interested in comments on this approach.

### 4.3.1 Determine Whether the Composite Score is Reportable

If at least half of the measures in the composite are present, the composite is reportable and CMS proposes to calculate the composite score (half-scale rule). Otherwise, the composite is not reportable and will be treated as missing. Requiring that at least half of the measure scores be present ensures that composite scores contain the same information and can be compared across QHPs. We intend to consider and address comments regarding this from the November 19, 2013 Federal Register Notice.

### 4.3.2 Calculate the Composite

All of the measure scores for the QRS composites are entered into the calculation with the same weight. Exhibit 6 shows an example of how the Staying Healthy: Child Composite would be calculated from the four measure scores.

**Exhibit 6. Example Composite Score Calculation**

QRS Composite: Staying Healthy: Child	Example Standardized Score
Annual Dental Visit	10
Childhood Immunization Status	20
Immunizations for Adolescents	80
Weight Assessment and Counseling for Nutrition and Physical Activity Children and Adolescents: BMI Percentile Documentation	90
<b>Composite Score</b>	<b>50</b>

<sup>12</sup> In the initial years, equal weighting will be used for creating all components within the QRS methodology. Equal weighting provides information that is easier to understand and interpret.

<sup>13</sup> See Section 4.3.2.1 for additional details on the approach for the Antidepressant Medication Management (AMM) measure and its accompanying indicators.

$$\text{Composite Score for Staying Healthy: Child} = \frac{\text{Annual Dental Visit} + \text{Child Immunization} + \text{Adolescent Immunization} + \text{Weight Assessment and Counseling}}{4}$$

$$\text{Composite Score for Staying Healthy: Child} = \frac{10 + 20 + 80 + 90}{4} = 50$$

#### 4.3.2.1 Include Indicators Separately

As mentioned, there is one QRS measure – the Antidepressant Medication Management (AMM) measure – whose individual indicators are not combined into a single measure score before being incorporated into the QRS scoring process.<sup>14</sup> For this measure, the indicators are included separately in the composite average and down-weighted so that the sum of their weights is equal to the weights of the other measures.

Exhibit 7 includes an example of the calculation of this measure within the Behavioral Health Composite. The difference between this calculation and the calculation in Exhibit 6 is that the individual indicator scores for the AMM measure are entered directly into the composite average and were not previously combined into a single measure score.

**Exhibit 7. Example QRS Behavioral Health Composite Calculation**

QRS Composite: Behavioral Health	Measure or Indicator	Composite Weight	Example Standardized Score
Follow-up After Hospitalization for Mental Illness: 7 days	Measure	1.0	50
Follow-up Care for Children Prescribed ADHD Medication: Initiation Phase	Measure	1.0	50
Antidepressant Medication Management (AMM): Effective Acute Phase Treatment	Indicator	0.50	10
Antidepressant Medication Management (AMM): Effective Continuation Phase Treatment	Indicator	0.50	90
<b>Composite Score</b>		<b>3.0</b>	<b>50</b>

<sup>14</sup> There is a statistical reason to treat the individual indicators of the Antidepressant Medication Management measure as down-weighted parts of the Behavioral Health Composite. The Field Test analysis found that combining the indicators for this measure before entry into the Behavioral Health composite “dilutes” some of their unique variation. The unique variation from these indicators is preserved, however, by including them independently and adjusting their weights, which avoids them from having overwhelming influence on the composite score. The overall integrity of the QRS is improved by this down-weighting of the indicators for the Antidepressant Medication Management measure in the Behavioral Health Composite.

$$\begin{aligned} & \textit{Composite Score for Behavioral Health} = \\ & \text{Follow – up After Hospitalization (1.0) +} \\ & \text{Follow – up Care for Children Prescribed} \\ & \text{ADHD Medication (1.0) + AMM (Acute)(0.5) +} \\ & \frac{\text{AMM (Continuation)(0.50)}}{3.0} = 50 \end{aligned}$$

$$\begin{aligned} & \textit{Composite Score for Behavioral Health} = \\ & \frac{50 (1.0) + 50 (1.0) + 10 (0.50) + 90 (0.50)}{3.0} = \frac{150}{3.0} = 50 \end{aligned}$$

### 4.3.3 Proposed Approach to Converting Scores to Categorical Ratings

The November 19, 2013 Federal Register Notice lays out the basis for the proposed approach to converting scores to categorical ratings. Specifically, the continuous distribution of composite scores are each divided into rating categories for display on a star scale that ranges from 1 star to 5 stars. **The composite scores are not standardized.** A value of 25, for instance, means “this QHP has an average percentile rank on the component measures of 25.” It does not mean “this QHP is at the 25<sup>th</sup> percentile rank for this composite.” No fixed percent of plans will have any individual star rating. We solicit comment on approaches to ensure that the public understands how to interpret the results of such an approach.

Exhibit 8 shows the score value cut-points that divide the scores into categorical ratings.

**Exhibit 8. Composite Score to Categorical Rating Conversion**

Composite Score Value	Categorical Rating
0 < Score Value < 25	1 ★
25 ≤ Score Value < 50	2 ★★
50 ≤ Score Value < 75	3 ★★★
75 ≤ Score Value < 90	4 ★★★★
90 ≤ Score	5 ★★★★★

## 4.4 Calculate Domain Scores and Ratings

CMS proposes to follow steps for domain score calculation that are similar to the steps for calculating the composite scores. Domain scores are averages of composite scores (the 0 to 99 percentile ranks), not averages of the composite ratings (the 1 to 5 star ratings).

The domain scoring steps are:

1. **Determine whether the domain score is reportable.** CMS will use a half-scale rule to determine if the domain score is reportable. Therefore, if half or more of the composite scores in a domain are present, the domain score is reportable. Otherwise, the domain score is not reportable.
2. **Create the domain score as an average of the available composite scores.** CMS will use equal weights for all composite scores as shown in Exhibit 9.

**Exhibit 9. Example Domain Score Calculation**

QRS Domain: Prevention	Example Composite Score <sup>15</sup>
Checking for Cancer	20
Maternal Health	20
Staying Healthy: Adult	80
Staying Healthy: Child	80
<b>Domain Score</b>	

$$\text{Domain Score for Prevention} = \frac{\text{Checking for Cancer} + \text{Maternal Health} + \text{Staying Healthy Adult} + \text{Staying Healthy Child}}{4}$$

$$\text{Domain Score for Prevention} = \frac{20 + 20 + 80 + 80}{4} = 50$$

3. **Convert the domain score to a categorical rating.** The domain scores will not be standardized before being converted into a categorical rating. CMS will use the same cut-point values for domain ratings as those shown in Exhibit 8.

Example: The Domain Score for Prevention of 50 lies within the limits of the third category in Exhibit 8 ( $50 \leq \text{Score Value} < 75$ ) and is converted to a three-star rating (★★★).

## 4.5 Proposed Approach to Calculating Summary Indicator Scores and Ratings

CMS proposes to follow steps for summary indicator score calculation that are very similar to the steps for calculating the domain scores. Summary indicator scores are averages of domain scores (not the domain ratings). In addition, domain scores are not standardized before calculating the summary indicator scores and ratings.

The summary indicator scoring steps are:

1. **Determine whether the summary indicator score is reportable.** CMS will use a full-scale rule to determine whether the summary indicator score is reportable with the exception related to the Patient Safety domain score as noted below. In general, if all of the domain scores for a summary indicator are present, the summary indicator score is reportable. Otherwise, the summary indicator score is not reportable.

<sup>15</sup> Again, composite scores are not standardized before averaging.

*Exception: If the summary indicator is Clinical Quality Management and only the Patient Safety domain score is missing, the summary indicator score for Clinical Quality Management is still reportable.<sup>16</sup>*

2. **Create the summary indicator score as an average of the domain scores.** CMS will use equal weights for all domain scores as shown in Exhibit 10.

**Exhibit 10. Example Summary Indicator Score Calculation**

QRS Summary Indicator: Member Experience	Example Domain Score
Access	65
Doctor and Care	35
<b>Summary Indicator Score</b>	<b>50</b>

*Summary Indicator Score for Member Experience =*

$$\frac{\text{Access} + \text{Doctor and Care}}{2} = \frac{65 + 35}{2} = 50$$

3. **Convert the summary indicator score to a categorical rating.** The summary indicator scores will not be standardized before being converted into a categorical rating. CMS will use the same cut-point values to create summary indicator ratings as those shown in Exhibit 8.

Example: The Member Experience summary indicator score of 50 in Exhibit 10 lies within the limits of the third category in Exhibit 8 ( $50 \leq \text{Score Value} < 75$ ) and converts to a three-star rating (★★★).

## 4.6 Proposed Approach to Calculating Global Score and Rating

CMS will follow steps for QRS global score calculation that are very similar to the steps for calculating the summary indicator scores. The global score is an average of the summary indicator scores (not the summary indicator ratings).

The global scoring steps are:

1. **Determine whether the global score is reportable.** CMS will use a full-scale rule to determine whether the global score is reportable. If all of the summary indicator scores are present, the global score is reportable. Otherwise, the global score is not reportable.

<sup>16</sup> The decision to exclude the Patient Safety domain in the full-scale rule for the summary indicator Clinical Quality Management was based on the sensitivity testing conducted during the Field Test. It was found that the Patient Safety domain was uncorrelated with the other domains in the Clinical Quality Management Summary Indicator. The exclusion of the Patient Safety domain did not substantially impact a plan's scores. The exception allows more plans to have reportable scores and thus, increases the availability of information to allow consumers to compare plan-to-plan global ratings, including all summary indicators. As the QRS measure set matures and additional measures are added, the exception for the Patient Safety domain will be re-examined.

2. **Create the global score as an average of the summary indicator scores.** CMS will use equal weights for all summary indicator scores as shown in Exhibit 11.

**Exhibit 11. Example Global Score Calculation**

Summary Indicator	Example Summary Indicator Score
Clinical Quality Management	65
Member Experience	35
Plan Efficiency, Affordability, and Management	50
<b>Global Score</b>	<b>50</b>

$$\text{Global Score} = \frac{\text{Clinical Quality Management} + \text{Member Experience} + \text{Plan Efficiency, Affordability, and Management}}{3}$$

$$\text{Global Score} = \frac{65 + 35 + 50}{3} = 50$$

3. **Convert the global score to a categorical rating.** The global score will not be standardized before being converted into a categorical global rating. CMS will use the same cut-point values for global ratings as those shown in Exhibit 8.

Example: The global score of 50 lies within the limits of the third category in Exhibit 8 ( $50 \leq \text{Score Value} < 75$ ) and therefore converts to a three-star rating (★★★).

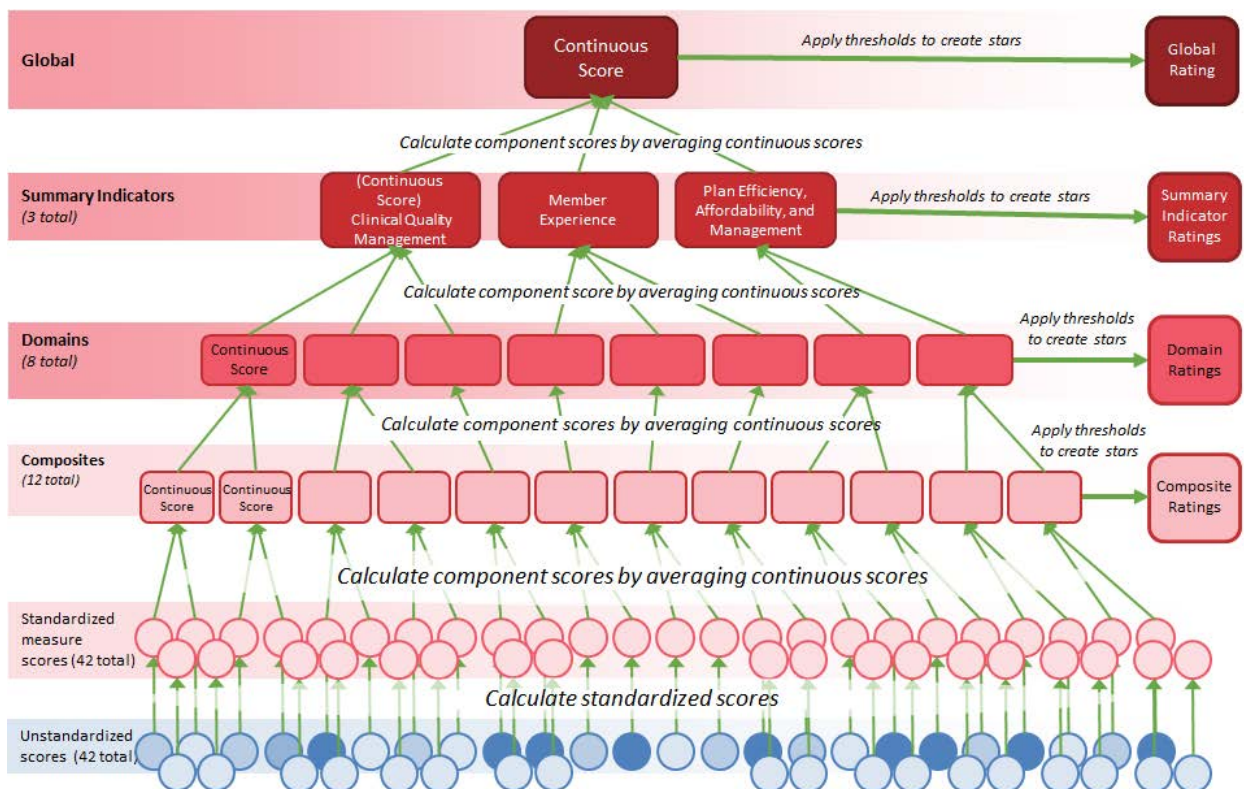
## 5.0 Scoring Process Summary

Exhibit 12 below shows a visual representation of the scoring methodology described in detail above. The following highlights key features of the QRS scoring process:

- For measures with indicators that are combined before being included in the QRS (e.g. survey measures) use the maximum sample size (denominator value) among the set of indicators to determine if the measure is reportable.
- Establish the requirements for the minimum sample sizes of measures for inclusion in the QRS based on actual Marketplace measure data (available in 2015).
- For each measure, use the score if the sample size is greater than or equal to the minimum required sample size specified for that measure. Otherwise, treat the measure score as missing or not reportable.
- Standardize measure scores using percentile ranks based on QHPs nationwide. Combine all product types (i.e., HMO, POS, PPO) into one national peer group when creating percentile ranks.
- For each composite, calculate the score if half or more of the measure scores are present. Otherwise, treat the composite score as missing or not reportable.

- For each domain, calculate the score if half or more of the composite scores are present. Otherwise, treat the domain score as missing or not reportable.
- Use an ‘average-of-averages’ approach of the lower level components’ scores to calculate the domain and higher component ratings.
- Use equal weights to average: (a) composite scores to calculate domain scores; (b) domain scores to calculate summary indicator scores; and (c) summary indicator scores to calculate a global score.
- For each summary indicator except Clinical Quality Management, calculate the score if all of the domain scores are present. For Clinical Quality Management, calculate the score if all of the domain scores or all of the domain scores *except* Patient Safety are present. Otherwise, treat the summary indicator scores as missing or not reportable.
- Calculate the global score if all the summary indicator scores are present.
- Convert scores at all levels to categorical ratings using cut-point values of 25, 50, 75, and 90.
- Use a five-star scale for the display of the categorical ratings.

**Exhibit 12. Scoring Methodology Visual Representation**





## Appendix A. Proposed QRS Measure Set

QRS Summary Indicator	QRS Domain	QRS Composite	Measure Title	NQF ID
Clinical Quality Management	Care Coordination	No Composite	CAHPS - Coordination of Members' Health Care Services	Not Currently Endorsed
	Clinical Effectiveness	Behavioral Health	Antidepressant Medication Management <sup>17</sup>	0105
			Follow-up After Hospitalization for Mental Illness: 7 days	One indicator of NQF-endorsed measure 0576
			Follow-up Care for Children Prescribed ADHD Medication: Initiation Phase	0108
		Cardiovascular Care	Cholesterol Management for Patients With Cardiovascular Conditions: LDL-C Control (<100 mg/Dl)	Not Currently Endorsed
			Cholesterol Management for Patients With Cardiovascular Conditions: LDL-C Screening	Not Currently Endorsed
			Controlling High Blood Pressure	0018
		Diabetes Care	Diabetes Care: Eye Exam (Retinal) Performed	0055
			Diabetes Care: Hemoglobin A1c (HbA1c) Control <8.0%	0575
		No Composite	Medication Management for People With Asthma	1799
		Patient Safety	No Composite	Annual Monitoring for Patients on Persistent Medications
	Plan All - Cause Readmissions			1768
	Prevention	Checking for Cancer	Breast Cancer Screening	Not Currently Endorsed
			Cervical Cancer Screening	0032
			Colorectal Cancer Screening	0034
		Maternal Health	Prenatal and Postpartum Care: Postpartum Care	1517
			Prenatal and Postpartum Care: Timeliness of Prenatal Care	1517
		Staying Healthy: Adult	Adult BMI Assessment	Not Currently Endorsed
			CAHPS - Aspirin Use and Discussion	Not Currently Endorsed
			CAHPS - Flu Shots for Adults	0039
			CAHPS - Medical Assistance With Smoking and Tobacco Use Cessation	0027

<sup>17</sup> The Antidepressant Medication Management measure is made up of two indicators that are entered separately and weighted so that the sum of their weights is equal to 1 as described in Section 4.3.2.1.

QRS Summary Indicator	QRS Domain	QRS Composite	Measure Title	NQF ID
		Staying Healthy: Child	Annual Dental Visit	1388
			Childhood Immunization Status	0038
			Immunizations for Adolescents	1407
			Weight Assessment and Counseling for Nutrition and Physical Activity Children and Adolescents: BMI Percentile Documentation	One indicator of NQF-endorsed measure 0024
Member Experience	Access	Access Preventive Visits	Adolescent Well-Care Visits	Not Currently Endorsed
			Adults' Access to Preventive and Ambulatory Health Services	Not Currently Endorsed
			Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	1516
		Access to Care	CAHPS - Getting Care Quickly	0006
			CAHPS - Getting Needed Care	0006
	Doctor and Care	Doctor and Care	CAHPS - Cultural Competency	Not Currently Endorsed
			CAHPS - Rating of All Health Care	0006
			CAHPS - Rating of Personal Doctor	0006
			CAHPS - Rating of Specialist Seen Most Often	0006
	Plan Efficiency, Affordability, and Management	Efficiency and Affordability	Efficient Care	Appropriate Testing for Children With Pharyngitis
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis				0058
Relative Resource Use for People with Cardiovascular Conditions - Inpatient Facility Index				1558
Relative Resource Use for People with Diabetes - Inpatient Facility Index				1557
Use of Imaging Studies for Low Back Pain				0052
Plan Service		Member Experience with Health Plan	CAHPS - Customer Service	0006
			CAHPS - Global Rating of Health Plan	0006
			CAHPS - Plan Information on Costs	0006

## Appendix B. Unweighted Measures and Indicators Included in the Proposed QRS

Exhibit B-1 shows the set of measures (and their indicators) that are created using unweighted averages (see Section 4.1.1).

**Exhibit B-1. Indicators Combined to Create Measures by the Unweighted Average Method**

Measure/ Indicator	Measure Title
<b>Measure</b>	<b>CAHPS - Customer Service</b>
Indicator	▪ CAHPS - Customer Service: Courtesy and Respect
Indicator	▪ CAHPS - Customer Service: Got Needed Info
<b>Measure</b>	<b>CAHPS - Getting Care Quickly</b>
Indicator	▪ CAHPS - Getting Care Quickly: Non-Urgent Care
Indicator	▪ CAHPS - Getting Care Quickly: Urgent Care
<b>Measure</b>	<b>CAHPS - Getting Needed Care</b>
Indicator	▪ CAHPS - Getting Needed Care: Easy Care, Tests, or Treatment
Indicator	▪ CAHPS - Getting Needed Care: Easy to See Specialist
<b>Measure</b>	<b>CAHPS - Plan Information on Costs</b>
Indicator	▪ CAHPS - Plan Information on Costs: Cost of Prescriptions
Indicator	▪ CAHPS - Plan Information on Costs: Cost of Service or Equipment
<b>Measure</b>	<b>CAHPS - Coordination of Members' Health Care Services</b>
Indicator	▪ CAHPS - Coordination of Members' Health Care Services: Discuss Prescriptions
Indicator	▪ CAHPS - Coordination of Members' Health Care Services: Doctor Informed
Indicator	▪ CAHPS - Coordination of Members' Health Care Services: Help to Manage Care
Indicator	▪ CAHPS - Coordination of Members' Health Care Services: Medical Records
Indicator	▪ CAHPS - Coordination of Members' Health Care Services: Office Managed Care
Indicator	▪ CAHPS - Coordination of Members' Health Care Services: Prompt Tests Results
Indicator	▪ CAHPS - Coordination of Members' Health Care Services: Tests Follow-up
<b>Measure</b>	<b>CAHPS - Cultural Competency</b>
Indicator	▪ CAHPS - Cultural Competency: Forms in Preferred Language
Indicator	▪ CAHPS - Cultural Competency: Interpreter

## Appendix C. Weighted Measures and Indicators Included in the Proposed QRS

Exhibit C-1 shows the set of measures (and their indicators) that are created using weighted averages where the “weights” are the respective measure sample sizes (see Section 4.1.2).

**Exhibit C-1. Indicators Combined to Create Measures by the Weighted Average Method**

Measure/ Indicator	Measure Title
<b>Measure</b>	<b>Annual Monitoring for Patients on Persistent Medications</b>
Indicator	▪ Annual Monitoring for Patients on Persistent Medications: ACE and ARB
Indicator	▪ Annual Monitoring for Patients on Persistent Medications: Anticonvulsants
Indicator	▪ Annual Monitoring for Patients on Persistent Medications: Digoxin
Indicator	▪ Annual Monitoring for Patients on Persistent Medications: Diuretics
<b>Measure</b>	<b>CAHPS - Aspirin Use and Discussion</b>
Indicator	▪ CAHPS - Aspirin Use and Discussion: Aspirin Use
Indicator	▪ CAHPS - Aspirin Use and Discussion: Discussing Aspirin Risks and Benefits
<b>Measure</b>	<b>CAHPS - Medical Assistance With Smoking and Tobacco Use Cessation</b>
Indicator	▪ CAHPS - Medical Assistance With Smoking and Tobacco Use Cessation: Advising Smokers and Tobacco Users to Quit
Indicator	▪ CAHPS -Medical Assistance With Smoking and Tobacco Use Cessation: Discussing Cessation Medications
Indicator	▪ CAHPS - Medical Assistance With Smoking and Tobacco Use Cessation: Discussing Cessation Strategies

## Appendix D. Glossary

Term	Definition
Average	The result obtained by adding several quantities together and then dividing this total by the number of quantities. The word 'average' is used interchangeably with mean unless otherwise noted.
Components	Each hierarchy has composites at the lowest level that aggregate to form domains. The domains roll up to form "summary indicators". Finally, the summary indicators are combined to create a single "global" rating. In this report, for simplicity, all these averages are referred to as "components" of the QRS.
Composite	Combination of two or more individual measures in a single measure that results in a single score
Cut-points	Thresholds to delineate levels of performance
Domain	Combination of two or more measures or composites that result in a single score or rating
Full-scale rule	A rule that states that a score is calculated/displayed if all the components of the summary indicator or global rating are present
Global rating	A single score representing an aggregate of multiple summary indicators
Half-scale rule	A rule that states that a score is calculated/displayed if at least half the components of the composite or domain are present
Hierarchical structure	The organization of the QRS measures set into information categories ranging from the most granular information (measures) to summary indicators ratings
Indicator	Sub-components that are grouped to create a measure.
Mean	See "Average"
Measure	A measure is the lowest level of the hierarchical structure that can be combined with another component and result in a composite score
Measure Score	Continuous number representing the measure result (e.g., 90% satisfaction with Customer Service on QHP Enrollee Survey)
Peer group	A reference dataset to compare the individual plan to the performance classification work; most often based around geographic or time period considerations (e.g., current year distribution of all plans nationally)
Product type	Overarching categories of health insurance plans. Examples include PPO, HMO, or HMO/POS
Qualified Health Plan (QHP)	Under the Affordable Care Act, starting in 2014, an insurance plan that is certified by an Exchange, provides essential health benefits, follows established limits on cost-sharing (like deductibles, copayments, and out-of-pocket maximum amounts), and meets other requirements
Qualified Health Plan (QHP) Issuer	A health insurance company that offers, pursuant to a certification from an Exchange, a Qualified Health Plan
Quality Rating System (QRS)	A system of rating QHPs based on quality and price; the performance information from this system will inform consumers and employers in their choice of a QHP and will provide for monitoring of health plan quality by regulators
QRS Rating	Refers to a score that allows for QHPs to be compared to one another
Rating methodology	The rules for combining measures and converting scores into performance ratings
Related indicators	Two or more measure sub-components that are similar. For example, the measure Medication Management for People with Asthma (MMA) is comprised of two related indicators: (1) the percentage of members who remained on an asthma controller medication for at least 50% of their treatment period and (2) the percentage of members who remained on an asthma controller medication for at least 75% of their treatment period
Scoring	Converting measure raw results to points or percentiles to place disparate measures' results on a common numeric scale (e.g., 88)

Term	Definition
Signaling	A method for creating a rating methodology that is primarily based on expert opinion
Standardize	A method in which raw scores that are converted to a standard using percentile ranks 0-99
Summary indicator	A plan-level rating created by aggregating related measures, composites, and domains
Unstandardized Score	The original, raw, measure score before being rounded, aggregated, or otherwise altered
Unweighted average	An average that is calculated in which each of the data points (values) contributes equally to the final average.
Weighted average	An average that is calculated in which some data points (values) contribute more than others to the final average.