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Overall Hospital Quality Star Ratings Listening Session Meeting Summary Report

Centers for Medicare & Medicaid Services (CMS)
Measure & Instrument Development and Support (MIDS)
Measures Management System Task Order (MMS)

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CMS
CENTERS FOR MEDICARE & MEDICAID SERVICES

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1. Introduction

The purpose of Overall Hospital Quality Star Ratings ("Star Ratings") is to summarize quality measure information reported on the *Hospital Compare* website in a way that is accessible and easy to understand for patients and consumers. Each hospital has a single star rating that ranges from one to five stars, with five stars signifying highest quality.

In calculating and reporting Star Ratings, the Centers for Medicare & Medicaid Services (CMS) strives to use transparent and scientifically valid methods. CMS has sought feedback on the methodology underlying Star Ratings through technical expert panels, patient and provider work groups, public comment periods, and national calls. However, CMS acknowledges that there is room for improvement in how Star Ratings are calculated, assigned, and communicated.

1.1 Purpose of the Listening Session

The purpose of the listening session was to provide a diverse group of stakeholders with an opportunity to learn about new directions CMS is considering for Star Ratings and for stakeholders to exchange ideas with CMS regarding Star Ratings. Discussions focused on four key topics:

- **Methodology** used to calculate Star Ratings, including changes being considered for how measures are grouped into categories, how Star Ratings should be calculated from categories of measures, and possible approaches for assigning Star Ratings to hospitals.
- **Social risk adjustment and peer grouping** as possible approaches to account for the challenges hospitals face in providing care to patients.
- **Patients and purchasers** use of Star Ratings and what CMS could do to improve their utility to these groups.
- **Novel approaches** for Star Ratings, including ideas that CMS is currently considering (e.g. user-customized Star Ratings) and other ideas put forth by stakeholders.

1.2 Description of Attendees

Attendees identified their primary role when they registered for the listening session. A total of 305 stakeholders attended either in-person or via the conference line. There were a total of 37 in-person attendees, including including nine hospital administration or hospital/clinical association representatives, nine measure developer/quality measure experts, and six patients or patient advocates.

A total of 268 stakeholders attended the listening session via the conference line, including 71 measure developers and quality measurement experts, 49 hospital administrators, 25 hospital or clinical association representatives, and 10 federal government representatives. The final breakdown of all attendees by role appears in **Appendix A**.

1.3 Overview of Listening Session Agenda

The listening session was an all-day meeting held in Baltimore, Maryland, on September 19, 2019. The agenda for the day included large group and breakout discussions for both groups of participants (**Appendix B**). CMS began the meeting by describing the guiding principles of Star Ratings and reviewing current methodology and opportunities for improvement. CMS then highlighted key themes from the Spring 2019 public comment period before inviting Lindsey Galli from Patient Family Centered Care (PFCC) Partners to provide a patient advisor's perspective.

Following the overview, in-person attendees participated in two of the four in-person breakout sessions. Approximately one-third of the virtual participants engaged in a moderated chat-based discussion on two topics: patient and purchaser use cases and novel approaches. After lunch, moderators from each breakout session summarized key themes and subsequently invited participants, including those online, to engage in a larger group discussion of the topics. A list of the discussion questions posed to listening session attendees during the day is provided in **Appendix C**.

CMS concluded the session by highlighting key themes from the day and thanking attendees for their participation.

2. Cross-cutting Themes

Across breakout sessions, the groups did not reach clear consensus on the topics discussed. However, several cross-cutting themes emerged. Quotes presented throughout the report illustrate stakeholder perspectives expressed, however, they only represent some of the opinions shared during the session. Themes included a lack of understanding for how Star Ratings are used, a desire for patient education regarding Star Ratings, a desire for meaningful comparisons across hospitals, and stakeholders' desire for transparency, predictability, and stability in Star Ratings. The themes described in this section incorporate comments from in-person attendees and conference line participants.

Understand how Star Ratings are used

Listening session participants believed the primary purpose of Star Ratings is to make hospital quality information easy for patients to understand. However, there was concern patients were not aware of the system: *"In our rural area, a third of our patients do not have smart phones or computers. They are not even aware [S]tar [R]atings or [H]ospital [C]ompare exists."*

- **Understand how patients make decisions:** Stakeholders pointed out that patients' choices are narrowed by many factors. This leads to choices based on (1) where their surgeon is, (2) where their insurance is accepted, (3) what condition they have, and (4) geographic location. Friends and family are also an important source of information.

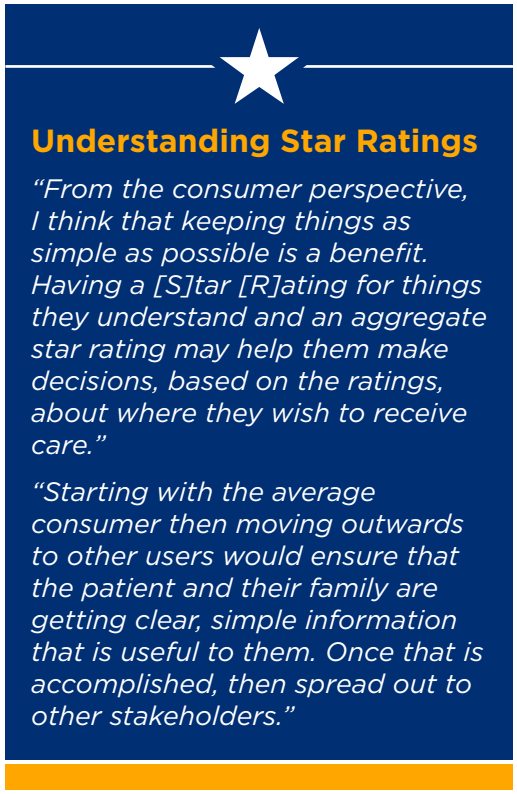
How are Star Ratings used?

"Providers use the [S]tar [R]atings to see how the hospital itself is actually doing and to see what they need to improve on; patients may use it just to see how their local hospital rates."

"Hospital ratings should be developed with the understanding that they will always be used by hospital leadership to drive quality improvement, even if patient/consumer-facing information is the primary goal."

- **Obtain empirical data on how Hospital Compare is used:** Participants suggested tracking user traffic on the Hospital Compare website to learn more about the audience. Providers felt this could offer useful information about changes in who is using the website and how it is being used.

- **Recognize how hospitals use Star Ratings and potential unintended consequences:** Participants noted that hospitals use Star Ratings for several different purposes: *"We advertise it to the public; we track our performance and we use it to push quality improvement."* Some participants noted that commercial payers used information on *Hospital Compare* to negotiate contract rates. Others expressed concern that data found within the Star Ratings system was misused or negatively communicated by researchers or the media. *"When our hospitals get good [S]tar [R]atings, they are advertising to their communities to get the word out about [S]tar [R]atings. Sometimes, the local media also publish stories (favorable or not) about the ratings. Because they are sometimes confused by the ratings or why they received the scores they received, our hospitals have been hesitant to steer consumers to the ratings systems."*



Patient education and engagement

Stakeholders believed patients need education about Star Ratings and why they are useful. Patients believed education should focus on how to use the Hospital Compare website and interpret Star Ratings.

- **Review usability of Hospital Compare:** Stakeholders, including patient advocates, urged CMS to consider the usability of the site itself from a consumer perspective. *"If patients don't understand the site, Star Ratings are for nothing."* Participants also suggested adding additional qualitative information and making the site more mobile friendly.

- **Simplify language:** Patient advocates suggested simplifying language so it is conversational rather than technical. Providers were also concerned about the use of clinical language on Hospital Compare. One provider suggested: *"Use patient-centered terms like 'patient safety' instead of 'timely and effective care.'" Another provider noted: "The average consumer isn't going to understand what "fewer days that average per 100 hospital discharges means."*

- **Link to other resources:** Patients and patient advocates viewed Star Ratings as part of a broader network of tools and information for healthcare decision making. Because Star Ratings are only intended to be one source of information, it would be helpful to have links on the *Hospital Compare* website to other resources, like condition-specific resources.

- **Open enrollment and social media:** Stakeholders suggested leveraging social media to increase awareness of Star Ratings. One patient suggested making patients aware of Star Ratings during open enrollment for health insurance.

- **Engage patients:** Participants urged CMS to invest in patient engagement for Star Ratings. A number believed patients had never heard of Star Ratings, and that information provided by CMS should be a trusted resource for healthcare decision-making. A patient advocate said that the *Hospital Compare* site should be designed with one guiding question in mind: "what does this information mean to me [patients]?"

- **Education for providers:** Several participants indicated that providers would welcome tools and technical assistance on how to interpret and increase their Star Rating. *"[The] suggestion of a "how to improve your Star Ratings" guide is great. That type of guide could give insight into how the rating was calculated and based on that methodology, point providers to what they can focus on to actually move their rating."*

Tools for Providers

"I propose it would be a great contribution of CMS to improvement if providers were given a "How to Improve Your Star Ratings" guide – or series of Technical Assistance offerings. Including not only the topics (experience, safety, readmission) which are clearly known, but guidance on: 1. The magnitude of relative improvement required to "move the needle" "up" a star; 2. The timeframe required to move [S]tar [R]atings and 3. Examples of teams who initiated target efforts to improve [S]tar [R]atings – and succeeded."

Allow patients to make meaningful comparisons across hospitals

Stakeholders expressed a desire for CMS to ensure Star Ratings allow for meaningful comparisons across hospitals. Opinions on ways to accomplish this objective, including domain-specific Star Ratings, user-customized Star Ratings, and related ideas (e.g. service line ratings) were divided. Several participants believed displaying several relative ratings could be confusing to some patients. Others thought these approaches would enhance the usability of Star Ratings. One provider recommended ensuring patients could easily identify the information most relevant to them as a way of reducing confusion: *"It would be nice (for a consumer) to be able to be able to state generally what services they are seeking, such as surgery. A rating could come back composed in part on infection rate. That I think would be useful. Even for emergency care, not at the moment of the emergency, but as one began to think about where they might go in event of an emergency."*

- **Display overall and domain-specific ratings:** Many participants suggested displaying domain-specific Star Ratings using a tiered approach that allows patients to view an overall Star Rating and then have the option to filter the information to view domain-specific Star Ratings.

- **Utilize service line ratings:** Stakeholders were interested in service line ratings. Some providers stated that service line ratings are the information patients really need to make healthcare decisions. Participants suggested utilizing non-CMS quality measure sources to create service line ratings, such as commercial healthcare data sets available for purchase.

- **Allow patients to compare hospitals based on information important to their decisions:** Some stakeholders were concerned Star Ratings don't provide information important to patients' healthcare decision making – like location and what insurance hospitals accept.

Customized Star Ratings

"There should be ratings for patients that are specific to the service the patient is needing. One of the issues with the current rating is that it does not address all types of care that the patient would need. For instance the maternity patient would only have one measure in [the] rating and it does not count for very much."

- **Group hospitals by location or condition:** Stakeholders suggested calculating Star Ratings by the type of measures reported. This approach would allow patients with a given condition to compare outcomes for that condition across all hospitals locally and nationally. Some individuals suggested this technique would better align with how patients make decisions, making it easier for them to look up quality hospitals for their specific condition(s) or treatment type(s).

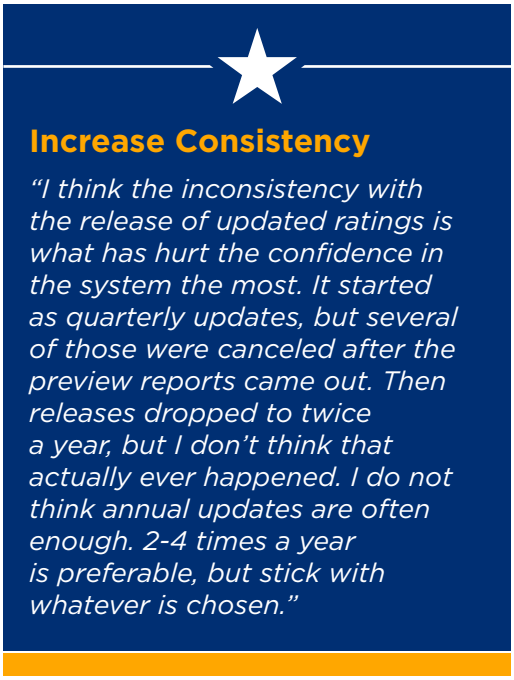
Transparency, predictability, and stability

There was widespread belief that hospitals should be able to anticipate changes in their Star Ratings and should be able to work toward improving them. Some hospital administrators expressed frustration that their Star Ratings could change across refresh periods, even when their performance on the underlying quality measures was consistent. Stakeholders requested the following:

- **Increased predictability and stability:** Several stakeholders indicated a desire for Star Ratings to be predictable. A few hospital representatives said hospitals would like to use Star Ratings to gauge the effectiveness of quality improvement (QI) initiatives, which is difficult to do with the data-driven approach currently used to calculate Star Ratings. When hospitals invest in QI initiatives, they expect to see improvements in their Star Ratings. Hospitals would also like to see stability in Star Ratings, so if their performance on measures does not change from one reporting period to the next, their Star Rating will also remain unchanged.

  Among stakeholders who raised issues related to the value of latent variable modeling (LVM) vs. alternatives (e.g., an explicit approach), concerns centered around issues of predictability and stability. Many participants indicated they would support whatever changes CMS made if they led to increased predictability and stability.

- **More frequent updates:** Participants believed more frequent updates are needed to reflect the current quality of a hospital: *"Patients probably don't realize it's not updated often, but having it update quarterly would make it more relevant. Providers might take notice and encourage more conversation about using the site."*



3.Breakout Session Themes

Each breakout session spurred unique topic-specific discussion. These discussions often focused on stakeholders' responses to the information moderators presented at the beginning of each session. As was the case across the listening session, consensus did not emerge within the breakout sessions. The major themes reported below only represent some of the many perspectives expressed during the listening session. The sections below describe the discussion topics moderators requested feedback on in each breakout session and response themes related to those topics. This section incorporates comments from in-person and conference line participants where applicable.

3.1 Methodology

The methodological changes CMS is considering for Star Ratings discussed during the listening session included the following:

- **Measure regrouping:** As measures included on Hospital Compare change, CMS will need to reconsider how these measures are grouped to calculate Star Ratings. CMS proposed a three-step measure regrouping process which would involve organizing measures into clinically relevant groups, conducting confirmatory factor analyses, and actively monitoring measure loadings to ensure consistency.

- **Replacing latent variable modeling:** LVM is a flexible approach that is widely used in education and healthcare quality to understand a single underlying concept based on a diverse set of indicator variables. However, some stakeholders reported that LVM is not intuitive or easy to understand. CMS requested feedback on the benefits and limitations of alternative approaches including explicit approaches like weighted averaging.

- **Changes to the Star Rating assignment criteria:** K-means clustering is currently used to assign each hospital to a Star Ratings category. However, some individuals are concerned this system of relative ranking reduces their ability to predict future Star Ratings and seems arbitrary to hospitals with borderline scores. CMS requested feedback on alternative approaches such as clinical benchmarking.

3.1.1 Methodology Discussion Themes

Measure grouping

Across breakout sessions, stakeholders accepted that year-to-year changes in the measures underlying Star Ratings requires CMS to reevaluate the way measures are grouped.

Attendees in both methodology breakout sessions discussed concerns about the impact of PSI-90 on the Safety of Care group. One hospital administrator commented that when they think about the stability of Star Ratings, they think about PSI-90 and how much it drives scores within the Safety of Care group. The administrator noted the components of PSI-90 fundamentally changed when the coding went from ICD-9 to ICD-10, and reported believing this change has had such a strong effect on the Safety of Care group that it may no longer reflect a single latent variable.

The administrator noted this detail is problematic because the presence of a single latent variable is a critical assumption for LVM. The group expressed agreement that if the underlying assumptions for LVM are not met, CMS needs to reconsider the use of LVM.

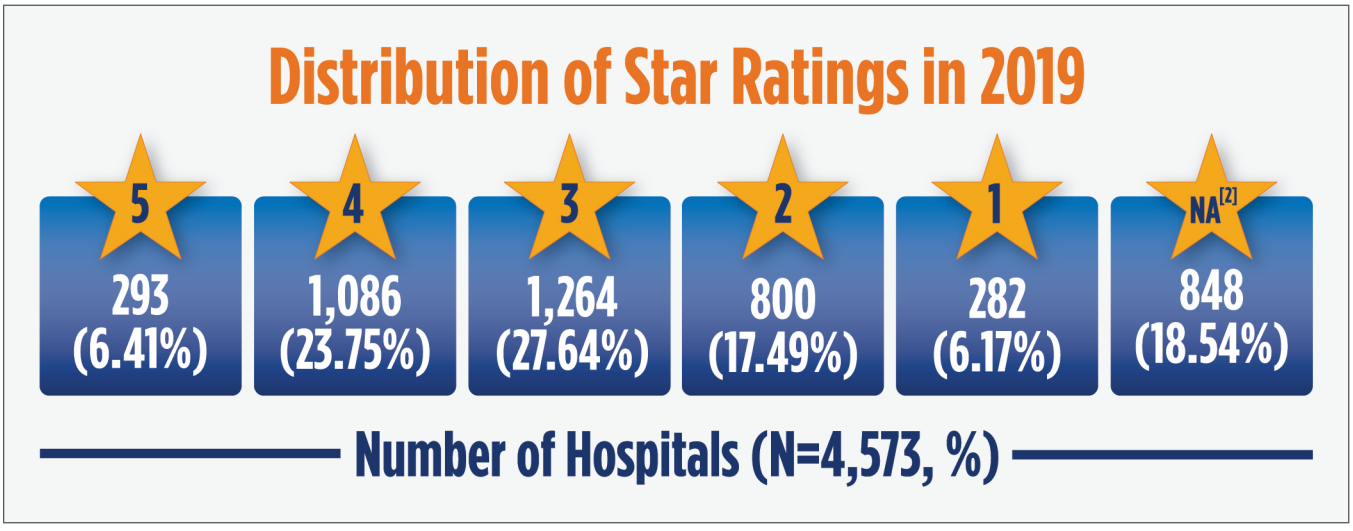
Attendees also discussed what measures should be included in Star Ratings. Providers emphasized that the measures included in Star Ratings need to be directly related to improvements in healthcare. One provider suggested focusing on a curated set of measures in Star Ratings rather than all the data available on Hospital Compare. A hospital administrator said including information not directly related to quality of care negatively affects hospital operations.

The advantages and disadvantages of latent variable modeling

Attendees in both methodology breakout sessions acknowledged the LVM approach had both strengths and weaknesses in Star Ratings. Hospital administrators said they were not inherently opposed to the use of LVM but were concerned that it was reducing the predictability and stability of Star Ratings. If an alternative approach like weighted averaging or another explicit model increased the predictability and stability of Star Ratings, hospital representatives said they would favor it. Opinions about whether Star Ratings should be determined by a data-driven or policy-driven approach underscored beliefs about the appropriateness of LVM. Participants did not strongly endorse keeping LVM or switching to an explicit approach. One hospital administrator pointed out that LVM makes it difficult for hospitals to "game the system" by focusing on measures that are strongly weighted in calculating Star Ratings. Other hospital administrators believed an explicit approach would be easier for stakeholders to understand and would increase transparency.

Star Rating assignment criteria

Much of the conversation about how Star Ratings should be assigned to hospitals focused on whether Star Ratings should be assigned relatively, based on the distribution of the underlying data, or based on policy-driven criteria. Hospital administrators expressed frustration with the current Star Rating assignment system because it is intended to highlight differences between hospitals when actual differences in quality are minimal. A patient advocate commented that patients were less concerned about how a hospital ranks on a bell curve than how well it meets absolute quality standards. Another patient advocate commented that, although it would be challenging to set absolute criteria, if CMS could do it, Star Ratings would become more meaningful to patients. Hospital representatives suggested that CMS consider using past cutoff points to assign future Star Ratings. This would create a quasi-baseline hospitals could work from to improve their Star Ratings. However, this change would require using a fixed formula to calculate Star Ratings rather than LVM.



Social Risk and Peer Grouping

CMS is considering changes in how hospitals are compared to one another in Star Ratings. Participants in the social risk and peer grouping breakout sessions discussed two topics:

- **Social risk adjustment:** To account for the impact of patient demographics on hospital performance, CMS is considering applying a method similar to what it uses in the Hospital Readmission Reduction Program; this method would apply an adjustment based on dual eligibility exclusively to the readmission measure group. CMS is not considering adjusting at the Star level because some of the measures included in the Star Rating (namely Safety of Care measures) should not be adjusted for social risk.

- **Peer grouping:** This process would restrict cross-hospital comparisons on *Hospital Compare* so hospitals would only be compared to similar hospitals (e.g., community hospitals would only be compared to other community hospitals). Based on what is feasible and aligned with current evidence, CMS is considering several approaches to group hospitals in terms of the number of measures or measure groups they report. These variables are considered a reasonably accurate proxy for other hospital characteristics, such as size and services provided.

3.1.2 Social Risk and Peer Grouping Discussion Themes

Listening session attendees provided feedback on social risk adjustment and peer grouping. The breakout session groups identified potential benefits and limitations of each topic.

Support for social risk adjustment

Most participants expressed support for applying social risk adjustment to Star Ratings, particularly at the measure group level. None of the participants expressed a preference for applying the adjustment at the Star level. Several participants, specifically those representing hospitals or hospital associations, expressed support for adjusting for social risk among the hospital readmission measures (rather than for all the measures).

Several participants—many of whom are patients or patient advocates—said that adjusting for social risk would help give them a better sense of overall hospital quality. Along similar lines, some patients and patient advocates indicated it is valuable for patients to know the case mix or overall population served by a given hospital to help contextualize the Star Ratings score they see. Some individuals felt this would be addressed through social risk adjustment, while one attendee was concerned adjustment would mask this information.

Many participants—patients, advocates, providers, and hospital representatives— believed adjusting for social risk is beneficial because it protects hospitals from receiving unfair scores.

Concerns about social risk adjustment

Although stakeholders were generally in favor of social risk adjustment, they identified some concerns for CMS to address. One measure developer/quality measure expert was concerned adjusting for social risk would reduce transparency regarding patient outcomes. In the larger group discussion, participants from a variety of backgrounds (including at least one patient) expressed concerns that social risk adjustment would provide an excuse for some hospitals to perform poorly or deliver less-than-optimal care, particularly hospitals serving vulnerable populations.

Many participants supported the use of dual Medicare/Medicaid eligibility as the variable for social risk adjustment, although they acknowledged it is an imperfect proxy for social risk. Several participants, however, felt dual eligibility isn't sensitive enough to identify true social risk. Two measure developer/quality measure experts suggested zip code would be a more appropriate variable on which to adjust.

Support for peer grouping

Participants in both breakout sessions were highly supportive of peer grouping, citing the perceived unfairness of comparing small community hospitals to larger academic ones. Some patient participants talked about being surprised by Star Ratings, particularly when a smaller community hospital has a five-star rating and large, respected Centers for Excellence hospitals have only three or four stars. Most of these participants suggested that peer grouping would help alleviate that issue, making it easier for patients to determine the quality of a hospital given the type of hospital it is.

A QI expert from a specialty hospital suggested that CMS consider peer grouping by the type, rather than the number, of measures reported. Doing so would better align with how patients actually make decisions, making it easier for them to look up quality hospitals for their specific condition(s) or treatment type(s).

One quality measure expert noted it would be ideal if patients with a given condition could compare outcomes for that condition across all hospitals locally and nationally.

Concerns about peer grouping

Participants from a variety of backgrounds expressed concern about explaining peer-grouped Star Ratings to patients. Some participants expressed concern that comparing only "like" hospitals to one another would make it impossible to compare smaller hospitals to the larger ones, which is unhelpful for patients searching locally.

3.2 Patient and Purchaser Use Cases

In the in-person and virtual patient and purchaser use cases breakout sessions, patients, patient advocates, and others shared their experiences with Star Ratings and their thoughts on how patients use the information on Hospital Compare.

3.2.1 Patient and Purchaser Use Cases Discussion Themes

Increasing awareness and education on Star Ratings

There was agreement across the breakout sessions that most patients are unaware of Star Ratings and that CMS should work to increase awareness of them. Patient advocates believed once patients know about Star Ratings, they will find them useful. Several participants suggested CMS leverage social media to increase public awareness of Star Ratings. They believed patients seek advice regarding the best hospitals and healthcare in their area through organized neighborhood groups on social media.

In addition to increasing awareness of Star Ratings, participants reported that patients need education about how to interpret Star Ratings and why they are useful. Patients said education should focus on how to use the *Hospital Compare* website and how to interpret Star Ratings. Patient advocates suggested the language be simplified so that it is conversational rather than technical. Providers were also concerned about the use of clinical language on *Hospital Compare*.

How patients make healthcare decisions

Patient advocates believed Star Ratings are helpful in validating healthcare recommendations patients receive from family and friends. When discussing a local hospital, patients may hear conflicting information about the quality of care a hospital provides. Star Ratings could help patients reconcile conflicting pieces of information they receive.

Despite their utility for validating healthcare recommendations, several participants expressed concern that Star Ratings don't provide patients with the most important information they need for their healthcare decision making. Providers and patient advocates noted Star Ratings do not consider location and what health insurance hospitals accept. Some providers suggested the type of care being sought can affect how patients choose hospitals.

Domain-specific Star Ratings

Across breakout sessions, participants supported displaying domain-specific Star Ratings using a tiered approach, where patients first view an overall Star Rating and then have the option to view domain-specific Star Ratings. However, because Star Ratings are a relative system, providers were concerned patients may not understand how to interpret domain-level ratings.

Many participants expressed an interest in service line ratings rather than domain-specific Star Ratings. Providers believed that service line ratings are the information that patients really need to make healthcare decisions. Participants suggested utilizing other quality measure sources, like commercially available healthcare data sets, to create service line ratings.

3.3 Novel Approaches

In the novel approaches breakout sessions, moderators shared ideas CMS is considering for Star Ratings, and then encouraged participants to share ideas. Approaches under consideration included the following:

- **User-customized Star Ratings:** CMS sought input on the value of a user-customized Star Ratings tool. This tool would allow patients to generate Star Ratings based on information that is important to them or their situation by setting the contribution weight for each measure group when calculating overall Star Ratings scores.

- **Incorporating improvement:** The current Star Ratings methodology captures the quality of care provided by a hospital at the time of measurement. It does not provide information about a hospital's performance compared to its past performance. CMS requested feedback on the advantages and disadvantages of including performance improvement data in Star Ratings.

- **Domain-specific Star Ratings:** Star Ratings are currently calculated separately for seven different domains of care and then combined to create a composite Star Rating. CMS asked for feedback on the value of reporting Star Ratings at the domain-level, which would give patients multiple Star Ratings to use in their healthcare decision making.

3.3.1 Novel Approaches Discussion Themes

User-customized Star Ratings

Stakeholders were receptive to the idea of user-customized Star Ratings but expressed concerns that these ratings may be confusing to some users and may lack the methodological rigor underlying Star Ratings. Patient advocates thought that greater customization could be helpful for those wanting more detail but noted many people do not want to dig for information.

Some participants suggested CMS customize Star Ratings by adding other pieces of supplemental data to existing Star Ratings – accreditations or qualitative data, for example. One measure developer suggested adding a "Yelp-like" functionality to Star Ratings to improve the "digestibility" of ratings for the public. They also mentioned that, in the United Kingdom, inspectors write a professional qualitative description of the hospital which is made available to the public. A hospital representative pushed back, saying that comments on public forums are not "reliable or valid" and are "biased." They noted that many hospitals already respond to comments on social media and believed that qualitative data may not 'be the best space for CMS to engage'. A hospital/clinical association representative noted the Joint Commission uses qualitative data in their reporting.

There was some discussion about giving users the ability to customize Star Ratings based on condition or procedure. Several participants suggested expanding the number of measures on Hospital Compare to facilitate this kind of customization, but a hospital association representative noted concern about increased reporting burden.

Incorporation of improvement

Opinions were divided about the merits of incorporating improvement into Star Ratings. Some participants believed hospitals with consistent improvements should be celebrated by Star Ratings. However, a patient advocate was unsure whether improvement should be incorporated into the Star Ratings. They were concerned that if a hospital improves, but others also improve, improvement would not be reflected accurately. They suggested "you'd need to show the baseline so [any improvement score] is relative to its own self." A hospital administrator expressed concern about the lag time of improvement measures and stated, "people look at the most recent" data, they "don't care about the past."

Domain-specific Star Ratings

In the two novel approaches breakout sessions, there was little enthusiasm for domain-specific Star Ratings. Participants expressed concern about the relationship between overall Star Ratings and domain-specific Star Ratings. A measure expert stated that composite Star Ratings are inadequate because they can mask information; a hospital with domain ratings of half five-stars and half one-stars would look the same overall as a hospital with three stars in all domains. However, a provider believed domain-specific Star Ratings would be hard for patients to understand and suggested having a navigator function on Hospital Compare to walk users through the system. A participant who works with payers believed that domain-level ratings, in conjunction with the overall Star Ratings and measures, would be too much information for patients to interpret.

4.Summary and Conclusion

Listening session participants expressed broad support for Star Ratings. Although stakeholders did not reach consensus on the specific issues discussed, there was widespread belief that Star Ratings are valuable for patients but noted ways CMS could improve usability:

- **Understanding how Star Ratings are used:** Stakeholders urged CMS to consider how Star Ratings are used by stakeholders when updating how they are calculated or presented. Participants recommended CMS make additional efforts to understand the factors affecting patients' healthcare decisions and how patients use the *Hospital Compare* website, then incorporate the information into their decisions. Further, stakeholders believed the needs of patients should be balanced with those of hospitals using Star Ratings to assess the effectiveness of QI initiatives. Stakeholders remarked that if Star Ratings drive hospital QI, patients are the ultimate beneficiary.

- **Increase awareness of Star Ratings and ensure the Hospital Compare website is engaging:** Participants affirmed that Star Ratings are valuable for patients who are aware of them, however, they believed too few patients were aware of Star Ratings. Stakeholders suggested CMS engage in outreach to patients to increase awareness of *Hospital Compare*. They also recommended CMS consider ways to improve the usability of the *Hospital Compare* website, such as simplifying clinical language and providing links to complementary healthcare decision making resources.
- **Ensure patients can make meaningful comparisons across hospitals:** Stakeholders were supportive of CMS's proposed strategies to ensure that overall Star Ratings make meaningful comparisons, including social risk adjustment and peer grouping. Many stakeholders expressed support for presenting the information captured in Star Ratings at a more granular level such as user-customized Star Ratings, provided they were presented in a way that was easy to understand and the underlying information was methodologically sound.

- **Pursue methodological changes to increase predictability and stability:** Stakeholders noted that hospitals should be able to anticipate changes in Star Ratings and expressed frustration that the current methodology limits their ability to do so. Hospital representatives urged CMS to consider changes that would improve the predictability and stability of Star Ratings, including replacing LVM with an explicit approach and using clinical benchmarking to assign Star Ratings.

CMS will continue to seek stakeholder feedback on potential changes to Star Ratings in the coming months. Planned stakeholder engagement efforts include a new technical expert panel being convened in Fall 2019, engagement with the Provider Leadership Work Group, and the Patient & Patient Advocate Work Group. Star Ratings will be refreshed using the current methodology in January 2020. Future changes to Star Ratings will be made public through the rulemaking process.

Appendix A. Listening Session Attendees

Attendee Role	Online Attendees	In Person Attendees	Total Attendees
Measure Developer/Quality Measure Expert	71	9	80
Hospital Administration	49	2	51
Hospital or Clinical Association Representative	25	7	32
Federal Government Representative	10	1	11
Academic Researcher	7	0	7
Patient Advocate	5	5	10
Provider	5	3	8
Patient	1	1	2
Other	82	5	87
Unknown	13	4	17
Grand Total	**268**	**37**	**305**

Appendix B. Listening Session Agenda

Time (ET)	In-Person Meeting	Virtual Meeting
7:45-8:30AM	**Pre-meeting sign in**	**Web conference line closed**
8:30-8:45AM	**Welcome** **Meeting overview**	Web conference line broadcasting live session audio (computer speakers or headset required) and slides [click here to join] *Virtual participants may submit comments and questions using the webinar platform's chat and Q&A features*
8:45-9:05AM	**Star Ratings overview** **Potential methodology updates** **Public comment themes (Spring 2019)**	
9:05-9:15AM	**Overview of breakout sessions**	
9:15-9:30AM	**Break**	**Web conference line closed**
9:30-10:30AM	**Breakout session 1** • Methodology • Social risk and peer groupings • Patient/purchaser use cases • Novel approaches	**Virtual breakout session 1a: Patient/purchaser** use cases [click here to join] **Virtual breakout session 1b: Novel approaches** [click here to join] *Virtual participants may submit comments and questions using the webinar platform's chat feature (no audio broadcast)*
10:30-10:45AM	**Break**	**Web conference line closed**
10:45-11:45AM	**Breakout session 2** • Methodology • Social risk and peer groupings • Patient/purchaser use cases • Novel approaches	**Virtual breakout session 2a: Patient/purchaser use cases** [click here to join] **Virtual breakout session 2b: Novel approaches** [click here to join] *Virtual participants may submit comments and questions using the webinar platform's chat feature (no audio broadcast).*
11:45AM-1:00PM	**Lunch**	**Web conference line closed**
1:00-2:30PM	**Breakout session report out and group discussion**	Web conference line broadcasting live session audio and slides [click here to join] *Virtual participants may submit comments and questions using the webinar platform's chat and Q&A features*
2:30-2:45PM	**Break**	**Web conference line closed**
2:45-3:15PM	**Breakout session report out and group discussion (continued)**	Web conference line broadcasting live session audio (computer speakers or headset required) and slides [click here to join] *Virtual participants may submit comments and questions using the webinar platform's chat and Q&A features*
3:15-4:00PM	**Group discussion and final thoughts**	

Appendix C. Listening Session Discussion Questions

Breakout Session Discussion Questions

Methodology

1. How would changes to the ways Star Ratings are calculated/modeled/weighted affect the usefulness of Star Ratings to stakeholders?
2. What are other methodological changes that CMS could consider to enhance the predictability of Star Ratings over time?
   - For further discussion, what does "predictability" mean to you in terms of Star Ratings?
3. Are there other methodological changes CMS should consider to make the Star Ratings simpler to calculate?
4. Are there other methodological changes CMS should consider to make the Star Ratings more useful to stakeholders?

Social Risk Adjustment & Peer Grouping

1. Is it appropriate to adjust for differences in social risk that a hospital's patients' experience in Star Ratings?
   - If it is appropriate to adjust for social risk, where in the process of calculating Star Ratings should the risk adjustment occur?
2. Is it feasible to group hospitals in such a way that Star Ratings can make "apples-to-apples" comparisons?
   - If it is possible, what dimensions are appropriate for grouping hospitals?
3. Would adjusting for social risk and/or peer grouping serve the best interests of people/patients using Hospital Compare to find information about hospitals?

Patient and Purchaser Use Cases

1. How do patients/purchasers use the information from Star Ratings?
   - What information needs to be shared with these individuals to ensure that they understand what Star Ratings are trying to communicate?
2. How would the changes CMS is considering affect the usefulness of Star Ratings for patients/purchasers?
3. What kinds of additional information do patients/purchasers want from Star Ratings?
4. Are there other ways that CMS could adapt the Star Ratings program to make it more useful to patients/purchasers?
5. Do patients/purchasers value simplicity (e.g. a single Star Rating) versus specificity (e.g. Star Ratings for each domain measured)?

Novel Approaches

1. How do stakeholders, including patients, providers, and purchasers, use Star Ratings? How could CMS make Star Ratings more meaningful to these stakeholders?
2. How would novel approaches – like user-customized Star Ratings and incorporating improvement into scores – affect the usability of Star Ratings for stakeholders?
3. What other novel approaches could CMS consider to improve the usability of Star Ratings?

Afternoon Large Group Discussion

1. How would changes to the ways Star Ratings are calculated/modeled/weighted affect the usefulness of Star Ratings to stakeholders?
2. What are other methodological changes that CMS could consider to enhance the predictability of Star Ratings over time?
   - For further discussion, what does "predictability" mean to you in terms of Star Ratings?
3. Are there other methodological changes CMS should consider to make the Star Ratings simpler to calculate?
4. Are there other methodological changes CMS should consider to make the Star Ratings more useful to stakeholders?