Overall Hospital Quality Star Rating on Care Compare: July 2023 Updates and Specifications Report

July 2023

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Acknowledgments

This work is a collaborative effort, and the authors gratefully acknowledge and thank our many colleagues and collaborators for their thoughtful and instructive input. Acknowledgment of input does not imply endorsement of the methodology and policy decisions.

We would like to acknowledge and thank: Vinitha Meyyur, PhD; Michelle Schreiber, MD; Tyson Nakashima; and the Centers for Medicare & Medicaid Services (CMS) for their contributions to this work.

We would also like to acknowledge and thank the contribution and work from: Dawn Beard, LPN from the Lantana Consulting Group.

Additionally, we would like to acknowledge Hospital Consumer Assessment of Healthcare Providers Systems (HCAHPS), Centers for Disease Control & Prevention (CDC), Mathematica Policy Research (MPR), and Sharon-Lise Normand, PhD, who provided statistical consultation.

Finally, we would like to recognize the commitment and contributions of the members of our Technical Expert Panel (TEP), our Patient & Patient Advocate Work Group (PAWG), and our Provider Leadership Work Group (PLWG).

1. How to Use This Report

Under contract with the Centers for Medicare & Medicaid Services (CMS), Yale New Haven Health Services Corporation – Center for Outcomes Research & Evaluation (CORE) has developed a methodology for the Overall Hospital Quality Star Rating, summarizing the quality information conveyed by measures publicly reported on Care Compare. The purpose of this report is to provide an overview of the methodology for calculating the Overall Star Rating and provide updated national results for the July 2023 Care Compare release. Questions regarding the Overall Hospital Quality Star Rating can be sent to the *QualityNet* Question and Answer Tool.

This Overall Hospital Quality Star Rating: July 2023 Updates and Specifications Report is organized into the following sections:

- Section 2: Objective of Overall Hospital Quality Star Rating
- Section 3: Overall Hospital Quality Star Rating Methodology
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    - 3.6. Step 5: Minimum Thresholds for Reporting an Overall Star Rating
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- Appendix B: Measures Excluded from the July 2023 Star Rating (N=13) by Exclusion Criterion
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2. Objective of Overall Hospital Quality Star Rating

The primary objective of the Overall Hospital Quality Star Rating project is to summarize information from existing quality measures reported on Care Compare in a way that is useful and easy to interpret for patients and consumers through the development of a statistically sound methodology. Consistent with other CMS Star Rating programs, this methodology assigns each hospital a rating from one to five stars reflecting the hospital's overall performance on Care Compare quality measures.

The Overall Hospital Quality Star Rating is designed to provide summary information for patients and consumers about existing publicly reported quality data. In the case of Care Compare, the Overall Hospital Quality Star Rating complements existing efforts, such as the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) star ratings (implemented in April 2015) and will not replace the reporting of any individual quality measures. In what follows, "Overall Star Rating(s)" refers to the Overall Hospital Quality Star Rating unless otherwise noted.

3. Overall Hospital Quality Star Rating Methodology

3.1. Overview of Seven Steps of the Star Rating Methodology

The methodology calculates the Overall Star Rating through a seven-step process. These steps are listed below and are described in greater detail in subsequent sections (see Appendix A).

- Step 1: Selection and standardization of measures for inclusion in the Overall Star Rating
- Step 2: Assignment of measures to measure groups
- Step 3: Calculation and standardization of measure group scores
- Step 4: Calculation of hospital summary scores as a weighted average of available group scores
- Step 5: Application of minimum thresholds for receiving an Overall Star Rating
- Step 6: Assignment of hospitals to peer groups based on their number of measure groups (3, 4, or 5)
- Step 7: Application of clustering algorithm to categorize summary scores into star ratings

The measures were first selected based on their relevance and importance as determined through stakeholder and expert feedback. The selected measures were standardized to be consistent in terms of direction and magnitude (Step 1). In Step 2, the measures were organized into five groups by measure type. In Step 3, a simple average of the standardized measure scores is calculated and this score is standardized to generate a group score. In Step 4, a predetermined weight is applied to each group score to calculate a hospital summary score. In Step 5, the public reporting threshold is applied, requiring hospitals to have a minimum of three measure groups (one of which must be the Mortality or Safety of Care group) with at least three measures in each of the three groups to receive an Overall Star Rating. In Step 6, hospitals meeting the reporting thresholds are organized into peer groups based on the number of measure groups in which they have at least three measures. In Step 7, hospital summary scores within each peer group are categorized with a Star Rating between one and five stars using a clustering algorithm.

3.2. Step 1: Selection and Standardization of Measures for Inclusion in the Star Rating

Criteria for Selecting Measures for the Overall Hospital Quality Star Rating

CORE vetted measure selection criteria with stakeholders through the original TEP and public input periods to ensure that the Overall Star Rating captured the diverse aspects of quality represented by the measures on Care Compare. CMS believes that these measures capture the quality of care at hospitals, and appropriately provide a snapshot of quality when combined.

All measures for acute inpatient and outpatient care hospitals reported on Care Compare in January 2023, as determined using the data reported in the downloadable data file available on data.cms.gov[*], were included for consideration in the Overall Star Rating.[†]

Because the Overall Star Rating is intended for acute inpatient and outpatient care hospitals, CMS first excluded all measures on Care Compare that were specific to specialty hospitals (such as a cancer hospital or inpatient psychiatric facility) or ambulatory surgical centers prior to applying any measure selection criteria.

Measure Exclusion Criteria

CMS used the following criteria to exclude measures from the Overall Star Rating calculation:

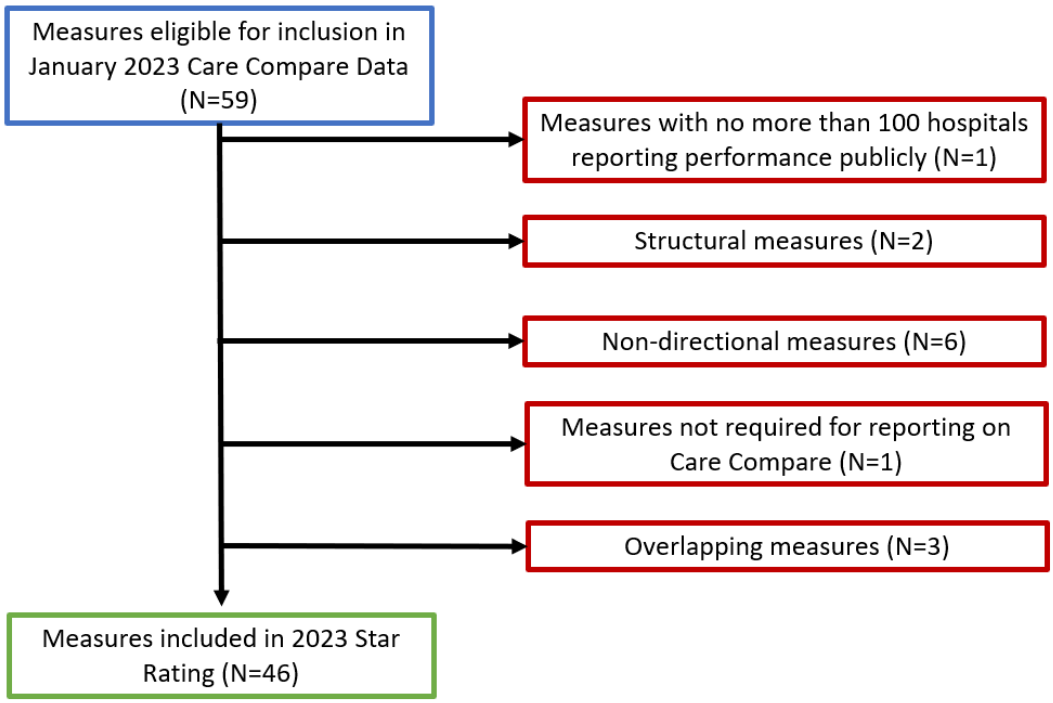
1. Measures with no more than 100 hospitals reporting performance publicly, as these measures would not produce reliable measure group scores based on so few hospitals;
2. Structural measures not amenable to inclusion in a summary scoring calculation alongside process and outcome measures, as these measures cannot be as easily combined with other measures captured on a continuous scale with more granular data;
3. Non-directional measures (for which it is unclear whether a higher or lower score is better), as these measures cannot be standardized to form an aggregate measure group score;
4. Measures not required for reporting on Care Compare through CMS programs; and,
5. Overlapping measures (for example, measures that are identical to another measure, or measures with substantial overlap in cohort and/or outcome).

With these measures excluded, a total of 46 measures were eligible for inclusion in the Overall Star Rating for July 2023. The Overall Star Rating measure selection criteria are presented in the subsequent text and in Figure 1.

[*] The downloadable data file is available at https://data.cms.gov/provider-data/search?theme=Hospitals

[†] The Star Ratings results were calculated using the January 2023 data update and the re-released OP-13 measure data publicly reported in April 2023 on Care Compare.

Figure 1. Measure Selection Flowchart (January 2023 Data)



For a complete list of the measures excluded in January 2023, please refer to Appendix B.

Standardization of Measure Scores

Hospital quality measure results include many different types of scoring information, ranging from time (e.g., median time in minutes from emergency department [ED] arrival to ED departure for admitted ED patients) to percentages (e.g., percentage of patients given antibiotics prior to surgery). Quality measures also have two directions, with either "lower is better" (readmissions, mortality) or "higher is better" (percent of healthcare workers vaccinated against Influenza). Therefore, to facilitate the combination of information, CMS uses standardization to ensure all measure scores are on a common scale with a common direction. This does not change the measure information, just the scale for scoring, and makes it possible to combine the measures in the Overall Star Rating calculation so that all measures have the same weight. Specifically, CMS standardizes a hospital's score on each measure by calculating "Z–scores" for each measure, reversing the direction if necessary, so that higher values were always 'better'; the measure "Z–score" is the difference between an individual hospital's score and the overall mean score for hospitals divided by the standard deviation across hospitals.

For example, if a Patient Safety Indicator measure had a national average performance of 159 deaths with a standard deviation of 20 deaths. After standardization and redirection, this measure

had a mean score of 0 and standard deviation of 1 and the score was reversed so that a higher standardized score indicates better quality (fewer deaths). Henceforth in this report, a measure score refers to the standardized measure score or “Z-score.”

3.3. Step 2: Assignment of Measures to Groups

Approach to Grouping Measures

CMS organizes measures into groups by measure type (that is, the dimension of quality represented). Groups were finalized with input from a Patient & Patient Advocate Work Group and previous CMS patient and consumer testing. The Overall Star Rating groups are:

- Mortality
- Safety of Care
- Readmission
- Patient Experience
- Timely and Effective Care

Measures by Group for July 2023

CMS assigns each measure included in Overall Star Rating to one of five mutually exclusive measure groups: Mortality (N=7), Safety of Care (N=8), Readmission (N=11), Patient Experience (N=8), and Timely and Effective Care (N=12).

For a complete list of the measures in each group, please refer to Appendix C.

3.4. Step 3: Calculation of Measure Group Scores using a Simple Average of Measure Scores

Calculating Measure Group Scores Using a Simple Average of Standardized Measure Scores

To calculate the measure group score, the standardized measure scores for each measure in a group, calculated in Step 1, are averaged for each hospital. A measure group score is calculated for every hospital reporting at least one measure in the measure group. This approach to calculating the measure group scores yields simple and predictable measure weights for the remaining steps of the methodology. It was supported by the TEP and other stakeholders who favored methodology that could be easily understood by stakeholders and used by hospitals to identify areas for quality improvement.

To calculate the measure group score, 100 percent is divided by the number of measures reported in that measure group by each hospital to give the percentage each measure will weigh for that hospital; this measure weight is then multiplied by the standardized measure score to calculate the measure's weighted score. Then, the weighted individual measure scores within a group are summed to calculate the measure group score. If a hospital reports no measures for a given measure group, CMS considers that group to be "missing."

The contribution of each individual measure to its respective measure group score can vary, depending on how many additional measures in that group are submitted. Thus, measure emphasis will vary across hospitals and across groups within a hospital. As an example, if a hospital reports three measures in the Safety of Care measure group, each measure would contribute 1/3 (33.3%) to the hospital's measure group score, whereas if a hospital reports eight measures each would contribute 1/8 (12.5%) to its measure group score.

Standardization of Measure Group Scores

As with the individual measures, standardizing scores is a way to facilitate combining them into a final overall score. Using the simple average of measure group scores the distributions and interpretations of measure group scores may differ. For example, a 0.5 measure group score in Safety of Care may represent only 1 standard deviation above the mean, whereas in Patient Experience a 0.5 measure group may represent 2 standard deviations above the mean. Standardizing the group scores ensures that similar values represent similar relative performance.

Specifically, measure scores are standardized by calculating a Z-score for each measure group. The Z-score is calculated by subtracting the national average measure group score from each hospital's measure group score and dividing by the standard deviation across hospitals. This step would occur prior to combining measure group scores through a weighted average to calculate summary scores.

3.5. Step 4: Weighted Average of Measure Groups to Calculate Summary Scores

Final Weighting Scheme

After calculating the measure group scores for each hospital, CMS calculates a weighted average to combine the measure group scores into a single hospital summary score. The final weighting scheme was developed in collaboration with various stakeholder groups. Stakeholders agreed that the outcome measure groups were more indicative of quality and, thus, should be weighted heavier than the process measures. The weights were reviewed through the TEP, PLWG, PAWG, and public input in 2017, where the majority of feedback warranted no change to the original weighting scheme. These weights were again reassessed in 2019 across an array of stakeholders and public comment, to account for the consolidation of all process measures (formerly comprising three groups) into the Timely and Effective Care Measure Group. The weights for each Measure Group are detailed in Table 1.

Table 1. Overall Star Ratings Weighting by Group

Group	Star Ratings Weight (w_d)
Mortality	22%
Safety of Care	22%
Readmission	22%
Patient Experience	22%
Timely and Effective Care	12%

Method for Re-weighting When Missing One or more Measure Groups

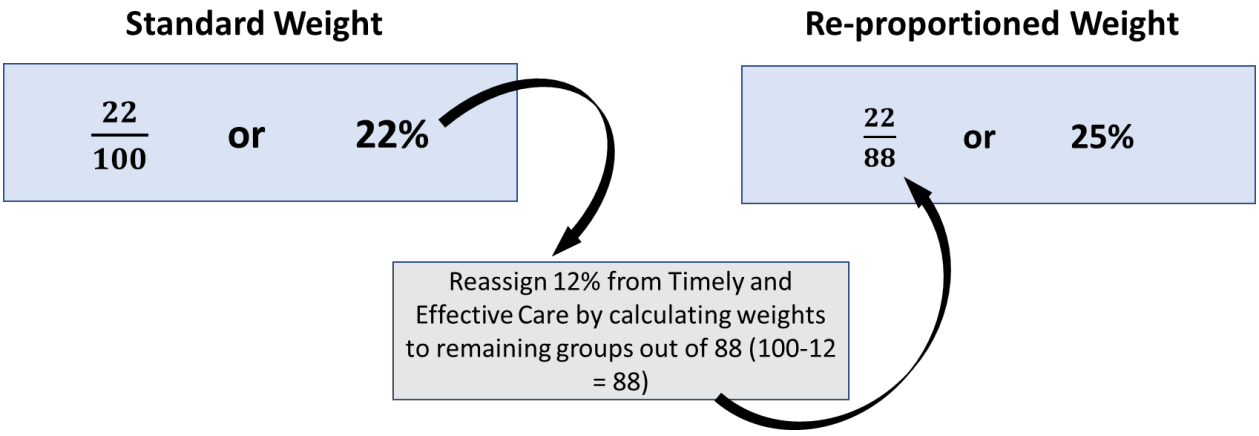
If a hospital reports no measures for a given measure group, CMS considers that group to be "missing." When a hospital is missing one or more measure groups, CMS applies the HVBP's approach of re-proportioning the weight of the missing group(s) across the groups for which the hospital does report measures. Table 2 and Figure 2 provide examples of how the weighting scheme is adjusted for a hospital that is missing the Timely and Efficient Care group.

The final summary score for each hospital is the weighted average of that hospital's measure group scores.

Table 2. Example Re-weighting Scheme for Hospital Missing Timely and Effective Care Group

Group	Standard Weight	Re-proportioned Weight
Mortality	22%	25%
Safety of Care	22%	25%
Readmission	22%	25%
Patient Experience	22%	25%
Timely and Effective Care **(N=0)**	12%	0%

Figure 2. Example Calculation for Re-proportioning Measure Group Weights



3.6. Step 5: Minimum Thresholds for Reporting an Overall Star Rating

Requirements for Receiving an Overall Star Rating

CMS intends to assign Overall Star Ratings on the basis of adequate information regarding hospitals' quality. Thus, CMS evaluated and developed standards regarding the minimum number of measures and groups a hospital must report to receive a publicly reported Overall Star Rating on Care Compare. Specifically, hospitals must receive at least three publicly reported measure scores for each of at least three measure groups (one of which must be Mortality or Safety of Care) to receive an Overall Star Rating. CMS set these thresholds to allow for as many hospitals as possible to receive an Overall Star Rating without sacrificing the validity and reliability of the Overall Star Rating methodology. This step is applied prior to clustering hospitals into star categories.

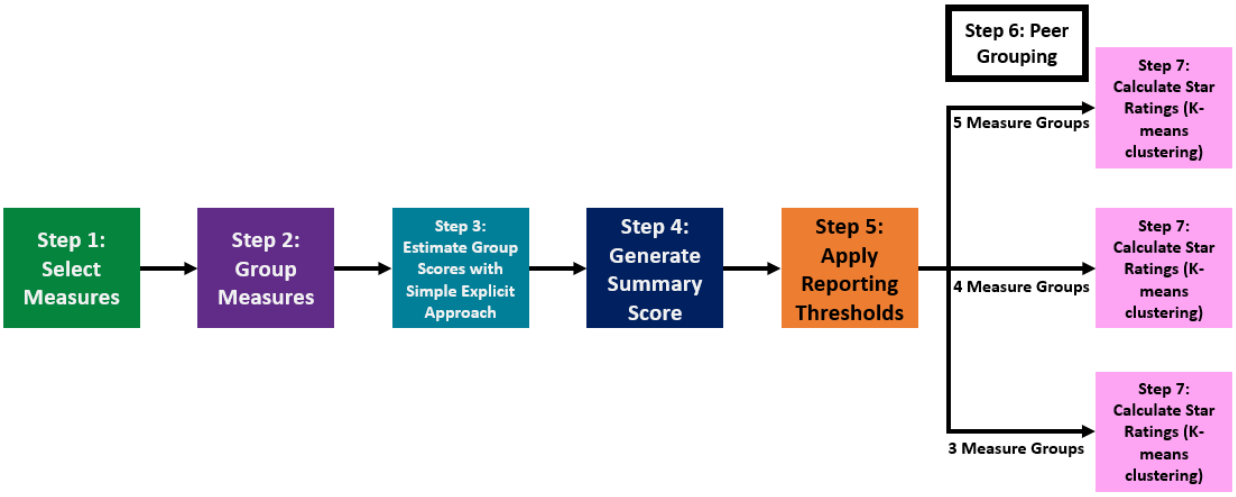
As long as a hospital meets this threshold, all available measures and measure groups are incorporated in their summary score. While there may be instances in which a hospital has one or two measures in a group contributing a large portion of the hospital's summary score, incorporating all measures for which a hospital has scores aligns with one of the guiding principles of inclusivity of measure information. For example, if a hospital reported more than three measures in each of the Mortality, Readmission, and Patient Experience measure groups and two measures each in the Safety of Care and Timely & Effective Care measure groups, then it would meet the threshold to receive an Overall Star Rating and would be assigned to the 3-measure group peer group (as discussed in section 3.7 below), but will receive a summary score based on all five measure groups. This approach was vetted through TEP and public comment stakeholder engagement and allows as many hospitals as possible to receive an Overall Star Rating while also maintaining face validity and reliability of the Overall Star Rating methodology.

3.7. Step 6: Application of Peer Grouping by Number of Measure Groups with at Least Three Measures

Approach to Peer Grouping

CMS peer groups hospitals by the number of measure groups for which they have at least three measures. Specifically, after the minimum reporting thresholds are applied, hospitals are categorized into one of three peer groups: a 3-measure group peer group, a 4-measure group peer group, and a 5-measure group peer group. *K*-means clustering is then applied within each peer group to assign hospital summary scores to the Overall Star Rating (Step 7), as shown in Figure 3.

Figure 3. Approach to Peer Grouping



3.8. Step 7: Application of Clustering Algorithms to Assign Overall Hospital Star Ratings

Approach for Translating a Summary Score to a Star Rating

To translate each hospital's summary score to a rating between one and five stars, CMS applies *k*-means clustering.

Overview of k-Means Clustering

The Overall Star Rating methodology uses a *k*-means clustering algorithm to assign an Overall Star Rating. *K*-means clustering is implemented separately within each peer group (3-measure, 4-measure, and 5-measure group), so hospitals are only compared to similar facilities.

The *k*-means clustering analysis is a standard method for creating a pre-specified number of categories (or clusters) so that observations in each category are closer to their category mean than to any other category mean. CMS specifies five categories so that the *k*-means clustering analysis generates five clusters (or categories) based on hospital summary scores in a way that minimizes the distance between summary scores (observations) and the average value of their assigned cluster (category mean). *K*-means clustering organizes hospitals into one of five categories such that a hospital's summary score is "more like" that of the other hospitals in the same category and "less like" the summary scores of hospitals in the other categories.

The Overall Star Rating methodology uses multiple iterations of clustering to achieve complete convergence (that is when hospitals no longer shift categories with additional iterations). This provides more reliable and stable star rating assignments. The star rating categories are structured such that the lowest group is one star, and the highest group is five stars.

For more information about k-means clustering, please refer to the *2021 Overall Hospital Quality Star Rating Methodology Report* that can be found at https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources.

3.9. Updates to 2023 Star Ratings

As finalized in the Calendar Year 2021 Outpatient Prospective Payment System (OPPS) and Ambulatory Surgical Center (ASC) Payment System Final Rule (CMS 1736-P), Veterans Health Administration (VHA) hospitals reporting data for measures included in Star Ratings are included in Star Rating calculations alongside non-VHA hospitals and are eligible to receive their own Star Ratings. Previously, while VHA data was included with all other hospitals at the measure level, they were not eligible to receive Star Ratings and were excluded from all Star Rating calculations.

Several updates to individual measures included in Overall Star Rating were made to January 2023 Care Compare data, which are reflected in the July 2023 refresh.

One measure from the Timeliness and Effective Care Measure Group was retired from public reporting in January 2022:

- OP-33: External beam radiotherapy for metastases

One measure was added to the Timely and Effective Care Measure Group:

- HCP COVID-19: COVID-19 Vaccination Coverage Among Health Care Providers

As noted in the *July 2022 Quarterly Updates and Specifications Report on QualityNet*, CMS granted hospitals exceptions for the first six months of 2020 (January 1 – June 30, 2020) due to the extraordinary circumstances faced by hospitals in the early stages of the COVID-19 pandemic. Under this policy, these six months of data were excluded from all measure calculations for any purpose. In other words, they could not be used for risk-adjustment, cohort definition, or outcome evaluation. Therefore, the Extraordinary Circumstance Exception (ECE) Policy still impacts 2023 Overall Star Ratings. As a result:

- Several measures (16/46, all of which ordinarily have data collection periods longer than 12 months) excluded the first two quarters of 2020 data from their reporting period that otherwise would have been included, resulting in shorter measurement periods than normal.
- The majority of measures (30/46, all of which are specified with a 12-month data collection period) have data collection periods that are now entirely post-June 30, 2020, and are no longer affected by the extraordinary circumstance exception.
- In 2022, several measures accommodated the extraordinary circumstance exception by reusing data from a previous period; in 2023, no measures are reusing data they otherwise would not have included.
- Overall, a much higher percentage of data was collected after June 30, 2020, for 2023 Star Ratings compared to 2022 Star Ratings, with 68% of all data-months included in 2023 Star Ratings collected after June 30, 2020 (compared to just 7% in 2022).

4. Results for July 2023 Implementation of Star Ratings

4.1. Distribution of the Star Rating and Group Performance Categories

The Overall Star Rating for July 2023 public reporting was calculated using January 2023 Care Compare data. The frequency of hospitals by each star rating category is shown in Table 3. Of note, the minimum and maximum score for each category will change with each reporting period based on the underlying distribution of hospital summary scores.

Table 3. Frequency of Hospitals by Star Category using *k*-Means (all peer groups)

Rating	Number of Hospitals (Frequency)	Summary Score Range in Cluster	Mean (sd)
1 Star	250 (8.13%)	-2.608, -0.674	-0.991 (0.2907)
2 Star	668 (21.72%)	-0.887, -0.189	-0.467 (0.1273)
3 Star	872 (28.35%)	-0.296, 0.203	-0.096 (0.1143)
4 Star	803 (26.11%)	0.038, 0.654	0.239 (0.1301)
5 Star	483 (15.70%)	0.390, 2.545	0.649 (0.2504)

Note: The total number of hospitals in the Care Compare dataset as of January 2023 is 4,654 hospitals. Results shown are for all hospitals meeting the reporting criteria (N=3076).
Please note results included in this report may differ from the results posted on Care Compare due to data suppressed by CMS for one or more quarters. CMS may suppress data for various reasons, like data inaccuracies.

On average, hospitals reported 3.6 groups and 26.2 measures for July 2023.

A majority of hospitals (3,076 out of 4,654, 66%) received a Star Rating in 2023. Overall, a net of 46 fewer hospitals received Star Rating in 2023 (3076) compared to 2022 (3,122); 236 hospitals no longer met the reporting threshold while 190 hospitals newly met the reporting threshold.

Measure Group Results

Table 4 displays the national average Measure Group score and Table 5 includes the distribution of Measure Group scores.

Table 4. National Average Measure Group Scores by Measure Group (among hospitals with at least one measure in each group), July 2023

Measure Group	National Average Measure Group Score
Mortality (N=3,780)	-0.051
Safety of Care (N=3,520)	-0.014
Readmission (N=4,413)	0.021
Patient Experience (N=3,260)	0.000
Timely and Effective Care (N=4,610)	0.031

Table 5. Distribution of Measure Group Score (among hospitals with at least one measure in each group), July 2023

Measure Group	Minimum	25th Percentile	Median	75th Percentile	Maximum
Mortality (N=3,780)	-3.343	-0.467	-0.019	0.395	2.606
Safety of Care (N=3,520)	-9.284	-0.277	0.055	0.377	1.630
Readmission (N=4,413)	-3.956	-0.264	0.067	0.352	3.813
Patient Experience (N=3,260)	-2.327	-0.587	-0.008	0.571	1.900
Timely and Effective Care (N=4,610)	-8.411	-0.235	0.069	0.351	1.812

Peer Group Results

The frequency of hospitals by each Overall Star Rating category for each peer group is shown in Table 6.

Table 6. Distribution of hospitals by Overall Star Rating and peer group, July 2023

Overall Star Rating	3-group peer group (n=194)	4-group peer group (n=462)	5-group peer group (n=2,420)
1 Star	22 (11.34%)	25 (5.41%)	203 (8.39%)
2 Star	40 (20.62%)	84 (18.18%)	544 (22.48%)
3 Star	73 (37.63%)	128 (27.71%)	671 (27.73%)
4 Star	37 (19.07%)	130 (28.14%)	636 (26.28%)
5 Star	22 (11.34%)	95 (20.56%)	366 (15.12%)

Table 7 shows the range of summary scores for each star category within each peer group.

Table 7. K-means Overall Star Rating summary score ranges by peer group, July 2023 (among the 3,076 hospitals that met reporting criteria)

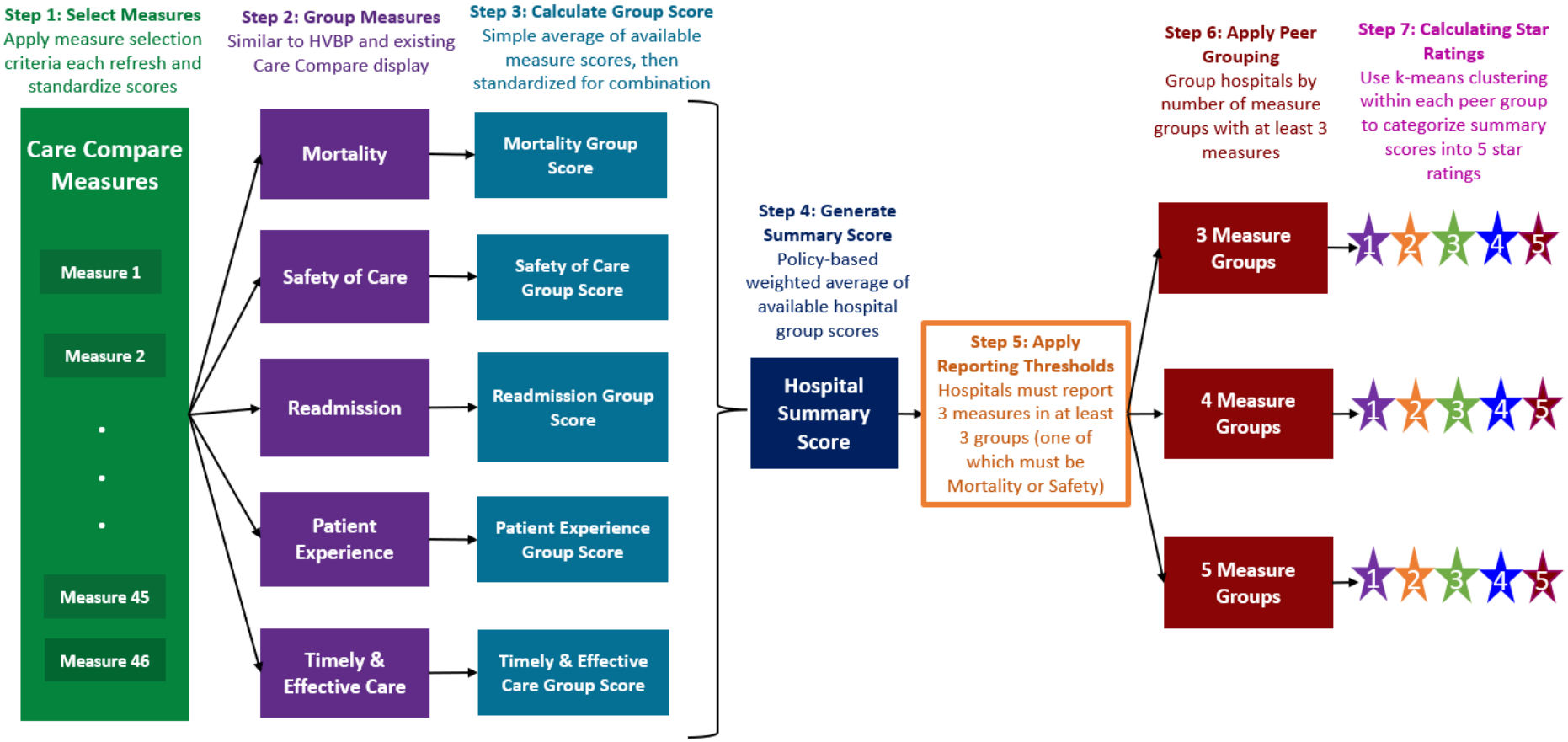
Overall Star Rating	3-measure group peer group (n=194)	4-measure group peer group (n=462)	5-measure group peer group (n=2,420)
1 Star	-2.069, -0.934	-2.608, -0.674	-1.861, -0.713
2 Star	-0.887, -0.327	-0.646, -0.189	-0.709, -0.296
3 Star	-0.296, 0.203	-0.184, 0.192	-0.295, 0.037
4 Star	0.210, 0.654	0.201, 0.591	0.038, 0.385

Overall Star Rating	3-measure group peer group (n=194)	4-measure group peer group (n=462)	5-measure group peer group (n=2,420)
5 Star	0.686, 1.303	0.613, 2.545	0.390, 1.482

Overall, a majority of the hospitals receiving an Overall Star Rating in July 2023 (2,647 of 3,076, 86%) remained in the same peer group as in 2022, providing evidence for the ability of the Overall Star Ratings methodology to respond to changes to the underlying measures.

Appendix A: Flowchart of the Seven-Step Overall Hospital Quality Star Rating Methodology

Figure A.1. The Seven Steps of the Current Star Rating Methodology



Appendix B: Measures Excluded from July 2023 Star Rating (N=13) by Exclusion Criterion

Measures with no more than 100 hospitals reporting performance publicly

1. OP-2: Outpatients with chest pain or possible heart attack who received drugs to break up blood clots within 30 minutes of arrival

Structural measures without evidence of an association with changes in clinical practice or improved outcomes

1. EDV-1: Emergency department volume
2. SM-7: Maternal Morbidity

Non-directional measures

1. MSPB-1/SPP-1: Spending per hospital patient with Medicare
2. PAYM-30-AMI: Acute Myocardial Infarction Payment and Value of Care
3. PAYM-30-HF: Payment for heart failure patients measure
4. PAYM-30-PN: Payment for pneumonia patients measure
5. PAYM-90-HIP-KNEE: Hip/Knee Payment Measure (THA/TKA Payment Measure) with VOC display
6. OP-39: Breast cancer screening recall rates

Measures not required for reporting on Care Compare

1. OP-31 Cataracts: Percentage of patients who had cataract surgery and had improvement in visual function within 90 days following the surgery

Overlapping measures already captured by another measure

1. READM-30-AMI: 30-day rate of readmission for heart attack patients
2. READM-30-HF: 30-day rate of readmission for heart failure patients
3. READM-30-PN: 30-day rate of readmission for pneumonia patients

Appendix C: Measures Included in July 2023 Star Rating (N=46) by Group

Mortality

1. MORT-30-AMI: 30-day death rate for heart attack patients
2. MORT-30-CABG: Death rate for coronary artery bypass graft surgery patients
3. MORT-30-COPD: Death rate for chronic obstructive pulmonary disease (COPD) patients
4. MORT-30-HF: 30-day death rate for heart failure patients
5. MORT-30-PN: 30-day death rate for pneumonia patients
6. MORT-30-STK: Death rate for stroke patients
7. PSI 04: Death rate among surgical inpatients with serious treatable complications

Safety of Care

1. COMP-HIP-KNEE: Rate of complications for hip and knee replacement patients
2. HAI-1: Central-line associated bloodstream infection (CLABSI)
3. HAI-2: Catheter-associated urinary tract infection (CAUTI)
4. HAI-3: Surgical site infection from colon surgery (SSI: Colon)
5. HAI-4: Surgical site infection from abdominal hysterectomy (SSI-abdominal hysterectomy)
6. HAI-5: Methicillin-resistant *Staphylococcus aureus* (or MRSA) blood infections (Antibiotic-resistant blood infections)
7. HAI-6: *Clostridioides difficile* (or C.diff.) infections (Intestinal infections)
8. PSI 90: Patient Safety and Adverse Events Composite

Readmission

1. EDAC-30-AMI: Acute myocardial infarction excess days in acute care (EDAC)
2. EDAC-30-HF: Heart failure excess days in acute care (EDAC)
3. EDAC-30-PN: Pneumonia excess days in acute care (EDAC)
4. READM-30-CABG: Rate of unplanned readmission after coronary artery bypass graft (CABG) surgery
5. READM-30-COPD: Rate of unplanned readmission for chronic obstructive pulmonary disease patient
6. READM-30-Hip-Knee: 30-day rate of readmission for hip and knee replacement patients
7. READM-30-HOSP-WIDE: Rate of readmission after discharge from hospital
8. OP-32: Facility 7-day risk standardized hospital visit rate after outpatient colonoscopy
9. OP-35 ADM: Admissions visits for patients receiving outpatient chemotherapy
10. OP-35 ED: Emergency department (ED) visits for patients receiving outpatient chemotherapy
11. OP-36: Hospital visits after hospital outpatient surgery

Patient Experience

1. H-COMP-1: Communication with nurses
2. H-COMP-2: Communication with doctors

3. H-COMP-3: Responsiveness of hospital staff
4. H-COMP-5: Communication about medicines
5. H-COMP-6: Discharge information
6. H-COMP-7: Care transition
7. H-HSP-RATING Hospital rating (Q21) + H-RECMND: Willingness to recommend hospital (Q22) / 2
8. H-CLEAN-HSP Cleanliness of hospital environment (Q8) + H-QUIET-HSP Quietness of hospital environment (Q9) / 2

Timely and Effective Care

1. IMM-3: Percent of healthcare workers vaccinated against Influenza
2. OP-22: Percentage of patients who left the emergency department before being seen
3. OP-23: Percentage of patients who came to the emergency department with stroke symptoms who received brain scan results within 45 minutes of arrival
4. OP-29: Appropriate follow-up interval for normal colonoscopy in average risk patients
5. PC-01: Percent of newborns whose deliveries were scheduled too early (1-3 weeks early), when a scheduled delivery was not medically necessary
6. SEP-1: Percentage of patients who received appropriate care for severe sepsis and septic shock
7. OP-3b: Average number of minutes before outpatients with chest pain or possible heart attack who needed specialized care were transferred to another hospital
8. OP-18b: Average time patients spent in the emergency department before being sent home
9. OP-8: Outpatients with low back pain who had an MRI without trying recommended treatments first, such as physical therapy
10. OP-10: Outpatient CT scans of the abdomen that were “combination” (double) scans
11. OP-13: Medicare patients who got cardiac imaging stress tests to screen for surgical risk before low-risk outpatient surgery
12. HCP COVID-19: COVID-19 Vaccination Coverage Among HCPs