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March 29, 2019

Seema Verma
Administrator
Centers for Medicare and Medicaid Services
Department of Health and Human Services
7500 Security Boulevard
Baltimore, Maryland 21244-1850

Re: Overall Hospital Quality Star Ratings on Hospital Compare Public Input Request

Dear Ms. Verma:

On behalf of our member nonprofit and public hospitals and other healthcare providers, the Healthcare Association of New York State appreciates the opportunity to comment on the possible updates to and future considerations for the Overall Hospital Quality Star Ratings methodology.

While HANYYS supports the public availability of hospital quality data, we have concerns about CMS' Overall Hospital Quality Star Ratings approach, which oversimplifies the complexity of delivering high-quality care, uses flawed measures and fails to adjust for complex patients' medical conditions and sociodemographic factors that impact outcomes.

Given the many flaws in the methodology and the unclear impact of the proposed changes, **HANYYS strongly urges CMS to remove the Star Ratings from the *Hospital Compare* website.** We request that CMS allow sufficient time to examine feedback provided and make significant modifications to the methodology to ensure that the Star Ratings are accurate before publishing them. In addition to gathering these comments, HANYYS urges CMS to proceed with ongoing methodology transparency, seeking stakeholder feedback in advance of public reporting for each version change.

In general, *Hospital Compare* provides helpful information for patients and communities about hospital quality of care. It provides detailed information at the individual quality measure level, including measure definitions, measure rationale, data reporting periods, national benchmarks, hospital performance and instructions for how to read the performance score. Measure-level information enables patients and family members to look into the specific aspects of care that are most relevant to their medical conditions and healthcare needs.

However, the Star Ratings combine numerous quality measures from different timeframes, settings and measure groups into one single rating. The composite Star Ratings create unnecessary complexity. Patients and families do not

possess the clinical and statistical knowledge or the time needed to decode the Star Ratings and to extract the information that is most relevant to them. Moreover, they should not be expected to do so.

To provide some clarity for consumers, HANYS urges CMS to categorize the measure groups using relatable terms, such as *obstetrical outcomes*, *surgical outcomes* and *infections*, rather than compiling them under one broad category, such as Safety of Care or Effectiveness of Care.

The composite Star Ratings also do not provide actionable information for hospitals to identify opportunities for improvement. The confounding effects of numerous measures based on data from different timeframes, settings and with varying impact, make it extremely difficult to effectively isolate current and relevant performance issues.

The Star Ratings fail to genuinely reflect hospital quality performance and are inconsistent with the trends shown in other national and state quality efforts and pay-for-performance programs. For example, the Star Ratings use the Patient Safety and Adverse Events Composite (PSI-90), a highly flawed quality measure that does not discriminate among events and fails to accurately capture what is intended. PSI-90 drives nearly all of the performance in the Outcome: Safety domain.

CMS has also not accounted adequately for the impact of sociodemographic factors on health outcomes. Studies from government agencies and the healthcare field all suggest high relevance and the great importance of these factors, and CMS has considered using socio-demographic status to adjust readmission measures for Medicare and Medicaid dual eligibility status in the Hospital Readmission Reduction Program. While this adjustment is far from adequate, we believe it is directionally correct. CMS' Star Ratings methodology has not adopted SDS adjustments for the underlying measures.

HANYS previously provided the following comments to CMS to inform its research of alternative approaches to improve the readmission measures and to make appropriate changes to the Readmissions Reduction Program and other value-based payment programs:

- ***Consider the inclusion of other sociodemographic status risk factors.*** The Centers for Disease Control and Prevention defines social determinants of health as “the set of factors that contribute to the social patterning of health, disease, and illness.”ⁱ Dual eligibility is only one out of the 17 social risk indicators studied by the National Academy of Medicine that are associated with health outcomes and healthcare utilization.ⁱⁱ Though restraints exist in terms of data available for some of these risk factors, others, including dual eligibility for Medicare and Medicaid, have data available or at least “some data available for use.”ⁱⁱⁱ CMS should develop risk-adjustment models that incorporate dual eligibility and other social factors to more comprehensively capture their social impacts on health.
- ***Risk-adjust at individual measure level.*** CMS' traditional risk-adjustment models are developed for individual readmission measures. They differ from each other by including different disease diagnoses, comorbidities, prior use of medical services, etc.ⁱⁱⁱ The same approach holds promise for SDS adjustment. SDS factors, by influencing different aspects of risk behaviors and disease progress patterns, might increase readmission risks at varying levels for different underlying medical conditions.

Comments on specific proposed changes

As stated above, we have significant concerns with the Overall Hospital Quality Star Ratings. CMS requested feedback on possible enhancements for the Star Ratings methodology; below are HANYS' specific comments in response to that request.

4.1 Measure groupings

As individual measure specifications are updated or measures are added or removed from programs that post data on *Hospital Compare* (including measures retired as part of the Meaningful Measures initiative), CMS may need to reconsider the way that it groups measures and defines measure groups.

HANYS supports the introduction of all three steps to evaluate the appropriateness of measure groupings over time. In particular, HANYS urges CMS to modify all domains where more than one dominant factor exists, as demonstrated by the review of statistical scree plots. As CMS states, the pattern observed for the Safety of Care domain differs from others in that the loadings remain consistent but are not well balanced; specifically, PSI-90 has a more substantial loading than other measures.

This finding supports the need for modifications to ensure statistical accuracy for each domain. While some CMS proposals mitigate this issue (i.e., shifting to use confidence interval weighting in latent variable modeling), most of these proposals have multiple conflating factors. HANYS urges CMS to consider removal of the PSI-90 composite and/or component measures to avoid mixing claim-based quality metrics with very different, chart-abstracted measures in the safety domain.

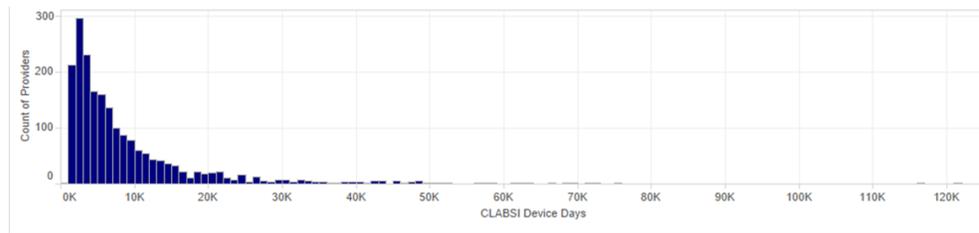
4.3 Incorporating precision of measures

CMS has sought to quantify the benefits and disadvantages of denominator weighting and evaluated other alternative approaches for incorporating measure score precision into the Overall Hospital Quality Star Ratings, including weighting by the logarithm of the denominator, confidence interval-based weighting or removing weighting altogether.

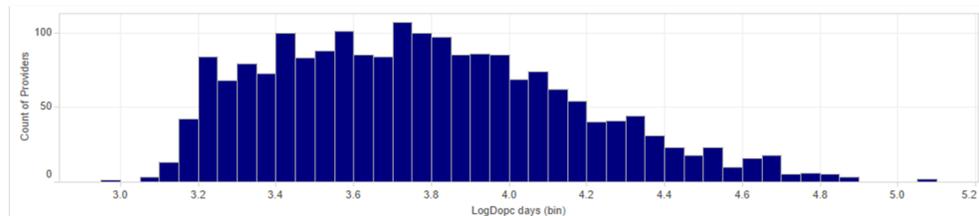
Under the current Star Ratings model, the measure loadings (or general importance of each measure) in the Safety of Care domain are incredibly lopsided. As a result, group/domain score estimates for this domain rely heavily on the flawed PSI-90 measure and effectively ignore performance on meaningful quality measures such as catheter-associated urinary tract infection, central line-associated bloodstream infection and other hospital-acquired infection measures in the domain.

HANYS supports CMS' proposal to move to either log-transformation or confidence interval weighting. Shifting to log-transformation of measure denominators improves statistical modeling by accounting for the skew in the distribution of hospital volumes in most HAI measures.

Denominator
Distribution **before**
Log Transformation



Denominator
Distribution **after**
Log Transformation



As shown above, log-transformation improves statistical modeling by adjusting for the skew in the original distribution of hospital device days on the CLABSI measure.

Shifting to confidence interval weighting helps account for the large confidence intervals on many hospitals' PSI-90 composite measure due to lower case counts and statistical methods incorporated into the PSI-90 composite. As demonstrated by the estimated measure loadings for each scenario, both proposals ensure more balanced measure loadings within this domain and correct for the fact that these measures come from very different data sources.

4.4 Period to period shifts

Stakeholders expressed concerns regarding more substantial shifts in ratings and CMS chose to evaluate methods that could make the Overall Hospital Quality Star Ratings more stable between refreshes.

HANYS opposes CMS' proposal to blend hospital ratings with historical star rating results, as this leads to even more historical data used in the star ratings – a common complaint from hospitals seeking to improve on the star ratings in real time.

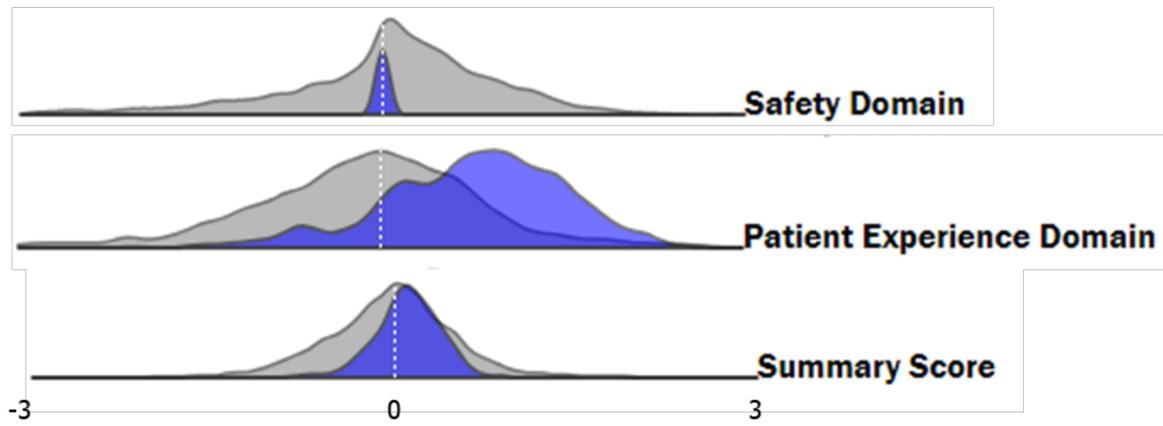
HANYS urges CMS to implement other, more meaningful changes to its methodology to ensure modeling is accurate and less sensitive to data updates over time, such as the shift to confidence interval weighting described above or the removal of the PSI-90 composite measure in the lopsided safety of care domain.

4.5 Peer grouping

Currently, CMS' Star Ratings compare hospitals of different types and characteristics together. CMS is soliciting comments on hospital stratifications, which would allow hospitals to be compared to peers within similar types or characteristics.

HANYS supports the addition of hospital stratification by peer groups to determine ratings by comparing hospitals with similar measure reporting. HANYS urges CMS to consider stratification by SDS factors (i.e., dual eligibles, area income statistics, etc.), teaching status and provider status (i.e., Critical Access Hospital vs. Prospective Payment System).

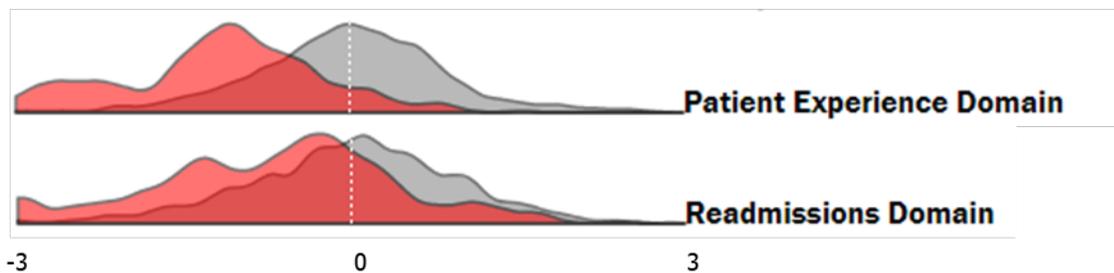
Critical Access Hospitals vs All other Providers



Stratification by these peer groups helps account for the differences in average performance levels by peer groups and limitations in specific domains due to reporting restrictions. For example, CAHs are excluded from the PSI-90 composite on which the Safety of Care domain relies, and voluntarily report HAI measures to the National Health Safety Network.

As a result, CAHs typically have “average” scores on this domain, as the statistical modeling lacks sufficient data to estimate domain performance relative to other provider types. Additionally, these facilities have historically performed much better, on average, than other provider types on Hospital Consumer Assessment of Healthcare Providers and Systems measures.

40% Dual Eligible+ Hospitals vs All other Providers



Additionally, stratification by SDS factors provides more meaningful benchmarks for hospitals with low-SDS patients who have unique complexities that are not included in risk-adjustment in the current readmission measures.

However, stratification at the K-means level does not directly address peer group variation at the measure or domain level. As stated above, HANYS urges CMS to consider appropriate adjustment for SDS at the measure level, alternatives to statistical modeling or reporting at the domain/service line level rather than overall star rating to account for significant differences in reporting requirements and average performance levels between provider types.

HANYS does recognize the level of complexity stratification may add to the interpretation of the Star Ratings. Because the Star Ratings are too complicated to be understood and meaningfully used by both patients and healthcare providers, CMS should remove the Star Ratings as a whole.

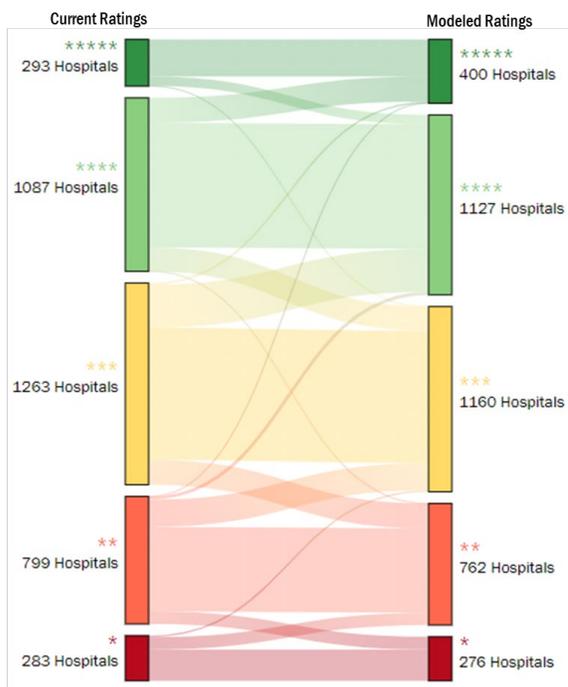
5.5 User-customized star ratings

User-customized star ratings would allow *Hospital Compare* users to interactively set the weights of measure groups that are used to calculate hospital summary scores and display clustered ratings based on those customized summary scores.

This would allow users to prioritize domains of care that are more important to them and compare hospitals by that preference. The tool could provide a set of predetermined default weights as a starting point for users who do not want to set their own weights. Also, due to computational limitations, a limited number of possible combinations of group weight would be available.

Enabling consumers to create their own customized Star Ratings using a three-point scale would cause major rating swings, making the rating system more confusing for consumers, not less. As shown in the graphic below, if users were to select different preferences than CMS' baseline modeling, several providers would change Star Ratings classifications with some lower-rated hospitals moving to the highest rating categories.

Estimated Change in Provider Ratings, Current Ratings vs. User Specification Scenario



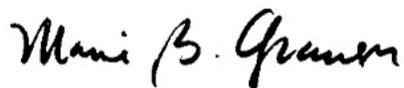
The graphic above estimates provider classifications using high preference toward mortality of care, effectiveness of care and medical imaging efficiency with low preference/weight toward all other domains. HANYS estimates nearly 60% of providers would change Star Ratings in this scenario.

This proposed customization assumes that patients and families possess the clinical and statistical knowledge, and the time needed to decode the Star Ratings to decide what is most relevant to them. HANYS recommends not moving forward with the consumer-customized ratings.

Instead, we urge CMS to continue its efforts under the Meaningful Measures program to identify those that are most reflective of true quality outcomes and account for important local SDS and economic influences. Such measures need to be straightforward, easy to find and easy to understand so every consumer can get precise information to inform personal healthcare choices.

Again, thank you for the opportunity to comment on proposed changes to the Overall Hospital Star Ratings. If you have any questions regarding our comments, please contact Loretta Willis, vice president, quality advocacy, research, and innovation, at (518) 431-7716, or at lwillis@hanys.org.

Sincerely,



Marie B. Grause, RN, JD
President

ⁱ Centers for Disease Control and Prevention. NCHHSTP Social Determinants of Health. Accessed June 7, 2017, at <https://www.cdc.gov/nchhstp/socialdeterminants/faq.html>.

ⁱⁱ Buntin, M.B. and Ayanian, J.Z. Social risk factors and equity in Medicare payment. *N Engl J Med.* 2017; 376 (6): 507-510.

ⁱⁱⁱ Centers for Medicare and Medicaid Services. 2013 measures updates and specifications report: hospital-level 30-day risk-standardized readmission measures for acute myocardial infarction, heart failure and pneumonia. Access June 7, 2017, at <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/Measure-Methodology.html>.