Hospital Inpatient Quality Reporting (IQR) Program

Inpatient Value, Incentives, and Quality Reporting (VIQR) Outreach and Education Support Contractor

Overall Hospital Quality Star Ratings on Care Compare 2021 OPPS Final Rule Methodology

Questions and Answers

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Subject-matter experts researched and answered the following questions after the live webinar. The questions may have been edited for grammar.

Question 1: **Will there still be a Statistical Analysis System (SAS) package for 2021 star ratings? If so, when will the SAS package and the input file be available?**

CMS will post the SAS pack and SAS files. However, due to the hospital data and information within the files, these documents cannot be publicly posted until the star ratings are published on Care Compare in late April.

CMS will post the SAS Pack, SAS Package instructions, and SAS Input file on the *QualityNet* Hospital Star Ratings page under SAS Resources: https://www.qualitynet.org/inpatient/public-reporting/overall-ratings/sas

Question 2: **Four hospitals in our eight-hospital network have discrepancies between the stars awarded on the "Stars Page" and in the Hospital-Specific Report (HSR). How do we reconcile this?**

Overall Star Ratings for April 2021 were calculated using measure data from the October 2020 Care Compare refresh and the new methodology that was finalized in the calendar year (CY) 2021 Medicare Hospital Outpatient Perspective Payment System (OPPS) and Ambulatory Surgical Center (ASC) Payment System Final Rule (CMS-1736-P).

As finalized in the OPPS/ASC rule, the annual publication of the Overall Star Rating will utilize data posted on Care Compare from a quarter within the prior year. Using data from a quarter within the prior year allows CMS to provide more time for hospitals to review their star rating results during the confidential preview period. Hospitals may use this additional time to more thoroughly understand the updated Overall Star Rating methodology and anticipate their new results as well as generate communication or improvement strategies.

The April 2021 Preview Report includes the measure data that will be publicly reported on Care Compare in April. The April 2021 Overall Hospital Star Ratings HSR includes the data used to calculate the star ratings, which was the October 2020 Care Compare measure score.

Since CMS used Care Compare data from October 2020 to calculate star ratings, please compare the data from the October 2020 Preview Reports to the April 2021 Overall Hospital Star Ratings HSR.

Please send specific HSR or data questions to the Overall Hospital Star Ratings Inbox Team via the *QualityNet* Question and Answer Tool (https://cmsqualitysupport.servicenowservices.com/qnet_qa) for the team to look at your hospital's specific data results.

Question 3: **While our actual percentages in each measure did not change, our star rating has gone from four to three and I do not really see what would have impacted this change. Is the change in scoring methodology possibly the reason?**

There are a few reasons why your hospital may have changed star ratings since the last publication of the Overall Star Rating in January 2020. Since the January 2020 Overall Star Ratings, all measure scores have been refreshed and measures have been added or removed from CMS programs.

Therefore, the measures were subsequently added or removed from Care Compare and the Overall Star Rating. In addition, since the January Overall Star Rating, CMS proposed and finalized several Overall Star Rating methodology updates through the CY 2020 OPPS/ASC Final Rule. CMS then implemented those updates, including peer grouping hospitals based on the number of measure groups for which they report at least three measures, before assigning hospitals to star ratings. Finally, some of the individual measures as well as the Overall Star Rating use comparative methodologies. Therefore, even if your hospital's performance is the same, your hospital's scores and star ratings change relative to the performance of other hospitals in the nation or within your peer group.

Please send specific HSR or data questions to the Overall Hospital Star Ratings Inbox Team via the *QualityNet* Question and Answer Tool: https://cmsqualitysupport.servicenowservices.com/qnet_qa.

Question 4: **Will star ratings only be updated once per year or twice?**

Generally, the Overall Star Rating is published annually using data publicly reported on Care Compare from a quarter within the prior year. Depending on individual measurement periods, measures are refreshed on Care Compare in January, April, July, and October of each year. As an example, April 2021 Overall Star Ratings will be published using October 2020 Care Compare data.

Question 5: **Will the updated star ratings be released with the quarter (Q)1 2021 Care Compare release?**

Overall Star Rating will be updated on Care Compare in April 2021, using measure data from the October 2020 Care Compare refresh and version (v)4.0 of the Overall Star Rating methodology.

Question 6: **What are the Data TIMES/DATES used in the new methodology? Is it Care Compare data from CY 2019? What months are included and for how long?**

The Overall Star Rating is a summary of the individual measures publicly reported on Care Compare. The individual measures on Care Compare vary in refresh cycle and data collection periods to maintain adequate case count for measure reliability.

Overall Star Ratings for April 2021 were calculated using measure data from the October 2020 Care Compare refresh and the new methodology that was finalized in the CY 2021 Medicare Hospital OPPS/ASC Payment System Final Rule (CMS-1736-P).

The data collection period for each measure included in the April 2021 Overall Star Rating calculation can be found on *QualityNet* on the Overall Hospital Quality Star Ratings page: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/data-collection

Question 7: **Why would the star rating on our Apr 2021 preview report not be the same as the score on the star rating HSR?**

Overall Star Ratings for April 2021 were calculated using measure data from the October 2020 Care Compare refresh and the new methodology that was finalized in the CY 2021 Medicare Hospital OPPS/ASC Payment System Final Rule (CMS-1736-P).

As finalized in the OPPS/ASC rule, the annual publication of the Overall Star Rating uses data posted on Care Compare from a quarter within the prior year. Using data from a quarter within the prior year allows CMS to provide more time for hospitals to review their star rating results during the confidential preview period. Hospitals may use this time to more thoroughly understand the updated Overall Star Rating methodology, anticipate results, and generate communication or improvement strategies.

The April 2021 Preview Report includes the measure data that will be publicly reported on Care Compare in April. The April 2021 Overall Hospital Star Ratings HSR includes the data used to calculate the star ratings, which was the October 2020 Care Compare measure score.

Since CMS used Care Compare data from October 2020 to calculate star ratings, please compare the data from the October 2020 Preview Reports to the April 2021 Overall Hospital Star Ratings HSR.

Please send specific HSR or data questions to the Overall Hospital Star Ratings Inbox Team via the *QualityNet* Question and Answer Tool (https://cmsqualitysupport.servicenowservices.com/qnet_qa) so the team can look at your hospital's specific data results.

Question 8: **Why do Patient Experience and Timely and Effective Care not have an assigned comparison to national average?**

Previously, CMS used a statistical model called "latent variable modeling" to calculate measure group scores, which produced data needed to estimate confidence intervals for measure group scores, allowing for the assignment of "above," "below," or "same as" the national average to hospital measure group scores. Beginning with the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores. Thus, confidence intervals for which to assign performance categories will no longer be produced. Instead, your hospital's HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups.

Hospitals can use the individual measure metrics to determine their performance relative to the nation and gauge their own quality improvement efforts. Please note that performance categories are not assigned or available for all measure types on Care Compare, including the Hospital Consumer Assessment of Healthcare Providers and Surveys (HCAHPS) components within the Patient Experience measure group and the process measures within the Timely and Effective Care measure group. Therefore, for both the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 9: **Can you tell me which emergency department (ED) measures were retired?**

The following measures were removed from CMS programs and no longer publicly reported on Care Compare. Therefore, they were subsequently removed from the Timely and Effective Care measure group:

- Immunization (IMM)-2: Influenza Immunization
- Venous Thromboembolism (VTE)-6: Potentially-Preventable Venous Thromboembolism
- ED-1b: Median Time from ED Arrival to ED Departure
- Outpatient (OP)-5: Median Time to Electrocardiogram (ECG)
- OP-11: Thorax Computed Tomography (CT) Use of Contrast Material
- OP-14: Simultaneous Use of Brain CT and Sinus CT

The following measures were added to Hospital Outpatient Quality Reporting (OQR) Program, publicly reported on Care Compare, and subsequently included within the Readmission measure group:

- OP-35 ADM: Admissions for Patients Receiving Outpatient Chemotherapy
- OP-35 ED: ED Visits for Patients Receiving Outpatient Chemotherapy
- OP-36: Hospital Visits after Hospital Outpatient Surgery

Question 10: **Will the next rating exclude measures that are no longer part of the required reporting? For example, ED-2 Admit Decision Time to ED Departure Time for Admitted Patients is included in the current preview, but has it been removed from required reporting?**

The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. As measures are added or removed from CMS programs and Care Compare, the measures are subsequently added or removed from the Overall Star Rating. Generally, the Overall Star Rating is published annually using data publicly reported on Care Compare from a quarter within the prior year. The April 2021 Overall Star Rating was calculated using October 2020 Care Compare data, which included ED-2b.

Question 11: **Will quarter Q1 and Q2 2020 data be used in future Overall Star Rating updates?**

The Overall Star Rating provides a summary of existing hospital quality measures reported on Care Compare through CMS programs.

The April 2021 Overall Star Rating was calculated using October 2020 Care Compare data. CMS did not include measure data for 1Q or 2Q 2020 in calculating the Overall Star Ratings for April 2021. The impact of COVID-19 hospitalizations, and healthcare broadly, is under active surveillance by CMS, and any updates to the data used for the individual measures reported on Care Compare through CMS programs as a result of coronavirus (COVID)-19 will subsequently be incorporated within the Overall Star Rating.

Question 12: **Does it reflect on your HSR which group you are in? Has CMS considered using the same grouping as for the Hospital Readmission Reduction Program (HRRP)?**

Within the Overall Star Rating methodology, to increase comparability of hospital star ratings, CMS now peer groups hospitals based on the number of measure groups for which they report at least three measures. You may find your hospital's assigned peer group located in the April 2021 Star Rating HSRs, released on February 1, 2021.

Hospital peer groups will not be publicly reported on Care Compare or the Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate Work Group, CMS has initially decided not to post peer grouping categorization on Care Compare as it may cause further confusion.

The HRRP groups hospitals based on their proportion of dual-eligible discharges for payment determination. In the CY 2021 OPPS/ASC rule, CMS proposed using a similar approach to stratify the Readmission measure group within the Overall Star Rating methodology by the proportion of dual-eligible discharges. CMS sought and received extensive feedback on whether to stratify the Readmission measure group through multi-stakeholder technical expert panels, work group meetings, and the CY 2021 OPPS/ASC rule formal public comment process. Ultimately, CMS did not finalize the proposal to stratify the Readmission measure group by the proportion of dual-eligible discharges primarily due to two reasons: the impact analyses demonstrating that the approach would not result in the intended effect and stakeholder concerns that it would be confusing for patients and consumers.

Question 13: **Are peer groups going to be available?**

Within the Overall Star Rating methodology, to increase comparability of hospital star ratings, CMS now peer groups hospitals based on the number of measure groups for which they report at least three measures.

You may find your hospital's assigned peer group located in the April 2021 Star Rating HSRs, released on February 1, 2021. A hospital's peer Group will not be publicly reported on Care Compare or the Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate Workgroup, CMS has initially decided not to post peer grouping categorization on Care Compare as it may cause further confusion.

Question 14: **Will CMS always use the October release to calculate the star ratings for each year?**

As finalized in the CY 2021 OPPS/ASC Final Rule, the Overall Star Rating will be published yearly using publicly available measure results from Care Compare from a quarter within the prior year. For example, for a January Overall Star Ratings release, CMS could use data refreshed on Care Compare in April, July, or October.

Question 15: **Will any of this change with the new administration or is it all set for 2021?**

It is currently set for 2021. The new administration will have an opportunity to make their desires known, and, through future rule making, there could be changes in the program.

Question 16: **Is there any chance that CMS would use the October data and run the stars outcome using the previous methodology for hospitals to compare?**

Within the CY 2021 OPPS/ASC rule, CMS compared the distribution of hospital star ratings using the previous and updated Overall Star Rating methodologies and October 2020 Care Compare data. Stakeholders may access the rule on CMS's website: https://www.cms.gov/medicaremedicare-fee-service-paymenthospitaloutpatientppshospital-outpatient-regulations-and-notices/cms-1736-p.

The purpose of CMS providing the SAS Pack is to allow hospitals to recreate their scores and better understand the methodology. It is possible to manipulate the data; however, this is not recommended. As reporting changes from quarter to quarter, results may change based on other hospitals' performance. CMS recommends hospitals have an advanced understanding of statistics and analysis before attempting any changes to the SAS pack. Please note, data manipulation may cause errors when running the SAS Pack.

The SAS Pack includes the statistical software code in the calculation, the user guides, and the national input file, which contains the data required to run the model. Different versions of SAS, or even computer hardware, may generate minor differences in overall results.

These resources are intended for hospitals to validate their Overall Hospital Quality Star Ratings. Results from an analysis of the SAS Package 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.

CMS will post the SAS pack and SAS files. However, due to the information within the files, these documents cannot be posted until the data are publicly reported in late April.

CMS will post the SAS Pack, SAS Package instructions, and SAS Input file on the *QualityNet* Hospital Star Ratings page under SAS Resources: https://www.qualitynet.org/inpatient/public-reporting/overall-ratings/sas

Question 17: **Will you be carving out patients with a secondary diagnosis of COVID-19 for future data? I feel this population will skew past and future data for hospital outcomes.**

CMS is very aware of the significance of the potential impact from COVID-19 and is taking it under consideration. The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. The impact of COVID-19 hospitalizations, and healthcare broadly, is under active surveillance by CMS, and any updates to the individual measures and CMS programs as a result of COVID-19 will subsequently be incorporated within the Overall Star Rating.

Question 18: **Now that there are five group measures, will the percentages be 22, 22, 22, 22, and now 12 percent for the Timely and Effective Care group?**

Correct, the standard weights for each measure group are included below:

- Mortality 22%
- Safety of Care 22%
- Readmission 22%
- Patient Experience 22%
- Timely & Effective Care 12%

Question 19: **Slide 23. Where can a hospital identify which category of measures they would fall into?**

If you are referring to how measures are grouped, you may refer to the Overall Hospital Quality Star Ratings on Care Compare methodology report (v4.0) which was posted on the *QualityNet* Resource page at https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources. Table D has a listing of the measures within each of the groups. The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. As measures are added and removed from CMS programs and Care Compare, the measures are subsequently added and removed from the Overall Star Rating. Since the January 2020 publication of the Overall Star Ratings, measures have been removed from the process measure groups, now one measure group called Timely and Effective Care, and measures were added to the Readmission measure group. The measures within the Mortality, Safety of Care, and Patient Experience measure groups remain the same.

If you are referring to how hospitals are assigned to peer groups, you may similarly refer to the methodology report for a description of methods or to Table 1 of your HSR. After summary scores are calculated and before hospitals are assigned to star ratings, CMS peer groups hospitals based on the number of measure groups for which they report at least three measures (three, four, or five measure groups), so hospitals are assigned to star ratings relative to hospitals that report a similar amount of measure information.

Question 20: **Slide 27. Why were the process groups not tabulated equally across the outcome measures?**

CMS calculates summary scores through a weighted average of measure group scores. Measure group weights were assigned based on stakeholder input and CMS policy indicating that outcome measures should be weighted more than process measures. Previously, the outcomes (Mortality, Safety of Care, Readmission) and Patient Experience measure groups were each weighted at 22 percent, and the process measure groups (Effectiveness of Care, Timeliness of Care, and Efficient Use of Medical Imaging) were each weighted at 4 percent. As a result of process measure retirements as part of CMS's Meaningful Measure Initiative, beginning with the April 2021 publication of the Overall Star Ratings, CMS combined all process measures into one measure group, Timely and Effective Care group, which is weighted 12 percent. The standard weights for each measure group are included below:

- Mortality 22%
- Safety of Care 22%
- Readmission 22%
- Patient Experience 22%
- Timely & Effective Care 12%

If a hospital is missing one or more measure groups, measure group weights for the missing measure groups are proportionally re-distributed across the remaining measure groups to produce a hospital summary score.

Question 21: **Are these new scores based on the same data as the last release? Is it correct that any increase in stars is related to methodology and not improvement?**

The April 2021 Overall Star Ratings were calculated using October 2020 Care Compare data, whereas the previous January 2020 Overall Star Ratings were calculated using October 2019 Care Compare data.

There are a few reasons why your hospital may have changed star ratings since the last publication of the Overall Star Rating in January 2020. Since the January 2020 Overall Star Ratings, all measure scores have been refreshed and measures have been added or removed from CMS programs and, therefore, subsequently added or removed from Care Compare and the Overall Star Rating. In addition, since the January Overall Star Rating, CMS proposed and finalized through the CY 2020 OPPS/ASC rule and implemented several Overall Star Rating methodology updates.

This includes peer grouping hospitals based on the number of measure groups for which they report at least three measures before assigning hospitals to star ratings. Finally, some of the individual measures as well as the Overall Star Rating use comparative methodologies. Therefore, even if your hospital's performance is the same, your hospital's scores and star ratings change relative to the performance of other hospitals in the nation or within your peer group. Please send specific HSR or data questions to the Overall Hospital Star Ratings Inbox Team via the *QualityNet* Question and Answer Tool: https://cmsqualitysupport.servicenowservices.com/qnet_qa.

Question 22: **How many total hospitals shifted down?**

When comparing the previous and updated Overall Star Rating methodologies using the same dataset (October 2019 Care Compare data), as presented on slide 38, 1,585 hospitals (50 percent) received the same star rating; 840 hospitals (27 percent) decreased star ratings; and 742 hospitals (23 percent) increased star ratings.

Question 23: **How is a rating scored if a critical access hospital (CAH) reports in all five measures but doesn't have sufficient data in each measure?**

The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. Hospitals, including CAHs, must first meet the individual measure reporting thresholds or minimum case counts to receive a publicly reported measure score on Care Compare. If hospitals do not meet the individual measure reporting thresholds or minimum case counts to receive a publicly reported measure score on Care Compare, the measure scores are subsequently not included within the Overall Star Ratings. Within the Overall Star Rating methodology, CAHs are held to the same minimum reporting threshold as all other Subsection (d) hospitals, which is to report at least three measures, in at least three measure groups, one of which must specifically be Mortality or Safety of Care in order to be eligible for a star rating. Furthermore, to ensure inclusivity of reported measures in star ratings, any additional measures and measure groups beyond this threshold are also included in the star rating calculation.

Question 24: **Have there been any changes to risk adjustment?**

The Overall Star Rating provides a summary of the existing hospital quality measures publicly reported on Care Compare through CMS programs.

While the Overall Star Rating methodology does not include risk adjustment, many of the individual measures risk adjust for various factors, including clinical comorbidities. For more information on the individual measure methodologies, please view the resources posted on *QualityNet* at https://qualitynet.cms.gov/inpatient/measures.

However, the addition of peer grouping hospitals based on the number of measure groups for which they report at least three measures has changed in the methodology update. This aims to increase comparability of hospital star ratings since the measure reporting thresholds a hospital meets to report on Care Compare is informed by hospital characteristics, such as size, case mix, and service mix.

Question 25: **Can you explain why the readmission calculations were based on measures accepted rather than readmissions, like dual care groups?**

The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. Within the HRRP, CMS does group hospitals based on their proportion of dual-eligible discharges, but by payment determination only. The readmission measure scores publicly reported on Care Compare through HRRP are unadjusted for dual-eligibility or social risk factors and it is those measures scores that are used within the Overall Star Ratings.

Related to the HRRP methodology, CMS proposed using a similar approach to stratify the Readmission measure group within the Overall Star Rating methodology by the proportion of dual-eligible discharges in the CY 2021 OPPS/ASC rule. CMS sought and received extensive feedback on whether to stratify the Readmission measure group through multi-stakeholder technical expert panels, work group meetings, and the CY 2021 OPPS/ASC rule formal public comment process. Ultimately, CMS did not finalize the proposal to stratify the Readmission measure group by the proportion of dual-eligible discharges primarily due to two reasons: The impact analyses demonstrated that the approach would not result in the intended effect and stakeholders were concerned that it would be confusing for patients and consumers.

Question 26: **Will the next star rating be later in 2021 or in 2022?**

Generally, the Overall Star Rating is published annually, usually in January, using data publicly reported on Care Compare from a quarter within the prior year.

Depending on individual measurement periods, measures are refreshed on Care Compare in January, April, July, and October of each year. For example, April 2021 Overall Star Ratings will publish using October 2020 Care Compare data. The Overall Star Rating displayed will be maintained on Care Compare until the next publishing of the Overall Star Rating.

Question 27: **With the pandemic and hospitals not being back to normal, has CMS considered excluding all of 2020 and now 2021 data?**

CMS has excluded Q1 and Q2 2020 data due to the global pandemic. Hospitals can submit an individual Extraordinary Circumstance Exception (ECE) for Q3 and Q4 2020. Overall, CMS is aware of the significance of the potential impact from COVID-19 and is taking it under consideration.

The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. The impact of COVID-19 hospitalizations, and healthcare broadly, is under active surveillance by CMS, and any updates to the individual measures and CMS programs as a result of COVID-19 will subsequently be incorporated within the Overall Star Rating.

Question 28: **We have three hospitals with fewer than three measures in one of the five measure group categories. These categories were included in their summary score calculations. Using Table 9 in the methodology report for the cutoff values, it appears that they were evaluated against four-measure group peer hospitals instead of five-measure group peer hospitals. As their measure weights are different, is this correct?**

There are two notable updates relative to these hospitals: measure group reporting thresholds and peer grouping.

1) **Reporting Thresholds:** In order to be assigned to a star rating, hospitals must meet a minimum number of measures and measure groups. Previously, CMS required at least three measures in at least three measure groups, one of which must be an outcome measure group. Any additional measures reported in any of the other measure groups are then included in the star rating calculation.

   CMS now requires at least three measures, in at least three measure groups, one of which must specifically be Mortality or Safety of Care. Unchanged from the original methodology, any additional measures reported in any of the other measure groups are then included in the star rating calculation.

   Relative to your hospitals, this means that the measure groups for which they reported less than three measures are included in their summary score calculation.

2) **Peer Grouping:** After summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. Therefore, hospitals are peer grouped in either the 3-, 4-, or 5-measure group peer groups for more similar comparison. Hospitals are then assigned to star ratings using k-means clustering within each peer group, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups. Relative to your hospitals, this means that they were correctly assigned to the 4-measure group peer group, because one of their groups did not have three measures.

In summary, while hospitals are assigned to peer groups based on the number of measure groups for which they report at least three measures, any additional measures in other measure groups still contribute to hospital summary scores and star ratings.

Question 29: **Does the information for Hospital-Acquired Infection (HAI)-5 and HAI-6 come from on the Hospital Compare report or from the National Healthcare Safety Network (NHSN)?**

The Centers for Disease Control and Prevention (CDC) collects data from hospitals via the NHSN. CDC provided HAI measure results in files that were used for October preview and public reporting, which are also used for Overall Star Rating calculations.

Question 30: **Why is the Overall Star Rating being updated in April 2021 when all of the data, like HCAHPS, will not be available?**

Overall Star Ratings for April 2021 were calculated using measure data from the October 2020 Care Compare refresh and the new methodology that was finalized in the CY 2021 Medicare Hospital OPPS /ASC Payment System Final Rule (CMS-1736-P).

As finalized in the OPPS/ASC rule, the annual publication of the Overall Star Rating will utilize data posted on Care Compare from a quarter within the prior year. Using data from a quarter within the prior year allows CMS to provide more time for hospitals to review their star rating results during the confidential preview period.

Hospitals may use this additional time to more thoroughly understand the updated Overall Star Rating methodology and anticipate their new results as well as generate communication or improvement strategies.

The April 2021 Preview Report includes the measure data that will be publicly reported on Care Compare in April. The April 2021 Overall Hospital Star Ratings HSR includes the data used to calculate the star ratings, which was the October 2020 Care Compare measure score.

Since CMS used Care Compare data from October 2020 to calculate star ratings, please compare the data from the October 2020 Preview Reports to the April 2021 Overall Hospital Star Ratings HSR. Please send specific HSR or data questions to the Overall Hospital Star Ratings Inbox Team via the *QualityNet* Question and Answer Tool (https://cmsqualitysupport.servicenowservices.com/qnet_qa) for the team to look your hospital's specific data results.

Question 31: **Is it the same for five stars in three group domains and five group domains?**

Beginning with the April 2021 Overall Star Ratings, after summary scores are calculated and reporting thresholds are applied, CMS peer groups hospitals based on the number of measure groups for which they report at least three measures. Beginning with the April 2021 Star Ratings, in order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the 3-, 4-, or 5-measure group peer groups.

Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings, from one to five, in comparison to other hospitals that report a similar number of measures and the same number of measure groups. The k-means clustering analysis is a standard method for creating categories (or clusters) so the observations (or scores) in each category are closer to their category mean than to any other category mean. Specifically, within the Overall Star Rating methodology, k-means clustering generates five categories of hospitals within each peer group so that a hospital's summary score is "more like" that of the other hospital summary scores in the same star rating category and "less like" the hospital summary scores in the other star rating categories.

Since k-means clustering is performed within each peer group, the summary score ranges for each star rating category slightly differs across peer groups, as displayed within Table 9 of the Overall Hospital Quality Star Rating Care Compare Methodology Report (v4.0).

Within the three measure group peer group, hospital summary scores of 0.72 or higher are assigned to five star ratings. This number was 0.91 and 0.35 for the four measure and five measure groups, respectively. Overall, 10.4 percent of three measure group; 7.0 percent of four measure group; and 15.5 percent of five measure group hospitals were classified as five-star hospitals.

Question 32: **How often will the Overall Star Ratings be updated? Will it continue to be annually and in January as before?**

As finalized in the CY 2021 OPPS/ASC final rule, the Overall Star Rating is published annually using data publicly reported on Care Compare from a quarter within the prior year. Depending on individual measurement periods, measures are refreshed on Care Compare in January, April, July, and October of each year. As an example, April 2021 Overall Star Ratings will be published using October 2020 Care Compare data.

Question 33: **Slide 21. The slide says 180 more hospitals met the reporting threshold. Yet, in the methodology book it says 74 percent of the nation's 4,536 hospitals received a star rating this year, down from 78.9–80.3 percent of hospitals previously. This contradicts that. Can you explain?**

When evaluating the methodology updates using October 2019 Care Compare data and isolating the methodology update to regroup measures into five, rather than seven, measure groups, 180 more hospitals met the previous reporting threshold of at least three measures in at least three measure groups, one of which must be an outcome group, to receive a star rating. However, slightly fewer hospitals receive a star rating for the April 2021 Overall Star Rating publication (74 percent), compared to the January 2020 Overall Star Rating publication (79 percent) when the following occurs: 1) All of the methodology updates are combined, including the updated reporting thresholds to require at least three measures in at least three measure groups, one of which must specifically be Mortality or Safety of Care. 2) Measures that have been added and removed from *Care Compare* are considered.

Question 34: **What is the rationale behind combining the HCHAPS measures H-CLEAN-HSP/H-QUIET-HSP into one measure and the measures H-HSP-RATING/H-RECMND into one measure for calculating standardized scores? Since these measures are not reported as combined on Care Compare, it is unexpected.**

The Overall Star Rating Patient Experience measure group is comprised of HCAHPS components. Briefly, HCAHPS surveys patients on their healthcare experiences based on 10 measures (e.g., responsiveness of hospital staff and cleanliness of hospital environment), which are calculated as linear mean scores from 0–100 and transformed and compiled into eight star rating components ranging from 1–5, then one summary star rating ranging from 1–5.

Previously, the Overall Star Ratings methodology utilized the 10 linear mean scores in order to calculate star rating results using the Latent Variable Model (LVM). For the April 2021 Overall Star Rating publication, CMS adopted an alternative approach to the LVM: Use a simple average of measure scores to calculate measure group scores. This new approach allowed CMS to begin using the eight HCAHPS star rating components. While HCAHPS includes 10 measure star ratings, four of these (H-CLEAN-HSP, H-QUIET-HSP, H-HSP-RATING, and H-RECMND) are combined to form two new categories that are used to create the HCAHPS Summary Star Ratings.

As a result, the Patient Experience measure group score is a standardized version of the eight measures used to calculate the HCAHPS Summary Star Rating. This ensures the highest degree of alignment and concordance between HCAHPS Star Ratings results and the Overall Star Ratings Patient Experience measure group score.

Question 35: **If your facility had no HAIs in 2019, why would they appear in the star report as the same for the national and state rate? Does that mean there were zero HAIs for all hospitals?**

Overall Star Ratings for April 2021 were calculated using measure data from the October 2020 Care Compare refresh and methodology finalized in the CY 2021 OPPS/ASC Payment System Final Rule (CMS-1736-P).

CMS made the decision to use October 2020 measure data to allow hospitals more time to preview results prior to publicly reporting the results. The April 2021 Preview Report includes the measure data that will be publicly reported.

The April 2021 Overall Hospital Star Ratings HSR includes the standardized measure-level data used in the star rating calculation (October 2020 data). We believe you may be comparing April measure data. Therefore, please compare the data from the October 2020 Preview Reports to the April 2021 HSR. If you have specific questions about your data, send them to the Overall Hospital Quality Star Ratings team at https://cmsqualitysupport.servicenowservices.com/qnet_qa for the team to look at your hospital's specific data results.

Question 36: **Will the Care Compare data for October 2021 then be used for the next release in April 2022, or will another release of star rating be done in 2021?**

CMS is currently reviewing the impact of COVID-19, Q1 2020, and Q2 2020 data and how it may impact Overall Star Ratings for future releases.

The Overall Star Rating is published annually using data publicly reported on Care Compare from a quarter within the prior year. Depending on individual measurement periods, measures are refreshed on Care Compare in January, April, July, and October of each year. As an example, April 2021 Overall Star Ratings will be published using October 2020 Care Compare data.

Question 37: **What are the total score ranges associated with each star level?**

The k-means clustering analysis is a standard method for creating categories (or clusters) so that the observations (or scores) in each category are closer to their category mean than to any other category mean. The number of categories is pre-specified; CMS specified five categories to represent the five star ratings with one star being the lowest and five stars being the highest.

Specifically, within the Overall Star Rating methodology, k-means clustering generates five categories of hospitals within each peer group so that a hospital's summary score is "more like" that of the other hospital summary scores in the same star rating category and "less like" the hospital summary scores the other star rating categories. The methodology runs clustering until complete convergence, in which the procedure iteratively examines solutions until it can find no better solution.

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures.

Hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups. K-means clustering is applied separately, creating distinct star rating threshold for each peer group. See the table below for each of the star rating summary score cutoffs for each peer group.

Rating	3-measure group peer group (n=337)	4-measure group peer group (n=553)	5-measure group peer group (n=2,465)
1 Star	-2.694, -0.734	-2.854, -0.692	-2.208, -0.874
2 Star	-0.714, -0.210	-0.668, -0.031	-0.868, -0.409
3 Star	-0.194, 0.241	-0.020, 0.420	-0.407, -0.043
4 Star	0.247, 0.694	0.433, 0.892	-0.042, 0.344
5 Star	0.719, 2.404	0.912, 1.909	0.347, 1.388

For more information, including a detailed description of the Star Rating methodology, please see the Comprehensive Methodology Report v4.0, available on *QualityNet* at https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources.

Question 38: **If your facility does not do hip/knee procedures or abdominal hysterectomies, would the remaining measures, heavier weighted, result in a score dropping from three stars to one?**

There are a few reasons why your hospital may have changed star ratings since the last publication of the Overall Star Rating in January 2020. Since the January 2020 Overall Star Ratings, all measure scores have been refreshed and measures have been added or removed from CMS programs. Therefore, measure may have been subsequently added or removed from Care Compare and the Overall Star Rating.

In addition, since the January Overall Star Rating, CMS proposed and finalized (through the CY 2020 OPPS/ASC rule) and implemented several Overall Star Rating methodology updates. This includes the use of a simple average of measure scores to calculate measure groups scores. Finally, some of the individual measures as well as the Overall Star Rating use comparative methodologies. Therefore, even if your hospital's performance is the same, your hospital's scores and star ratings change relative to the performance of other hospitals in the nation or within your peer group.

Measure group scores are calculated using a simple average of measure scores that a hospital reports within that group. In this approach, all measures that a hospital reports in a given measure group have equal contribution to the measure group score. Specifically, the measure group score is the calculated as the sum of each standardized measure score multiplied by its respective measure weight.

Hospitals report different numbers and types of measures based on their case and service mixes. Therefore, measures may have varying weight across hospitals depending on the number of measures a hospital reports in the measure group. For example, if the Safety of Care measure group has eight measures and a hospital reports all eight of the measures, each measure will be weighted at 12.5 percent. Should a hospital only report three of these eight measures, each measures' weight will then contribute 33.3 percent to the measure group score.

Example of Simple Average of Measure Scores to Calculate Measure Group Scores:

Group score = [(-1.13*0.125) + (-0.75*0.125) + (0.09*0.125) + (1.21*0.125) + (0.97*0.125) + (0.98*0.125) + (0.46*0.125) + (0.02*0.125)] = 0.23

Please send specific HSR or data questions to the Overall Hospital Star Ratings Inbox Team via the *QualityNet* Question and Answer Tool: https://cmsqualitysupport.servicenowservices.com/qnet_qa.

Question 39: **Why not add the past star rating and the current star rating so patients can see if a hospital is improving or not?**

CMS considered showing hospital improvement on the Overall Star Ratings on Care Compare and CMS's development contractor consulted the Overall Star Rating Patient and Patient Advocate Work Group.

Work group members generally felt inclusion of such information would be confusing to patients and caregivers, hindering their ability to make informed decisions about where to seek care. CMS ultimately did not pursue the display of improvement to maintain the Overall Star Ratings as a summary of existing hospital quality information on Care Compare in a way that is simple and easy for patients to understand. However, one of the guiding principles of the Overall Star Ratings is responsiveness to stakeholders and CMS will continue to engage stakeholders and evaluate the Overall Star Rating methodology.

Question 40: **How many of the five measure groups are community access hospitals?**

When evaluating methodology updates using October 2019 data, there were 2,509 hospitals in the 5-measure group peer group, 22 (0.9 percent) of which were CAHs. CAHs are more likely to be assigned to the 3 or 4 measure group peer groups (58 percent and 52 percent, respectively, using October 2019 data).

Question 41: **If a measure group has fewer than three measures, is that measure group still scored when at least three other measure groups have three or more measures, or should it be excluded from the calculations?**

In order to be assigned to a star rating, hospitals must meet a minimum number of measures and measure groups. Beginning with the April 2021 Overall Star Rating publication, CMS requires at least three measures, in at least three measure groups, one of which must specifically be Mortality or Safety of Care. Once this threshold is met, any additional measures reported in any of the other measure groups are also included in the star rating calculation.

Question 42: **Are 19 percent of safety net hospitals in the five-measure group, or are 19 percent of hospitals in the five-measure group safety nets?**

When evaluating methodology updates using October 2019 data, there were 2,509 hospitals in the 5-measure group peer group, 482 of which (19 percent) were safety-net hospitals.

Question 43: **How many CAHs are in the 5-measure group?**

When evaluating methodology updates using October 2019 data, there were 2,509 hospitals in the 5-measure group peer group, 22 (0.9 percent) of which were CAHs. CAHs are more likely to be assigned to the 3 or 4 measure group peer groups (58 percent and 52 percent, respectively, using October 2019 data).

Question 44: **Why was peer grouping not done before looking at standardized scores for each measure?**

Applying peer grouping after the calculation of summary scores and before the assignment of hospitals to star ratings allows:

1) Hospital summary scores to be equivalent and comparable among all hospitals, regardless of peer grouping.
2) Transparency and the ability for stakeholders to review measure group and summary score results comparable to all other hospitals in the nation for quality improvement efforts within their confidential HSRs during the 30-day confidential preview period or the Care Compare websites' downloadable database upon public release.
3) Minimal sensitivity of measure-level differences between peer groups on star ratings.
4) Hospitals' final star ratings to only be in comparison to "like" hospitals that have a similar number of measure groups.

Question 45: **This question is regarding removing Readmissions as one of the inclusions in an outcome measure. (Now it is only Mortality and Safety of Care.) I am concerned that this will negatively impact the CAHs because patients in smaller communities have less post-discharge options and quite often terminal patients come to the hospital for end of life or hospice care. This will negatively impact the star rating of the CAHs because of an inflation of the mortality rates due to end of life care. Can this be reconsidered?**

The new Overall Star Rating methodology has not modified the weight of the Mortality measure group. Under both versions 3.0 and 4.0 the Mortality measure group score contributes a weight of 22 percent to a hospital's summary score.

Therefore, the contribution of the Mortality measure group score to the Overall Star Rating has not changed. Moreover, Readmission measures are still included as part of the Readmission measure group.

The update to version 4.0 of the methodology was not to remove the Readmission measure group, but rather require that hospitals have at least three Mortality or Safety of Care measures in order to receive an Overall Star Rating in order to reflect areas of care that are most meaningful to patients. Once a hospital meeting the minimum reporting threshold of at least three measures in at least three measure groups (one of which must be Mortality or Safety of Care, as noted), any additional measures in any additional measure groups are included in the Overall Star Rating calculation, including Readmission measures. In January 2020, 125 hospitals did not report at least three measures in either the Mortality or Safety of Care groups. Of those 125 hospitals without at least three measures in either the Mortality or Safety of Care groups, 48 were safety-net hospitals, 68 were CAHs, and 16 were specialty hospitals.

Furthermore, most of the measure methodologies within the Mortality measure group specifically exclude hospice patients. For more information on the individual measure methodologies, you may review measure specifications on *QualityNet*: https://qualitynet.cms.gov/inpatient/measures

Question 46: **How is a rating scored if a CAH reports in all five measures, but it does not have sufficient data in each measure?**

The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. Hospitals, including CAHs, must first meet the individual measure reporting thresholds or minimum case counts to receive a publicly reported measure score on Care Compare. If hospitals do not meet the individual measure reporting thresholds or minimum case counts to receive a publicly reported measure score on Care Compare, the measure scores are subsequently not included within the Overall Star Ratings. Within the Overall Star Rating methodology, CAHs are held to same minimum reporting threshold as all other Subsection (d) hospitals, which is to report at least three measures, in at least three measure groups, one of which must specifically be Mortality or Safety of Care in order to be eligible for a star rating. Furthermore, to ensure inclusivity of reported measures in star ratings, any additional measures and measure groups beyond this threshold are also included in the star rating calculation.

Question 47: **I noticed that there were several changes in the HCAHPS measures in this update of the Star Ratings as compared to the January 2020 update. Specifically, as opposed to response rates for each dimension, star ratings for each dimension were used in the calculation of that measure group's score. Also, Overall Rating was added to Willingness to Recommend to form a composite measure. Cleanliness and Quietness were also combined to form a composite measure. Finally, the Care Transition dimension has been deleted in this update. Can you provide the rationale for these changes in how the HCAHPS measures were included in the Star Ratings?**

The Overall Star Rating Patient Experience measure group is comprised of the HCAHPS components. Briefly, HCAHPS surveys patients on their healthcare experiences based on 10 measures (e.g., responsiveness of hospital staff and cleanliness of hospital environment), which are calculated as linear mean scores from 0–100 and transformed and compiled into eight star rating components ranging from 1–5, then one summary star rating ranging from 1–5.

Question 48: **Did hospitals have the option of reporting Q 1 and Q2 for 2020 of any measures?**

Yes, hospitals did have the option to report data for Q1 and Q2 2020. However, CMS did not use any data from Q1 and Q2 2020 for measure score calculations and public reporting.

Question 49: **Can you further explain how the Hospital Summary Score is calculated?**

Previously, the Overall Star Ratings methodology utilized the 10 linear mean scores in order to calculate star rating results using the LVM. For the April 2021 Overall Star Rating publication, CMS adopted an alternative approach to the LVM: Use a simple average of measure scores to calculate measure group scores. This new approach allowed CMS to begin using the eight HCAHPS star rating components. While HCAHPS includes 10 measure star ratings, four of these (H-CLEAN-HSP, H-QUIET-HSP, H-HSP-RATING, and H-RECMND) are combined to form two new categories that are used to create the HCAHPS Summary Star Ratings.

As a result, the Patient Experience measure group score is a standardized version of the eight measures used to calculate the HCAHPS Summary Star Rating. This ensures the highest degree of alignment and concordance between HCAHPS Star Ratings results and the Overall Star Ratings Patient Experience measure group score.

Question 50: **Slide 35. The curve for five-measure grouping hospitals is notably lower than the others, most likely due to the change in the categorization. Can slide 63 be broken out by grouping distribution?**

We understand this comment to refer to the fact that the distribution of hospital summary scores for the five-measure peer group appears to be shifted to the left of the three- and four-measure groups. However, performance overall is quite similar between all three groups. There is substantial overlap in distributions. Also, the number of hospitals in the five-measure group peer group is substantially larger than other peer groups and may contribute to some differences in the shape of the distribution. You may view the summary score ranges for each star rating category by peer group in Table 9 of the Overall Hospital Quality Star Rating on *Care Compare* (v4.0) methodology report on *QualityNet*: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources.

Furthermore, the percentages of one, two, three, four, and five star hospitals are closely aligned and can be viewed within Table 10 of the same methodology report.

Question 51: **How many hospitals increased or decreased by three stars?**

When comparing the previous and updated Overall Star Rating methodologies using the same dataset (October 2020 Care Compare data), as presented on slide 38, nine hospitals (0.3 percent) increased or decreased by three-star ratings. Of those, seven hospitals decreased by three star ratings and two hospitals increased by three star ratings.

Question 52: **What percentage of the 45 percent of the hospital's that shifted up or down one star, went down a star?**

When comparing the previous and updated Overall Star Rating methodologies using the same dataset (October 2020 Care Compare data), as presented on slide 38, of the 1,423 hospitals that increased or decreased by one star rating, 748 (52.6 percent) decreased by one star rating.

Question 53: **Could we have the k-means cutoffs for overall scores for the test data?**

The k-means clustering analysis is a standard method for creating categories (or clusters) so that the observations (or scores) in each category are closer to their category mean than to any other category mean.

The number of categories is pre-specified; CMS specified five categories to represent the five star ratings, with one star being the lowest and five stars being the highest. Specifically, within the Overall Star Rating methodology, k-means clustering generates five categories of hospitals within each peer group so that a hospital's summary score is "more like" that of the other hospital summary scores in the same star rating category and "less like" the hospital summary scores of the other star rating categories. The methodology runs clustering until complete convergence, in which the procedure iteratively examines solutions until it can find no better solution.

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. Hospitals are peer grouped in either the three-, four-, or five-measure group peer groups.

Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups. K-means clustering is applied separately, creating distinct star rating threshold for each peer group. See the table below for each of the star rating summary score cutoffs for each peer group.

Rating	3-measure group peer group (n=337)	4-measure group peer group (n=553)	5-measure group peer group (n=2,465)
1 Star	-2.694, -0.734	-2.854, -0.692	-2.208, -0.874
2 Star	-0.714, -0.210	-0.668, -0.031	-0.868, -0.409
3 Star	-0.194, 0.241	-0.020, 0.420	-0.407, -0.043
4 Star	0.247, 0.694	0.433, 0.892	-0.042, 0.344
5 Star	0.719, 2.404	0.912, 1.909	0.347, 1.388

For more information, including a detailed description of the Star Rating methodology, please see the Comprehensive Methodology Report v4.0, available on *QualityNet:* https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources

Question 54: **Has there been any changes to risk adjustment?**

The Overall Star Rating provides a summary of the existing hospital quality measures publicly reported on Care Compare through CMS programs. While the Overall Star Rating methodology does not include risk adjustment, many of the individual measures risk adjust for various factors, including clinical comorbidities. For more information on the individual measure methodologies, please view the resources posted on *QualityNet*: https://qualitynet.cms.gov/inpatient/measures.

However, the methodology update adds peer grouping hospitals based on the number of measure groups for which they report at least three measures. This aims to increase comparability of hospital star ratings since the measures that meet the reporting thresholds for Care Compare are informed by hospital characteristics like size, case mix, and service mix.

Question 55: **Are the cut off ranges, broken out by peer group, in the methodology report available?**

The k-means clustering analysis is a standard method for creating categories (or clusters) so that the observations (or scores) in each category are closer to their category mean than to any other category mean. The number of categories is pre-specified; CMS specified five categories to represent the five star ratings, with one star being the lowest and five stars being the highest.

Specifically, within the Overall Star Rating methodology, k-means clustering generates five categories of hospitals within each peer group so that a hospital's summary score is "more like" that of the other hospital summary scores in the same star rating category and "less like" the hospital summary scores the other star rating categories. The methodology runs clustering until complete convergence, in which the procedure iteratively examines solutions until it can find no better solution.

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. Hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups. K-means clustering is applied separately, creating distinct star rating threshold for each peer group. See the table below for each of the star rating summary score cutoffs for each peer group.

Rating	3-measure group peer group (n=337)	4-measure group peer group (n=553)	5-measure group peer group (n=2,465)
1 Star	-2.694, -0.734	-2.854, -0.692	-2.208, -0.874
2 Star	-0.714, -0.210	-0.668, -0.031	-0.868, -0.409
3 Star	-0.194, 0.241	-0.020, 0.420	-0.407, -0.043
4 Star	0.247, 0.694	0.433, 0.892	-0.042, 0.344
5 Star	0.719, 2.404	0.912, 1.909	0.347, 1.388

See the Comprehensive Methodology Report v4.0 on *QualityNet* for a description of the Star Rating methodology: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources

Question 56: **Why would a hospital that was consistently a three star now become a two star with no real change in the reported data?**

There are a few reasons why your hospital may have changed star ratings since the last publication of the Overall Star Rating in January 2020. Since the January 2020 Overall Star Ratings, all measure scores have been refreshed and measures have been added or removed from CMS programs. Therefore, they were subsequently added or removed from Care Compare and the Overall Star Rating. In addition, since the January Overall Star Rating, CMS proposed and finalized (through the CY 2020 OPPS/ASC rule) and implemented several Overall Star Rating methodology updates.

These include using a simple average of measure scores to calculate measure group scores and peer grouping hospitals based on the number of measure groups for which they report at least three measures before assigning hospitals to star ratings. Finally, some of the individual measures as well as the Overall Star Rating use comparative methodologies. Therefore, even if your hospital's performance is the same, your hospital's scores and star ratings change relative to the performance of other hospitals in the nation or within your peer group. For detailed information on the methodology updates, please see the Overall Hospital Quality Star Ratings on Care Compare (v4.0) methodology report on *QualityNet*: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources

Please send specific HSR or data questions to the Overall Hospital Star Ratings Inbox Team via the *QualityNet* Question and Answer Tool: https://cmsqualitysupport.servicenowservices.com/qnet_qa

Question 57: **The preview report is only one page. Before, additional pages did a deep dive into the categories. Will this be available, or are there two reports to get from Health Care Quality Information Systems (HCQIS) Access Roles and Profile (HARP)?**

On February 1, 2021, CMS released the April 2021 Overall Hospital Quality Star Rating HSRs. The April 2021 Overall Star Ratings were calculated using the measure data from the October 2020 update of Care Compare to allow hospitals more time to preview results prior to publicly releasing Overall Star Rating. The Overall Hospital Star Rating HSRs will provide you with a detailed summary of your Overall Hospital Quality Star Rating, Measure Group score results and weights, individual measure results, and Peer Grouping.

The Axway Secure File Transfer (SFT) (Data Exchange) application was decommissioned on December 16, 2020. Managed File Transfer (MFT) is the Enterprise Services replacement for Axway SFT (Data Exchange). MFT requires users to be registered in HARP and have a MFT Web User role to send and receive files. News releases regarding MFT can be found here: https://qualitynet.cms.gov/news/5fda63975b2cb7002501c5b1

Overall Star Ratings transitioned the delivery of the HSRs to MFT for April 2021. Only the Registered Security Administrator/Officials (SA/O) who have been assigned the Auto-Route (IQR) permission should have received an Auto Route File Delivery Notification email indicating that the HSRs are available.

If you are unsure of the name of your hospital's SA/O or if you have been assigned the Auto-Route (IQR) permission, please contact the *QualityNet* Help Desk as our team does not have access to these functionalities to assist you. The *QualityNet* Help Desk can be reached at qnetsupport@hcqis.org or (866) 288-8912, Monday – Friday from 7 a.m. - 7 p.m. Central Time (CT).

HSRs will be accessible by logging into the MFT Dashboard and entering your HARP username and password. From there, click on Mail in the left-hand navigation pane and locate your HSR in the Inbox folder.

If you are not a SA/O, you will not have the proper permissions to access your HSR. Please contact the SA/O for your organization to confirm that you have the basic MFT permission and to be assigned the Auto-Route (IQR) permission.

You may also contact your Hospital's SA/O to request a copy of your HSR. Once you have been granted the proper permissions, you will have access to any future HSR deliveries. HSRs will be available in your MFT mailbox for 30 days. If your hospital's SA/O does not have a copy of the HSR, please send a request to the Overall Star Rating Team via the *QualityNet* Question and Answer Tool for the HSR to be resent**:** https://cmsqualitysupport.servicenowservices.com/qnet_qa.

Question 58: **How will reduced data during the public health emergency impact star rating methodology in 2022? Could we see big swings and a reduction in the number of hospitals meeting criteria to receive a star rating?**

CMS is currently reviewing how COVID-19, Q1 2020, and Q2 2020 data are impacting Overall Star Ratings for future releases.

Question 59: **For the projected overall star rating, what could make it change between now and April?**

The Overall Star Ratings results within your HSR are the results that will ultimately be published on Care Compare in April 2021.

Question 60: **For hospitals that followed the COVID-19 waiver, in Patient Experience for Q1 and Q2 2020, will that change the peer group for next year's Care Compare reports? For example, if there are five measure groups, will it drop to four?**

CMS is currently reviewing how COVID-19, Q1 2020, and Q2 2020 data are impacting Overall Star Ratings for future releases.

Question 61: **Please provide the site where we can view our data.**

The caller with this question did not specify the website. Hospitals can view their own facility's preview reports prior to public posting on the HQR Secure Portal. CMS has also distributed the April 2021 Hospital-Specific Report on February 1, 2021, for hospitals use as a reference. The Overall Star Ratings are publicly reported in late April on the Care Compare site and within the Hospital General Information dataset on the Provider Data Catalog site.

Question 62: **Will there be another refresh in July and then every January and July thereafter?**

The Overall Star Rating is published annually using data publicly reported on Care Compare from a quarter within the prior year. Depending on individual measurement periods, measures are refreshed on Care Compare in January, April, July, and October of each year. As an example, April 2021 Overall Star Ratings will be published using October 2020 Care Compare data.

Question 63: **Will you have a rating by "domain" as better than expected, as expected, and/or worse than expected in the new reports? For example, Readmission category as "better than expected."**

Previously, CMS used a statistical model called latent variable modeling to calculate measure group scores, which produced data needed to estimate confidence intervals for measure group scores.

They allowed for the assignment of "above," "below," or "same as" the national average to hospital measure group scores. With the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores.

Therefore, confidence intervals for which to assign performance categories will no longer be produced. Instead, your hospital's HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups.

Hospitals can use the individual measure metrics to determine their performance relative to the nation and gauge their own quality improvement efforts.

Please note that performance categories are not assigned or available for all measure types on *Care Compare*, including the HCAHPS components within the Patient Experience measure group and the process measures within the Timely and Effective measure group. Therefore, for both the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 64: **Who do you contact if you find an error on the preview report?**

CMS has determined that it is provider responsibility to verify the accuracy of their data prior to the submission deadline. CMS's expectation is that providers submit, review, and correct data prior to the submission deadline each quarter. Unfortunately, once the submission deadline has passed, no additional submission or corrections can be made.

The intention of the preview period is for hospitals to review their data prior to data being publicly reported on Care Compare. The preview period is not a review and corrections period where hospitals can send corrected data.

The Overall Hospital Quality Star Ratings cannot be recalculated.

Question 65: **Are there best practices posted anywhere to help hospitals to improve their scores?**

Overall Star Ratings summarizes quality across the five measure groups (i.e., Mortality, Safety of Care, Readmission, Patient Experience, Timely and Effective Care) using individual measure scores as observations. A hospital may improve its Overall Star Rating by improving performance on measure scores. Beginning with the April 2021 Overall Star Rating publication, measure group scores will be calculated using a simple average of measure scores. In other words, every measure that a hospital reports will have equal contribution to the measure group score. A simple average of measure scores simplifies the methodology and allows stakeholders to better predict the emphasis of each measure, and in turn better anticipate changes in star ratings and focus quality improvement efforts.

Hospitals may improve their star rating by improving performance on the individual measure scores weighted the highest based on the number of measures each hospital reports within each measure group and the Mortality, Safety of Care, Readmission, and Patient Experience measure groups, which are each weighted 22 percent. It is important to note that the Overall Star Rating methodology is comparative in nature, ultimately assigning hospitals to star ratings relative to other hospitals.

In the final step of the Overall Star Ratings methodology, hospitals are assigned to star ratings of 1 through 5 using a statistical method called k-means clustering. K-means clustering categorizes hospital summary scores such that they are more similar within, and more different between, star categories. Please note that hospitals are now peer grouped by the number of measure groups for which they report at least three measures (3-, 4-, or 5-measure groups) prior to k-means clustering so that hospitals are assigned to star ratings relative to other hospitals with similar amounts of measure information.

Hospitals can use the individual measure metrics found in their HSRs to determine their performance relative to the nation and gauge their own quality improvement efforts.

Question 66: **How will the optional data periods be handled by this program?**

CMS is reviewing the impact for Overall Star Ratings future releases.

Question 67: **How will Q1 and Q2 2020 data gaps be addressed in the future star ratings?**

CMS did not use any data from Q1 and Q2 2020 for measure score calculations and public reporting. We are reviewing the impact of the removal of Q1 and Q2 2020 from measure score calculation on future Overall Star Ratings.

Question 68: **Will you publish what quarters will be used for the next star update in 2022?**

The Data Collection Period changes for each Overall Hospital Star Rating publishing to include updated data. These dates have not been finalized.

Question 69: **Are you still going to need 100 responses for Patient Experience a quarter to obtain a star rating?**

Hospitals must have at least 100 completed HCAHPS surveys over a given four-quarter period and hospitals must be eligible for public reporting of HCAHPS measures. Hospitals with fewer than 100 completed HCAHPS surveys do not receive HCAHPS Star Ratings; however, their HCAHPS measure scores are publicly reported on *Care Compare*.

Question 70: **Can you further break down the number and percentages of those hospitals that only went down two stars, instead of going down or up two stars?**

When comparing the previous and updated Overall Star Rating methodologies using the same dataset (October 2020 Care Compare data), 1,485 (50 percent) hospitals receive the same star rating, 1,423 (45 percent) hospitals increase or decrease one star rating, 150 (5 percent) hospitals increase or decrease two star ratings, 9 (0.3 percent) hospitals increase or decrease three star ratings, and 0 hospitals increase or decrease four star ratings. Specific to your question, of the 150 hospitals that change two star ratings, 85 (2.7 percent) decreased by two star ratings and 65 (2.1 percent) increased by two star ratings. Of the 9 hospitals that increase or decrease three star ratings, 7 (0.2 percent) decreased by three star ratings and 2 (0.1 percent) increased by three star ratings.

Question 71: **There is no publicly reported, national-level measure for comparison of Patient Experience and Timely and Effective Care. Why is that when the October report had satisfaction star status based on median national performance?**

Previously, CMS used a statistical model called latent variable modeling to calculate measure group scores which produced data needed to estimate confidence intervals for measure group scores, allowing for the assignment of “above,” “below,” or “same as” the national average to hospital measure group scores. Beginning with the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores.

Therefore, confidence intervals for which to assign performance categories will no longer be produced. Instead, your hospital's HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups. Hospitals can use the individual measure metrics to determine performance relative to the nation and gauge their own quality improvement efforts.

Please note that performance categories are not assigned or available for all measure types on Care Compare, including the HCAHPS components within the Patient Experience measure group and the process measures within the Timely and Effective Care measure group. Therefore, for the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 72: **How do you get the Measure Score to the Standardized Measure Score? Using the earlier example, the Hip/Knee measure score was 3.22 percent and the standardized score was -1.13. Is this a z-score equation? Is there a way to look up the population mean?**

In order to be combined to calculate a measure group score, measures must first be standardized to a single, common scale to account for differences in measure score units, such as ratios or rates, and direction, specifically whether a higher or lower score indicates better quality. To accomplish this, the methodology calculates z-scores for each measure by subtracting the national mean measure score from each hospital's measure score and dividing the difference by the measure standard deviation.

Question 73: **Who receives the confidential preview? Does that go to the Chief Executive Officer?**

Preview reports are available in the Hospital Quality Reporting (HQR) Next Generation User Interface to the hospital's SA/O or users who received access from the SA/O. For questions regarding technical issues, email the *QualityNet* Help Desk at qnetsupport@hcqis.org. Let them know you are having issues with the HQR Next Generation User Interface and the preview report.

Question 74: **Can hospitals reproduce their scores?**

The purpose of CMS providing the SAS Pack is to allow hospitals to recreate their scores and better understand the methodology. It is possible to manipulate the data; however, this is not recommended. As reporting changes from quarter to quarter, results may change based on other hospitals' performance.

CMS recommends hospitals have an advanced understanding of statistics and analysis before attempting any changes to the SAS pack. Please note, data manipulation may cause errors when running the SAS Pack.

The SAS Pack includes the statistical software code in the calculation, the user guides, and the national input file, which contains the data required to run the model. Different versions of SAS, or even computer hardware, may generate minor differences in overall results.

The resources are intended for hospitals to validate their Overall Hospital Quality Star Ratings. Results from an analysis of the SAS Package 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.

CMS will post the SAS pack and SAS files. However, due to the information within the files, these documents cannot be posted until the data are publicly reported in late April. CMS will post the SAS Pack, SAS Package instructions, and SAS Input file on the *QualityNet* Hospital Star Ratings page under SAS Resources: https://www.qualitynet.org/inpatient/public-reporting/overall-ratings/sas.

Question 75: **Will each hospital's Peer Group be exposed in the data accessible via the Care Compare API?**

Within the Overall Star Rating methodology, to increase comparability of hospital star ratings, CMS now peer groups hospitals based on the number of measure groups for which they report at least three measures.

You may find your hospital's assigned peer group located in the April 2021 Star Rating HSRs that were released on February 1, 2021. A hospital's Peer Group will not be publicly reported on Care Compare or the Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate workgroup, CMS has initially decided not to post peer grouping categorization on *Care Compare* as it may cause further confusion.

Question 76: **How will CMS communicate that star ratings will be peer grouped, so hospitals with three groups should not be compared to hospitals with four groups?**

Within the Overall Star Rating methodology, to increase comparability of hospital star ratings, CMS now peer groups hospitals based on the number of measure groups for which they report at least three measures. You may find your hospital's assigned peer group located in the April 2021 Star Rating HSRs, released on February 1, 2021.

A hospital's Peer Group will not be publicly reported on Care Compare the or Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate workgroup, CMS has initially decided not to post peer grouping categorization on *Care Compare* as it may cause further confusion.

Question 77: **How do you compare your previous star rating to this new method?**

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar amount of measure information. Hospitals report different numbers and types of measures based on their size, case mix, and service mix. Peer grouping hospitals by the number of measure groups for which they report at least three measures attempts to addresses stakeholder concerns about the comparability of hospitals with fundamental differences, such as measure reporting, hospital size or volume, patient case mix, and service mix.

Peer grouping hospitals based on the number of measure groups for which they report at least three measures creates similar hospital reporting profiles within peer groups. In general, larger hospitals with more diverse case mix and service mix, such as large urban teaching hospitals, frequently report a greater number of measures, and therefore measure groups. This places them into a different peer group than smaller hospitals with less diverse patient cases and service mix, which tend to report fewer measures and measure groups.

However, the goal of peer grouping was not to create a peer group that was so narrowly defined that only small groups of hospitals with identical characteristics could be compared. We recognize that this decision means that peer groups will include diverse types of hospitals. However, stakeholders have repeatedly expressed that it is important for patients to be able to compare star ratings across hospital types.

Question 78: **How can one facility with a summary score of -0.73 have a two-star rating, while another with a summary score of -0.69 has one star?**

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

Hospitals report different numbers and types of measures based on their size, case mix, and service mix. Peer grouping hospitals by the number of measure groups for which they report at least three measures addresses stakeholder concerns about the comparability of hospitals with fundamental differences, such as measure reporting, hospital size or volume, patient case mix, and service mix. Peer grouping hospitals based on the number of measure groups for which they report at least three measures creates similar hospital reporting profiles within peer groups.

However, since k-means clustering is performed within each peer group, the summary score ranges for each star rating category slightly differs across peer groups, as displayed within Table 9 of the Overall Hospital Quality Star Rating on *Care Compare* Methodology Report (v4.0).

Question 79: **How does the updated methodology account for the uncertainty of measurement?**

The Overall Star Rating provides a summary of existing hospital quality measure publicly reported on Care Compare through CMS programs. In order to first receive publicly reported measure scores on Care Compare, hospitals must meet the individual measure reporting thresholds, which ensure a hospital has enough cases or information to receive a reliable measure score.

Beginning with the April 2021 Overall Star Rating publication, CMS calculates measure group scores using a simple average of measure scores. Previously, CMS used a complex statistical approach called latent variable modeling to calculate measure group scores, which necessitated the winsorization of measure scores to minimize extreme outliers and ensure model stability. With a simple average of measure scores to calculate group scores, rather than statistical modeling, CMS no longer needs to winsorize measure scores.

Question 80: **I see the question and answer about the six measures retired from Timely and Effective Care and the three measures added to Readmission. However, I am not able to identify the net difference of 59 measures in the old methodology and 49 measures with the new.**

On Care Compare in January 2020, 51 measures met the Overall Star Rating measure inclusion and exclusion criteria. Between the January 2020 Overall Star Ratings, which used October 2019 Care Compare data, and April 2021 Overall Star Ratings, which used October 2020 Care Compare data, six process measures were removed and three readmission measures were added to CMS programs. This resulted in 48 measures meeting the Overall Star Rating measure inclusion and exclusion criteria for the April 2021 Overall Star Ratings.

Please see the Overall Hospital Quality Star Ratings on Care Compare methodology report (v4.0) for details on the Overall Star Rating measure inclusion and exclusion criteria. Measures included for April 2021 Overall Star Ratings can also be found in the Methodology Report in Appendix D: Measures Included in the Overall Star Ratings by Measure Group (October 2020) found on page 41.

For April 2021 publishing, Data Collection Period dates for each release can be found on the *QualityNet* Overall Hospital Rating Data Collection page (https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/data-collection).

The dates are also in the April 2021 Preview FAQ that is posted on the *QualityNet* Overall Hospital Rating web page: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources#tab2

You can also find the dates in the HSR User Guide (HUG) that is sent with your HSR Report. A copy of the HUG can also be found on the *QualityNet* Overall Hospital Rating web page: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/reports

Question 81: **Is it possible that small hospitals will be compared to teaching hospitals if the teaching hospital chooses to submit their best three measures?**

The Overall Star Rating provides a summary of hospital quality measures publicly reported on Care Compare, through a variety of CMS programs, which are used to determine payment. CMS only includes measures required for reporting through the Hospital IQR Program, Hospital OQR Program, HRRP, Hospital Value-Based Purchasing (VBP) Program, and Hospital-Acquired Condition (HAC) Reduction Program. Therefore, hospitals do not decide which measures they would like included in their star rating. If a hospital meets the individual measure reporting threshold or minimum case count to receive a publicly reported measure score, the measure is subsequently included within the Overall Star Ratings.

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

In general, larger hospitals with more diverse case mix and service mix, such as large urban teaching hospitals, frequently report a greater number of measures and, therefore, measure groups. This places them into a different peer group than smaller hospitals with less diverse patient cases and service mix, which tend to report fewer measures and measure groups.

Question 82: **I downloaded our April 21 preview report but do not see the overall star rating on this report. Is there another report I should download/run out of our HQR HARP site?**

On February 1, 2021, the CMS released the April 2021 Overall Hospital Quality Star Rating HSRs. The April 2021 Overall Star Ratings were calculated using the measure data from the October 2020 update of Care Compare to allow hospitals more time to preview results prior to publicly releasing Overall Star Ratings.

The Axway SFT (Data Exchange) application was decommissioned on December 16, 2020. MFT is the Enterprise Services replacement for Axway SFT (Data Exchange). MFT requires users to be registered in HARP and have a MFT Web User role to send and receive files. News releases regarding MFT can be found here: https://qualitynet.cms.gov/news/5fda63975b2cb7002501c5b1

Overall Star Ratings transitioned the delivery of the HSRs to the MFT for April 2021.Only the registered SA/O assigned the Auto-Route (IQR) permission should have received an Auto Route File Delivery Notification email indicating HSRs are available.

If you are unsure of the name of your hospital's SA/O or if you received the Auto-Route (IQR) permission, please contact the *QualityNet* Help Desk as our team does not have access to the functionality to this to assist you. The *QualityNet* Help Desk can be reached at qnetsupport@hcqis.org or (866) 288-8912, Monday–Friday from 7 a.m. - 7 p.m. CT.

HSRs will be accessible by logging into the MFT Dashboard and entering your HARP username and password. From there, click on Mail in the left-hand navigation pane and locate your HSR in the Inbox folder.

If you are not a SA/O, you will not have the proper permissions to access your HSR. Please contact the SA/O for your organization to confirm that you have the basic MFT permission and to request the Auto-Route (IQR) permission. You may also contact your SA/O to request a copy of your HSR. Once you have been granted the proper permissions you will have access to any future HSR deliveries.

HSRs will be available in your MFT mailbox for 30 days. If your hospital's SA/O does not have a copy of the HSR, request the HSR to be resent via the Overall Star Rating Team and the *QualityNet* Question and Answer Tool**:** https://cmsqualitysupport.servicenowservices.com/qnet_qa

Question 83: **How will hospitals know which Care Compare publication will be used for the star rating in the future? It mentioned either July or October. Is it truly a 50/50 chance?**

CMS is currently reviewing the impact of COVID-19, Q1 2020, and Q2 2020 data and how they may impact Overall Star Ratings in future releases. The Overall Star Rating is published annually using data publicly reported on Care Compare from a quarter within the prior year. Depending on individual measurement periods, measures are refreshed on Care Compare in January, April, July, and October of each year. As an example, April 2021 Overall Star Ratings will be published using October *2020* Care Compare data.

Question 84: **When you say hospitals will be grouped with the same reporting measures, will there be a difference regarding for-profit and not-for- profit hospitals?**

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

While the peer grouping methodology does not distinguish between profit and non-profit hospitals, peer grouping hospitals by the number of measure groups for which they report at least three measures addresses stakeholder concerns about the comparability of hospitals with fundamental differences, such as measure reporting, hospital size or volume, patient case mix, and service mix. Hospitals report different numbers and types of measures based on their size, case mix, and service mix. Peer grouping hospitals based on the number of measure groups for which they report at least three measures creates similar within peer group hospital reporting profiles.

CMS has evaluated many variables, including but not limited to CAH designation, teaching status, bed size, and other hospital characteristics.

Stakeholder engagement consistently results in a lack of consensus, particularly among providers, regarding which variable is most suitable for peer grouping hospitals within the Overall Star Rating methodology. In addition, few variables are available and consistently captured for all hospitals in the nation.

While peer grouping hospitals by the number of measure groups may not directly address differences in hospital characteristics, CMS analyses indicate that the measure group variable indirectly identifies differences in hospital size, case mix, and services provided, as demonstrated through the number and type of measures they report. As stakeholder input evolves and data becomes available, CMS will continue to examine alternative approaches to peer grouping both for the calculation as well as display of the Overall Star Rating.

Question 85: **Although our star remained the same, our overall summary score is significantly lower. Can this be attributed to the reduction in quarters reported due to the COVID exemptions/extensions?**

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

While the peer grouping methodology does not distinguish between profit and non-profit hospitals, peer grouping hospitals by the number of measure groups for which they report at least three measures addresses stakeholder concerns about the comparability of hospitals with fundamental differences, such as measure reporting, hospital size or volume, patient case mix, and service mix. Hospitals report different numbers and types of measures based on their size, case mix, and service mix. Peer grouping hospitals based on the number of measure groups for which they report at least three measures creates similar hospital reporting profiles within peer groups.

CMS has evaluated many variables, including but not limited to Critical Access Hospital designation, teaching status, bed size, and other hospital characteristics. Stakeholder engagement consistently results in a lack of consensus, particularly among providers, regarding which variable is most suitable for peer grouping hospitals within the Overall Star Rating methodology. In addition, few variables are available and consistently captured for all hospitals in the nation.

While peer grouping hospitals by the number of measure groups may not directly address differences in hospital characteristics, CMS analyses indicate that the measure group variable indirectly identifies differences in hospital size, case mix, and services provided, as demonstrated through the number and type of measures they report. As stakeholder input evolves and data becomes available, CMS will continue to examine alternative approaches to peer grouping both for the calculation as well as display of the Overall Star Rating.

Question 86: **Will CMS provide the updated list of measures that roll up to the five domains?**

Please see the Overall Hospital Quality Star Ratings on Care Compare methodology report (v4.0) for details on the Overall Star Rating measure inclusion and exclusion criteria. Measures included for April 2021 Overall Star Ratings can also be found in the Methodology Report in Appendix D: Measures Included in the Overall Star Ratings by Measure Group (October 2020) found on page 41.

For April 2021 publishing, Data Collection Period dates for each release can be found on the *QualityNet* Overall Hospital Rating Data Collection web page: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/data-collection. It can also be found in the April 2021 Preview FAQ that is posted on the *QualityNet* Overall Hospital Rating web page: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources#tab2

The Data Collection Period dates for each release are also in the HSR User Guide (HUG) that is sent with your HSR Report. A copy of the HUG can also be found on *QualityNet* Overall Hospital Rating web page: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/reports

Question 87: **Is it possible that the star rating is different on the stars page than on the HSR? We do not know which is the true star rating and do not know how to proceed.**

Overall Star Ratings for April 2021 were calculated using measure data from the October 2020 Care Compare refresh and the new methodology that was finalized in the CY 2021 OPPS/ASC Payment System Final Rule (CMS-1736-P).

CMS made the decision to use October 2020 measure data to allow hospitals more time to preview results prior to publicly reporting the results.

The April 2021 Preview Report includes the measure data that will be publicly reported. The April 2021 Overall Hospital Star Ratings HSR includes the Standardized measure-level data used in the star rating calculation (October 2020 data). Therefore, please compare the data from the October 2020 Preview Reports to the April 2021 HSR.

Question 88: **What should we do if we have not received our Overall Star Rating HSR?**

The Axway SFT (Data Exchange) application was decommissioned on December 16, 2020. MFT is the Enterprise Services replacement for Axway SFT (Data Exchange). MFT requires users to be registered in HARP and have a MFT Web User role to send and receive files. News releases regarding MFT can be found here: https://qualitynet.cms.gov/news/5fda63975b2cb7002501c5b1.

Overall Star Ratings transitioned the delivery of the HSRs to the MFT for April 2021. Only the Registered SA/O with the Auto-Route (IQR) permission should have received an Auto Route File Delivery Notification email indicating that the HSRs are available.

If you are unsure of the name of your hospital's SA/O or if you have been assigned the Auto-Route (IQR) permission, please contact the *QualityNet* Help Desk as our team does not have access to this functionality to assist you. The *QualityNet* Help Desk can be reached at qnetsupport@hcqis.org or (866) 288-8912, Monday – Friday from 7 a.m. - 7 p.m. CT.

HSRs will be accessible by logging into the MFT Dashboard and entering your HARP username and password. From there, click on Mail in the left-hand navigation pane and locate your HSR in the Inbox folder.

If you are not a SA/O, you will not have the proper permissions to access your HSR. Please contact the SA/O for your organization to confirm that you have the basic MFT permission and to be assigned the Auto-Route (IQR) permission.

You may also contact your Hospital's SA/O to request a copy of your HSR. Once you receive the proper permissions, you will have access to any future HSR deliveries. Note: HSRs will be available in your MFT mailbox for 30 days. If your hospital's SA/O does not have a copy of the HSR, please send a request to the Overall Star Rating Team via the *QualityNet* Question and Answer Tool for the HSR to be resent**:** https://cmsqualitysupport.servicenowservices.com/qnet_qa.

Question 89: **Will the Star Rating methodology changes continue to be released in future OPPS proposed rules, or will it come back to the Inpatient Prospective Payment System (IPPS) proposed rules?**

Any potential changes to Star Ratings will likely be in the IPPS rule, but CMS has not made a final decision.

Question 90: **Can you share your Risk Adjustment Model calculation?**

The Overall Star Rating provides a summary of the existing hospital quality measures publicly reported on Care Compare through CMS programs. While the Overall Star Rating methodology does not include risk adjustment, many of the individual measures risk adjust for various factors, including clinical comorbidities. For more information on the individual measure methodologies, please view resources posted on QualityNet: https://qualitynet.cms.gov/inpatient/measures. However, the methodology uses the addition of peer grouping hospitals based on the number of measure groups for which they report at least three measures. This aims to increase comparability of hospital star ratings since hospital characteristics (such as size, case mix, and service mix) inform the measures a hospital reports to meet thresholds for Care Compare.

Question 91: **Why do you calculate z-scores for individual measures (which you average for a domain score), then calculate another z- score for the domain?**

A key component of the Star Ratings methodology is the z-score standardization approach. Because the measures that make up Overall Star Ratings use different scales and directions, we needed to dedicate a step in the methodology that standardizes these scores in order to compare performance across hospitals. Thus, we first standardize measure scores for individual measures in order to calculate measure group scores.

It was previously not necessary to standardize measure group scores again when using statistical modeling, such as the LVM used in version 3.0 of the methodology. In version 4.0, using the simple average of measure group scores, may lead the distributions and interpretations of measure group scores to 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 and facilitates combination into the summary score.

Specifically, measure group 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 the summary score.

Question 92: **For upcoming publicly reported performance periods is CMS planning to shorten the reporting periods when excluding Q1 2020 and Q2 2020 data, or will the performance periods be adjusted backwards to still include the same number of months in the performance period?**

CMS is reviewing the impact for Overall Star Ratings future releases.

Question 93: **Given the methodology changes and the fact that we cannot calculate the "better than," "worse than," and "no different from" categories, how do you suggest we benchmark the results of the star measures?**

Previously, CMS used a statistical model called LVM to calculate measure group scores. This produced data needed to estimate confidence intervals for measure group scores, allowing for the assignment of "above," "below," or "same as" the national average to hospital measure group scores. Beginning with the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores. Therefore, confidence intervals for which to assign performance categories will no longer be produced. Instead, your HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups.

Hospitals can use the individual measure metrics to determine their performance relative to the nation and gauge their own quality improvement efforts. Please note that performance categories are not assigned or available for all measure types on Care Compare, including the HCAHPS components within the Patient Experience measure group and the process measures within the Timely and Effective Care measure group. Therefore, for both the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 94: **What Care Compare archive dataset has the correct performance period for the Timely and Effective Care group? The January 2021 dataset has a later time window than what *QualityNet* lists as the time period for the star methodology. It would be nice if all the timely/process measures were in one file versus several files. Potentially, you could create a guide that shows the measure and its respective data file name.**

Since CMS used the October 2020 measure data for the April 2021 Overall Star Ratings calculations, please refer to the October files. You will find a crosswalk of the datasets the October 2020 Data Dictionary (included in the zip folder). Going forward, we updated the dataset names to make them more user friendly and to help locate the appropriate files.

Question 95: **Are cut points/scores available to know how close or far a hospital is from the next star?**

The k-means clustering analysis is a standard method for creating categories (or clusters) so that the observations (or scores) in each category are closer to their category mean than to any other category mean. The number of categories is pre-specified; CMS specified five categories to represent the five star ratings with one star being the lowest and five stars being the highest. Specifically, within the Overall Star Rating methodology, k-means clustering generates five categories of hospitals within each peer group so that a hospital's summary score is "more like" that of the other hospital summary scores in the same star rating category and "less like" the hospital summary scores the other star rating categories. The methodology runs clustering until complete convergence, in which the procedure iteratively examines solutions until it can find no better solution.

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. Hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups. K-means clustering is applied separately, creating distinct star rating threshold for each peer group. See the table below for each of the star rating summary score cutoffs for each peer group.

Rating	3-measure group peer group (n=337)	4-measure group peer group (n=553)	5-measure group peer group (n=2,465)
1 Star	-2.694, -0.734	-2.854, -0.692	-2.208, -0.874
2 Star	-0.714, -0.210	-0.668, -0.031	-0.868, -0.409
3 Star	-0.194, 0.241	-0.020, 0.420	-0.407, -0.043
4 Star	0.247, 0.694	0.433, 0.892	-0.042, 0.344
5 Star	0.719, 2.404	0.912, 1.909	0.347, 1.388

For more information, including a detailed description of the Star Rating methodology, please see the Comprehensive Methodology Report v4.0, available on *QualityNet* at https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources.

Question 96: **Will you still provide the SAS pack?**

CMS will post the SAS pack and SAS files. However, due to the hospital data and information contained within the files, these documents cannot be publicly posted until the star ratings are published on Care Compare in late April. CMS will post the SAS Pack, SAS Package instructions, and SAS Input file on the *QualityNet* Hospital Star Ratings page under SAS Resources: https://www.qualitynet.org/inpatient/public-reporting/overall-ratings/sas

Question 97: **What was the method to adding/removing measures within the groupings (e.g., adding Outpatient (OP)-36 to the Readmission measure group)?**

The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. As measures are added or removed from CMS programs and Care Compare, they are subsequently added or removed from the Overall Star Rating.

Specifically, the Overall Star Rating uses measure scores publicly reported on Care Compare through the following CMS programs: Hospital IQR Program, Hospital OQR Program, HRRP, Hospital VBP Program, and HAC Reduction Program. Using your example, OP-36 was added to the Hospital OQR Program and reported on Care Compare in January 2020. Therefore, it was incorporated within the Overall Star Ratings for the April 2021 publication, which used October 2020 Care Compare data.

Question 98: **Where can we find the comprehensive methodology report?**

The comprehensive methodology report (v4.0) can be found on the *QualityNet* Resource page at https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources.

Question 99: **Does the peer grouping only consider the number of measure groups and not the hospital characteristics such as public versus non-profit and safety net versus community?**

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care.

Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

While the peer grouping methodology does not distinguish between profit and non-profit hospitals, peer grouping hospitals by the number of measure groups for which they report at least three measures addresses stakeholder concerns about the comparability of hospitals with fundamental differences, such as measure reporting, hospital size or volume, patient case mix, and service mix. Hospitals report different numbers and types of measures based on their size, case mix, and service mix. Peer grouping hospitals based on the number of measure groups for which they report at least three measures creates similar hospital reporting profiles within peer groups.

CMS has evaluated many variables, including but not limited to CAH designation, teaching status, bed size, and other hospital characteristics.

Stakeholder engagement consistently results in a lack of consensus, particularly among providers, regarding which variable is most suitable for peer grouping hospitals within the Overall Star Rating methodology. In addition, few variables are available and consistently captured for all hospitals in the nation. While peer grouping hospitals by the number of measure groups may not directly address differences in hospital characteristics, CMS analyses indicate that the measure group variable indirectly identifies differences in hospital size, case mix, and services provided, as demonstrated through the number and type of measures they report. As stakeholder input evolves and data becomes available, CMS will continue to examine alternative approaches to peer grouping both for the calculation as well as display of the Overall Star Rating.

Question 100: **If we only have two reportable measures in the Safety of Care section, how do we get a third to meet requirements to move up a peer group?**

The Overall Star Rating provides a summary of the existing hospital quality measures publicly reported on Care Compare through CMS programs. Hospitals must meet the individual measure reporting thresholds to receive a measure score publicly reported on Care Compare and subsequently the Overall Star Rating.

Specifically, within the Safety of Care measure group:

- HAI measures do not meet public reporting required minimums if the hospital's measure Facility Threshold Indicator value = 0. (This value is part of the external file received from the CDC.)
- COMP-HIP-KNEE measure does not meet public reporting minimums if the hospital has less than 25 eligible cases for the measure.
- PSI-90 measure does not meet public reporting minimum requirements if the hospital does not have at least one PSI-90 component measure with at least three eligible discharges.

Question 101: **Why would our facility go from having a star rating to N/A?**

There are a few reasons a hospital's April 2021 star rating may have increased or decreased from the January 2020 publication It could be due to a refresh of the underlying measure data used to calculate the Overall Star Rating, several substantive updates made to the Overall Star Ratings methodology for 2021 and subsequent years, the relative nature of the Overall Star Rating methodology.

1) Typically, the Overall Star Rating is updated annually using Care Compare data from a quarter within the prior year. Increases or decreases in star ratings are expected from one publication to the next, as the underlying measures scores are refreshed to reflect your hospital's performance and measures are added or removed from CMS programs, and subsequently Care Compare and the Overall Star Ratings. The January 2020 Overall Star Rating publication used Care Compare data from October 2019, whereas the April 2021 Overall Star Rating used Care Compare data from October 2020.

   Between the January 2020 and April 2021 publications, all measure data were refreshed. In addition, six measures were removed, and three measures were added to CMS programs and subsequently Care Compare and the Overall Star Rating.

2) Through the CY 2021 OPPS/ASC Payment System Final Rule (CMS-1736-P), CMS finalized an updated Overall Star Rating methodology for 2021 and subsequent years. Methodology updates aim to increase simplicity of the methodology, predictability of measure emphasis within the methodology, and comparability of hospital star ratings. The methodology updates are listed below, with details on how they compare to the previous methodology, which may ultimately impact your hospital's star rating.

- **Measure Regrouping:** Previously, CMS grouped measures into one of seven measure groups: Mortality (22 percent), Safety of Care (22 percent), Readmission (22 percent), Patient Experience (22 percent), Effectiveness of Care (4 percent), Timeliness of Care (4 percent), and Efficient Use of Medical Imaging (4 percent). Due to the removal of several process measures as a result of CMS's Meaningful Measure Initiative, CMS combined the three process measure groups (Effectiveness of Care, Timeliness of Care, Efficient Use of Medical Imaging) into one group, Timely and Effective Care, for a total of five measure groups. In addition to a new Timely and Effective Care measure group score, this methodology update may result in some hospitals reducing the number of measure groups and may result in some hospitals now meeting the minimum measure threshold of three measures within the Timely and Effective Care measure group.

  They may not have did not met the measure threshold previously. The new measure groups and measure group weights are as follows. Measure group weights are proportionally redistributed when a hospital is missing one or more measure groups.

  1. Mortality 22%
  2. Safety of Care 22%
  3. Readmission 22%
  4. Patient Experience 22%
  5. Timely and Effective Care 12%

- **Measure Group Score Calculation:** Measure group scores are now calculated using a simple average of measure scores. In other words, every measure that a hospital reports will have equal contribution to the measure group score. Previously, CMS used latent variable modeling to calculate measure group scores, which estimated measure loadings that determined the contribution of each measure score to the measure group score for all hospitals. Measure contribution is now equal within a hospitals' measure group and depends on the number of measures the hospital reports within the group, but measure contribution now differs between measure groups and hospitals. With a simple average of measure scores, CMS now standardizes measure group scores to make the scores comparable before combining into summary scores through a weighted average.

- **Reporting Thresholds:** In order to be assigned to a star rating, hospitals must meet a minimum number of measures and measure groups. Previously, CMS required at least three measures in at least three measure groups, one of which must be an outcome measure group. Any additional measures reported in any of the other measure groups are then included in the star rating calculation. CMS now requires at least three measures, in at least three measure groups, one of which must specifically be Mortality or Safety of Care. Any additional measures reported in any of the other measure groups are then included in the star rating calculation. This means that some hospitals may no longer meet the reporting thresholds to receive a star rating if they do not have at least three measures in Mortality or Safety of Care.

- **Peer Grouping:** After summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. Therefore, hospitals are peer grouped in either the 3-, 4-, or 5-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer group, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

  For further details on these updates, please refer to the Comprehensive Methodology Report (v4.0) posted on *QualityNet*.

3) In addition, the Overall Star Rating methodology is comparative in nature, assigning hospitals to star ratings relative to other hospitals. First, please note that some of the individual measures also use comparative methodologies. Many of measures in the Mortality and Readmission measure groups are examples. Even if your hospital's performance remains the same from a previous publication, the measure scores and star ratings may increase or decrease based on national hospital performance. In the final step of the Overall Star Ratings methodology, hospitals are assigned to star ratings of 1 through 5 using a statistical method called k-means clustering. K-means clustering categorizes hospital summary scores such that they are more similar within, and more different between, star categories. Please note that hospitals are now peer grouped by the number of measure groups for which they report at least three measures (3-, 4-, or 5-measure groups) prior to k-means clustering so that hospitals are assigned to star ratings relative to other hospitals with similar amounts of measure information.

Question 102: **Will public reporting reflect the assigned peer groups?**

Within the Overall Star Rating methodology, to increase comparability of hospital star ratings, CMS now peer groups hospitals based on the number of measure groups for which they report at least three measures. You may find your hospital's assigned peer group located in the April 2021 Star Rating HSRs, released on February 1, 2021.

A hospital's peer groups will not be publicly reported on Care Compare or the Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate workgroup, CMS has initially decided not to post peer grouping categorization on *Care Compare* as it may cause further confusion.

Question 103: **Can you please review the criteria for determining use of the peer groups? I thought I heard you needed three indicators to qualify. I want to be sure I heard accurately.**

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

While the peer grouping methodology does not distinguish between profit and non-profit hospitals, peer grouping hospitals by the number of measure groups for which they report at least three measures addresses stakeholder concerns about the comparability of hospitals with fundamental differences, such as measure reporting, hospital size or volume, patient case mix, and service mix. Hospitals report different numbers and types of measures based on their size, case mix, and service mix. Peer grouping hospitals based on the number of measure groups for which they report at least three measures creates similar within peer group hospital reporting profiles.

CMS has evaluated many variables, including but not limited to CAH designation, teaching status, bed size, and other hospital characteristics. Stakeholder engagement consistently results in a lack of consensus, particularly among providers, regarding which variable is most suitable for peer grouping hospitals within the Overall Star Rating methodology. In addition, few variables are available and consistently captured for all hospitals in the nation. While peer grouping hospitals by the number of measure groups may not directly address differences in hospital characteristics, CMS analyses indicate that the measure group variable indirectly identifies differences in hospital size, case mix, and services provided, as demonstrated through the number and type of measures they report. As stakeholder input evolves and data becomes available, CMS will continue to examine alternative approaches to peer grouping both for the calculation as well as display of the Overall Star Rating.

Question 104: **Is the new methodology with Appendix D posted on *QualityNet*?**

The Comprehensive Methodology v4.0 can be found on the *QualityNet* Resource page at https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources.

Question 105: **When will the updated SAS software package for calculation of hospital ratings be available online?**

CMS will post the SAS pack and SAS files. However, due to the hospital data and information contained within the files, these documents cannot be publicly posted until the star ratings are published on Care Compare in late April. CMS will post the SAS Pack, SAS Package instructions, and SAS Input file on the *QualityNet* Hospital Star Ratings page under SAS Resources: https://www.qualitynet.org/inpatient/public-reporting/overall-ratings/sas.

Question 106: **Where can we find the International Classification of Diseases (ICD)-10 codes for each measure? For example, where could I locate the specific codes that are used to identify the Death Rate for Coronary Artery Bypass Graph (CABG) Patients?**

The Overall Star Rating uses hospital quality measure scores that are publicly reported on Care Compare for hospitals providing acute inpatient and outpatient care through the following CMS programs: Hospital IQR Program, HRRP, HAC Reduction Program, Hospital VBP Program, and Hospital OQR Program. For the measure methodologies, please refer to the specific measures located on the Hospital Inpatient Measures page on *QualityNet*.

Question 107: **Is the z-score assuming a mean of 0 and standard deviation of 1?**

Yes, we employ a traditional z-score to standardize both measure and measure group scores. As such, we rescale measure and measure group scores to have a mean score of 0 and a standard deviation of 1.

Question 108: **Would you please explain the difference between the measure weight on the individual measures versus the standard measure group weight?**

The Overall Star Rating methodology can be summarized in seven steps:

1. Selection and standardization of measures
2. Assignment of measures to groups
3. Calculation of measure group scores
4. Calculation of hospital summary scores
5. Application of the minimum reporting thresholds
6. Application of peer grouping
7. Assignment of hospitals to star ratings

Within Step 3, measure group scores are calculated through a simple, or equal, average of measure scores that a hospital report. In other words, measures that a hospital reports are assigned equal weights within each measure group.

Within Step 4, summary scores are calculated through a weighted average of measure group scores using standard weights of 22 percent for the Mortality, Safety of Care, Readmission, and Patient Experience measure groups and 12 percent for the Timely and Effective Care measure group. If a hospital is missing one or more measure groups, measure group weights for the missing measure groups are proportionally re-distributed across the remaining measure groups to produce a hospital summary score.

Question 109: **Is a spreadsheet available on the new methodology for hospitals to emulate the CMS results?**

CMS will post the SAS pack and SAS files. However, due to the hospital data contained within the files, these documents cannot be publicly posted until the star ratings are published on Care Compare in late April. CMS will post the SAS Pack, SAS Package instructions, and SAS Input file on the *QualityNet* Hospital Star Ratings page under SAS Resources: https://www.qualitynet.org/inpatient/public-reporting/overall-ratings/sas.

Question 110: **Could we have a link to the latest manual that is being mentioned in the Q&A?**

The Comprehensive Methodology v4.0 can be found on the *QualityNet* Resource page at https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources.

Question 111: **Did you compare star ratings in the same sample?**

CMS used a variety of analyses to identify, evaluate, and assess the impact of methodology updates. To isolate the methodology updates from updates in measure methodologies and scores, CMS compared hospital star ratings using the same dataset with and without methodology updates, as presented within the CY 2021 OPPS/ASC rule and displayed on slide 38. To anticipate ultimate changes in hospital star ratings, CMS compared hospital star ratings using the previous methodology and data from the January 2020 Overall Star Rating publication (October 2019 Care Compare data) to the updated methodology and data for the April 2021 Overall Star Rating publication (October 2020 Care Compare data). This revealed 56 percent of hospitals changed star ratings, 30 percent of hospitals received a higher star rating, and 26 percent of hospitals received a lower star rating.

Question 112: **If you don't publish the peer group publicly, then why make the changes at all? It's silly to hide the differences in peers, as the lack of transparency is misleading.**

A hospital's peer groups will not be publicly reported on Care Compare or the Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate workgroup, CMS has initially decided not to post peer grouping categorization on Care Compare as it may cause further confusion.

Question 113: **Why is a measure group performance category no longer available?**

Previously, CMS used a statistical model called latent variable modeling to calculate measure group scores, which produced data needed to estimate confidence intervals for measure group scores, allowing for the assignment of "above," "below," or "same as" the national average to hospital measure group scores. Beginning with the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores.

Therefore, confidence intervals for which to assign performance categories will no longer be produced. Instead, your hospital's HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups. Hospitals can use the individual measure metrics to determine their performance relative to the nation and gauge their own quality improvement efforts. Please note that performance categories are not assigned or available for all measure types on Care Compare, including the HCAHPS components within the Patient Experience measure group and the process measures within the Timely and Effective Care measure group. Therefore, for both the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 114: **Won't John Q. Public need to know who is in each peer group designation for them as consumers to fully apply their critical thinking skills for consuming the star rating? Withholding this information from the Care Compare consumer is intentionally hiding important information.**

A hospital's peer Group will not be publicly reported on Care Compare or the Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate workgroup, CMS has initially decided not to post peer grouping categorization on Care Compare as it may cause further confusion.

Question 115: **Since we have scores in the five measures, I assume we are in the five-measure group. We do have NA for comparison in state, national and top 10 percent for Patient Experience and Timely and Effective Care measure groups. Why is this NA?**

Previously, CMS used a statistical model called latent variable modeling to calculate measure group scores, which produced data needed to estimate confidence intervals for measure group scores, allowing for the assignment of "above," "below," or "same as" the national average to hospital measure group scores. Beginning with the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores. Therefore, confidence intervals for which to assign performance categories will no longer be produced.

Instead, your hospital's HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups. Hospitals can use the individual measure metrics to determine their performance relative to the nation and gauge their own quality improvement efforts. Please note that performance categories are not assigned or available for all measure types on Care Compare, including the HCAHPS components within the Patient Experience measure group and the process measures within the Timely and Effective measure group. Therefore, for both the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 116: **Are you pulling from NHSN? We complete most of the HAI data even if we don't have infections.**

The CDC collects data from hospitals via NHSN. CDC provided HAI measure results in files that were used for October preview and public reporting, which are also used for Overall Star Rating calculations.

Question 117: **If a hospital does not receive a Star Rating due to not meeting the measure count threshold, are their data still used in the calculation of other hospital Star Ratings?**

The Overall Star Rating methodology can be summarized in seven steps:

1. Selection and standardization of measures
2. Assignment of measures to groups
3. Calculation of measure group scores
4. Calculation of hospital summary scores
5. Application of the minimum reporting thresholds
6. Application of peer grouping
7. Assignment of hospitals to star ratings

All hospitals providing acute inpatient and outpatient care with scores for measures included within the Overall Star Rating reported on Care Compare are included in the Overall Star Rating calculation through Step 4.

Within Step 5, the minimum reporting thresholds of at least three measures in at least three measure groups, one of which must be Mortality of Safety of Care, are applied so that Steps 6 and 7 of the methodology assign hospitals to peer groups and star ratings only in relation to hospitals meeting the reporting thresholds to receive a star rating. CMS now uses a simple average of measure scores, rather than latent variable modeling, to calculate measure groups scores in Step 4. Therefore, the methodology is not truly comparative, until Step 6 after which hospitals not meeting the reporting threshold to receive a star rating are removed.

Question 118: **How will eCQMs become a part of the measures?**

The Overall Star Rating provides a summary of existing hospital quality measures publicly reported on Care Compare through CMS programs. From there, CMS specifically includes measures within the Overall Star Ratings that are required for reporting by CMS programs and can be reliably or appropriately combined with other measure scores. Please see the Overall Hospital Quality Star Ratings on *Care Compare* methodology report (v4.0) for additional details on the measure inclusion and exclusion criteria: https://qualitynet.cms.gov/inpatient/public-reporting/overall-ratings/resources. As eCQMs are publicly reported on Care Compare and become required for reporting through CMS programs, measures will be considered for inclusion within the Overall Star Ratings.

Question 119: **Why isn't there a comparison in column E for all of the measures in the Table 3 report?**

Previously, CMS used a statistical model called latent variable modeling to calculate measure group scores, which produced data needed to estimate confidence intervals for measure group scores, allowing for the assignment of "above," "below," or "same as" the national average to hospital measure group scores. Beginning with the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores. Therefore, confidence intervals for which to assign performance categories will no longer be produced.

Instead, your hospital's HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups. Hospitals can use the individual measure metrics to determine their performance relative to the nation and gauge their own quality improvement efforts.

Please note that performance categories are not assigned or available for all measure types on Care Compare, including the HCAHPS components within the Patient Experience measure group and the process measures within the Timely and Effective measure group. Therefore, for both the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 120: **Is one of the peer groups solely Critical Access Hospitals (CAHs)?**

Beginning with the April 2021 Overall Star Rating publication, after summary scores are calculated, CMS peer groups hospitals meeting the reporting thresholds to receive a star rating based on the number of measure groups for which they report at least three measures. In order to receive a star rating, hospitals must report at least three measures in at least three measure groups, one of which must be Mortality or Safety of Care. Therefore, hospitals are peer grouped in either the three-, four-, or five-measure group peer groups. Hospitals are then assigned to star ratings using k-means clustering within each peer, so that hospitals are assigned to star ratings in comparison to other hospitals that report a similar number of measures and the same number of measure groups.

While the peer grouping methodology does not distinguish between profit and non-profit hospitals, peer grouping hospitals by the number of measure groups for which they report at least three measures addresses stakeholder concerns about the comparability of hospitals with fundamental differences, such as measure reporting, hospital size or volume, patient case mix, and service mix. Hospitals report different numbers and types of measures based on their size, case mix, and service mix. Peer grouping hospitals based on the number of measure groups for which they report at least three measures creates similar hospital reporting profiles within peer groups.

CMS has evaluated many variables, including but not limited to CAH designation, teaching status, bed size, and other hospital characteristics. Stakeholder engagement consistently results in a lack of consensus, particularly among providers, regarding which variable is most suitable for peer grouping hospitals within the Overall Star Rating methodology. In addition, few variables are available and consistently captured for all hospitals in the nation.

While peer grouping hospitals by the number of measure groups may not directly address differences in hospital characteristics, CMS analyses indicate that the measure group variable indirectly identifies differences in hospital size, case mix, and services provided, as demonstrated through the number and type of measures they report. As stakeholder input evolves and data becomes available, CMS will continue to examine alternative approaches to peer grouping both for the calculation as well as display of the Overall Star Rating.

Question 121: **I received HSRs for four of the eight hospitals where I have MFT access to download reports. Why would I receive some but not all of the HSRs?**

You may not have the role of SA/O for hospitals with certain CMS Certification Numbers (CCNs), or you may not be assigned the Auto-Route (IQR) permission for the MFT tool.

Only the Registered SA/O assigned the Auto-Route (IQR) permission should have received an Auto Route File Delivery Notification email indicating that the HSRs are available.

If you are unsure of the name of your hospital's SA/O, or you have been assigned the Auto-Route (IQR) permission, please contact the *QualityNet* Help Desk as our team does not have access to this functionality to assist you. The *QualityNet* Help Desk can be reached at qnetsupport@hcqis.org or (866) 288-8912, Monday – Friday from 7 a.m. - 7 p.m. CT.

HSRs will be accessible by logging into the MFT Dashboard and entering your HARP username and password. From there, click on Mail in the left-hand navigation pane and locate your HSR in the Inbox folder.

If you are not a SA/O, you will not have the proper permissions to access your HSR. Please contact the SA/O for your organization to confirm that you have the basic MFT permission and to receive the Auto-Route (IQR) permission. You may also contact your Hospital's SA/O to request a copy of your HSR. Once you have received the proper permissions, you will have access to future HSR deliveries. HSRs will be available in your MFT mailbox for 30 days.

If your hospital's SA/O does not have a copy of the HSR, please send a request to the Overall Star Rating Team via the *QualityNet* Question and Answer Tool for the HSR to be resent**:**
https://cmsqualitysupport.servicenowservices.com/qnet_qa.

Question 122: **Aren't the readmission and mortality measures risk adjusted using the CMS risk adjustment methodology?**

The measures included in Overall Star Ratings each have their own individual risk-adjustment methodologies. For further details on these measures. please contact the respective support for each measure at cmsreadmissionmeasures@yale.edu and cmsmortalitymeasures@yale.edu. Additional materials are available on CMS Mortality and Readmission measure methodologies on *QualityNet* at https://qualitynet.cms.gov/inpatient/measures.

Question 123: **Why is there no available comparison in the measure performance category for Patient Experience and Timely and Effective Care?**

Previously, CMS used a statistical model called latent variable modeling to calculate measure group scores, which produced data needed to estimate confidence intervals for measure group scores, allowing for the assignment of "above," "below," or "same as" the national average to hospital measure group scores. Beginning with the April 2021 Overall Star Rating publication and subsequent years, CMS will use a simple average of measure scores to calculate measure group scores. Therefore, confidence intervals for which to assign performance categories will no longer be produced. Instead, your hospital's HSR displays the performance category for each individual measure, as is displayed on Care Compare, and your hospital's preview report displays a summary of individual measure performance categories for the Mortality, Readmission, and Safety of Care measure groups.

Hospitals can use the individual measure metrics to determine their performance relative to the nation and gauge their own quality improvement efforts. Please note that performance categories are not assigned or available for all measure types on Care Compare, including the HCAHPS components within the Patient Experience measure group and the process measures within the Timely and Effective measure group.

Therefore, for both the Patient Experience and Timely and Effective Care measure groups, all hospitals will see N/A for individual measure performance categories within their HSR and NA for the number of measures of better, same, or worse within their preview report.

Question 124: **Will the peer group be publicly reported in the downloadable scores found in the Care Compare Data Catalog? Currently, only the Overall CMS Star Rating is published in the Hospital General Information Provider Data.**

A hospital's peer groups will not be publicly reported on Care Compare or the Provider Data Catalog. Based on prior stakeholder input, particularly from our Overall Star Rating Patient and Patient Advocate workgroup, CMS has initially decided not to post peer grouping categorization on Care Compare as it may cause further confusion.